

## COMMENTARY

# We Aren't Teaching What Students Need to Know About Climate Science

By David J. Hess | JUNE 08, 2018 ✓ PREMIUM



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For several years, I have been including an introduction to climate science and politics in most of my classes. One study has provoked particularly thoughtful discussions. A paper by two sociologists, Aaron McCright and Riley Dunlap, published in 2011, reported that a college education was related to acceptance of the effects of global warming as already apparent — but that the acceptance varied by

ideology.

Specifically, they found that liberals with a college education had a higher level of belief (82.2 percent) in global warming than did those without a college education (61.6 percent), while among conservatives the difference was negligible (43.1 percent for those with a college education, 42.4 percent for those without it).

In teaching this topic, I originally assumed that there was a lock-in of belief before students arrived at college. But my students suggested that another possibility was more plausible: They had conservative friends who simply avoided courses with an environmental or climate-related theme. Those conservative peers were more interested in courses related to their career plans (often in business); some also did not want to be in courses that they perceived to have a liberal agenda.

Our class discussions then shifted to how colleges could make climate-science knowledge more widely available, which in turn led us to think about why climate-science education is not included as a core-curriculum requirement.

As a veteran of curriculum-reform efforts over several decades, I'm not optimistic about any proposal to modify the core curriculum. Departments often have intense vested interests in the requirements of certain categories of core courses, any changes in which can have significant implications for the departments' access to limited resources.

One question that emerged from these discussions with students was what kinds of models exist for climate-change education in the core curriculum. As a result, I conducted, with Brandi Collins, an undergraduate student at the time, a study of core curricula to find the proportion of core courses that include climate science or climate change. We used information from 50 research universities and 50 liberal-arts colleges.

Strikingly, only one, Columbia University, had a core course that explicitly included climate-science education and was required for all students. A few colleges offered a choice of courses in environment or sustainability, but many of those did not mention climate change or global warming. Some colleges had large numbers of climate-related courses across different core areas, but that would not overcome the problem of self-selection.

Students were most likely to learn about climate science as part of their natural-science core than any other area. But even among those course options, the likelihood was low. For core curricula across all colleges and universities, the average likelihood was just 17 percent.

We found trends shared by types of institutions as well. Research universities were likelier to include more climate-change courses in their core curricula than liberal-arts colleges were. And public research universities in states with Democratic-controlled statehouses were likelier to do so than were those in split or Republican-led states. The sample is quite small for that last comparison, and, of course, it doesn't mean that legislatures are intervening directly in curricular matters. However, they could be setting a general tone, especially if party control has been stable over time.

Finally, we sought to identify best practices for exposing as many students as possible to climate science. The model offered by Columbia is worth discussing more broadly as institutions ponder how to improve their core curricula.

A flexible approach might include an environmental or sustainability-studies menu with at least one required course that covers climate science or climate change and society. Another option might be calling for students to take at least one course that covers climate-science education, a requirement similar to writing across the curriculum. Educational options outside the classroom could also be helpful.

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Shouldn't we, as educators, be raising this question about getting accurate information to students about one of the most important problems facing the world? By not including climate change as a required part of the core curriculum, are we guilty in some way of living in denial, to borrow the title of Kari Marie Norgaard's book on climate change and society?

Most of my colleagues understand that there is a scientific consensus about the reality of anthropogenic climate change, and most of us think it is an important global problem. But we haven't taken the next step of acting on this knowledge and making sure that college students get the education they will need on this important topic.

*David J. Hess is a professor of sociology at Vanderbilt University.*

1255 Twenty-Third St., N.W.  
Washington, D.C. 20037

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