

The National Academies' Call to Action for Science Education: What roles will science teacher educators play?

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Throughout the past year, public responses to current events, such as the COVID-19 pandemic and wildfires in the western United States, have demonstrated a continued need to foster scientific literacy in society. In early 2021, the National Academies of Sciences, Engineering, and Medicine announced that they have appointed an ad-hoc committee to author a national [Call to Action for Science Education](#), which you may have heard about from our ASTE leadership. The overarching goal of this call is to “prepare students to face the global challenges of the future, both as engaged participants in society and as future science professionals.” As the committee does their important work over the coming months, it is important for us, as science teacher educators, to consider key questions so that we may be prepared to respond to the call and lend our collective expertise to action. This editorial explores questions intended to prompt reflection about how we might better prepare science teachers for teaching “students [how] to face the global challenges of the future.”

One such question is: How might we prepare science teachers to convincingly articulate the importance of science education to parents, fellow teachers, administrators, and, most importantly, students? As we know, engaging in argument from evidence is a complex skillset, and teachers' positionality among fellow educators and the general public ideally situates them to adapt that skill set to multiple, diverse audiences. Furthermore, although the importance of science education is a no-brainer for science teacher educators, perspectives in society at-large include a decreasing trust in science as we fully enter the “post-truth” era (Iyengar & Massey, 2019). Are the science teachers that we are training prepared to justify teaching science to parents and community members who do not value it? If not, how might we prepare them not only to justify the teaching of our discipline but also to foster support for robust science education for all students? And finally, how can we help science teachers emotionally cope with the ever-increasing doubt within our society that our discipline is worth teaching?

As scientific topics become more and more politicized, another question worthy of consideration is: To what extent are we, as science teacher educators, willing to embrace the notion of science education as and for sociopolitical action so that we can prepare science teachers and science students to be scientifically literate in a society that politicizes science? Scholars have long recognized that education is a form of sociopolitical action that has the potential to perpetuate societal systems or break the cycles that lead to injustice and oppression across generations (Dewey, 1909; Hodson, 1999; Roth & Désautels, 2002;

Swain, 2005). We often feel an implicit pressure to “not make it political” when it comes to teaching science; but, what about when the scientific content *is* political, not by our doing but due to societal forces beyond the classroom? We are accustomed to the notion of making science relevant to students’ lives, but how do we remain committed to this ideal as the science relevant to students’ lives becomes politicized? Further, how might we prepare science teachers for these new challenges?

I apologize for posing such questions and not providing any answers, but I am confident that our community of science teacher educators has important insights for tackling these new challenges. I am hopeful that future issues of *Innovations in Science Teacher Education* will explore these topics by providing novel, innovative ways to enable science teachers to effectively teach science as society’s relationship with science changes.

References

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