

## Teaching Climate Change and Sustainability Across Disparate Ideologies

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**Abstract:** While the majority of today's youth accept climate change as a factual phenomenon, many educators and their curricula lag behind with a continued emphasis on confronting climate skepticism and denial. This article highlights our experience teaching a course, Climate Change and Sustainability, in which we encountered disruptive objections to our lessons from students who believe climate change is happening and desperately want action. However, the all-or-nothing stance of these students stifled conversation, and their lack of engagement with various topics kept them uninformed. To address these issues, we recommend structuring classroom debate around consensus-building activities to practice solution-oriented communication.

**Keywords:** Climate Change, Sustainability, Activism, Debate, Generation Z

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Although climate change has been taught in the natural sciences for decades, it is now being taught in many other disciplines, and in some cases, courses on the subject are even listed as general education requirements (Molthan-Hill et al, 2022). The content of these courses is broadening to include not only the physical processes of climate change but also the impacts, risks, and vulnerabilities associated with it. A holistic course on the topic requires an instructor who is able to teach across disciplines spanning the natural and social sciences. Extending the climate change curriculum beyond the physical basis is crucial for students to understand both the societal drivers of and potential solutions to the problem, but as our experience shows, can make for a contentious classroom. These tensions are exacerbated by a changing social landscape shaped by digital content, remote learning, and exposure to misinformation (Giray, 2022). In this essay, we reflect on our recent experience with what we as educators see as a new generation of students. We offer our perspective that classroom debates regarding climate change require more thoughtful guidance and facilitation to create a productive learning environment.

The challenge for teachers in the climate classroom is not that some students are climate deniers or skeptics, but rather the many disagreements about how to address the problem. Our experience teaching *Climate Change and Sustainability*, an undergraduate course at the University at Buffalo, may help to articulate new challenges for climate educators, particularly those in the broad interdisciplinary context of sustainability. The course was designed as an introduction to climate change with special emphasis on its social dimensions including justice, ethics, economics, and policy. We began with the fundamentals of climate science, which went smoothly; however, as we moved to the impacts of climate change on society and the various proposals to address them, we found the class repeatedly disrupted by students offering contentious commentary. As these students attempted to dominate discussions, they drastically slowed down the pace of the course and increased classroom anxiety—several students complained to us about their discomfort. Worst of all, the disruptions escalated, and even became aggressive, as the students took offense at any attempt to move on with lessons instead of allocating additional time to share their perspectives. What was most interesting for us was that these disruptions were not what climate educators and communicators have come to expect and prepare for. Instead of false claims that climate change is a hoax, we encountered a firm belief that the only way to address the crisis is full-scale revolution. While we felt prepared to counter and confront the misinformation and denialism that has for so long shaped climate conversations, we admittedly struggled to manage critiques of climate science, economics, and policy coming from *within* the climate movement.

A curriculum designed to confront climate change denial is becoming irrelevant as most students enrolling in climate courses accept the reality of climate change and are increasingly invested in climate action. This new generation of students has grown up with more exposure to the topic and is coming of age at a moment when the effects of a warming world are clearer than ever. What this means is that today's students are more passionate about climate issues than those of any other time. In fact, a 2021 Pew Research report found that 76% of Gen Z say that climate change is one of their biggest societal concerns with 37% saying it is their primary concern (Nadeem, 2021). Students still need to be prepared to confront misinformation, but denial is not the only perspective in which they may be misinformed. Even students who advocate for climate

action may lack an understanding of the mechanisms shaping the global situation—inhibiting their ability to engage in dialogues about it. While the incongruity of acceptance and knowledge may seem insignificant from a political perspective, students who accept climate change but do not understand it lack the ability to work towards the kind of broad consensus the climate crisis calls for. In our course, students who were politically motivated but uninformed were unable to clearly articulate their critiques, often vocalizing false information and in turn heightening classroom tensions. By continuing to emphasize denial, we leave many students unprepared for the real work of planning solutions and organizing to address the problem. Students need skills to navigate the disagreements about how to address climate change while also managing feelings of hopelessness and despair which can stifle productive conversations.

The contentious comments and questions peaked as the class content explored various economic and policy perspectives to address environmental degradation. Frustratingly, these disruptions were not well-thought-out critiques, but refusals to engage. These students desperately *want* climate action, unlike so-called “doomers,” but they only want it on their own terms (Osaka, 2023). Anything perceived as remotely neoliberal or upholding the status quo was dismissed and attacked by our most vocal students. For example, one student’s hyper-focus on the failure of the Paris Agreement to achieve what he thought was sufficient emission reductions prevented him, and others, from understanding both its potential strengths and weaknesses. His determination to explain that it was a failure, under the incorrect assumption that our goal was to convince the class that it was a success, produced vicious and personal attacks that undercut both the lesson and the learning environment more generally. These perspectives are valid, and unbeknownst to these students we often agreed with them, but the tone and all-or-nothing stance impeded true dialogue. Ironically, the refusal to engage with market-based and governmental solutions meant that these students did not understand them. This lack of understanding both weakened their critiques and confused their classmates. When students refuse to engage with a subject at a meaningful level but insist on offering commentary, lessons are muddied for the entire class. For these reasons, if a climate change educator allows time and space in their lessons for debate, we find it must be structured in a way that promotes active engagement and practices the broad consensus-building the climate crisis requires. Through this experience we learned that our classrooms must be spaces of patience, empathy, and self-reflection—reflecting on *how* we communicate as much as what.

The urgency of climate change calls for both swift action and broad consensus building (IPCC, 2023). Including a diverse range of perspectives is key to making sure that climate mitigation and adaptation promote justice, but accounting for so many voices is anything but fast (Galgóczi, 2022). We need to find ways to hear a range of perspectives, but also to move toward resolutions quickly. While the students we encountered claimed that we were infringing on their right to free speech by asking them to hold questions until after class or limiting the number of comments they could make, we believe that there must be limitations on what is debated in the climate classroom and structures put in place for how such debates are conducted. Guidelines must be set not for the sake of silencing any individual but to allow for as many perspectives as possible. As bell hooks writes in her powerful book *Teaching to Transgress* (1994): “I enter the classroom with the assumption that we must “build community” in order to create a *climate* [emphasis added] of openness and intellectual rigor” (p. 40). Community is key to hooks’

democratic pedagogy precisely because it reframes the classroom from a space of individuals competing to a group working towards the shared goal of learning. Being explicit and offering reminders about the responsibility each student has for the learning of their peers can work to reinforce the unacceptability of disruptions that interfere with the education of others. While we cannot guarantee a ‘safe space’ in which everyone feels comfortable at all times, we can work to make our classrooms ‘brave spaces’ where students feel empowered to take risks and share perspectives that are representative of who they are (Arao & Clemens, 2013). Students do not have to like what everyone has to say, but there must be an expectation that classroom conversations will be conducted with mutual respect so that no one is too afraid to contribute a thought or ask a question.

One strategy to promote productive conversations with this changing student population is time spent reflecting on individual perspectives and where they come from. This can take the form of modeling such reflection by explaining our own career experiences and motivations in our lesson design, or by asking students to write narratives that illustrate how their perspectives formed. Another approach is explaining processes of knowledge production, such as peer-review, to show how perspectives can be challenged in a civil and productive manner. Requiring students to justify their arguments through peer-reviewed evidence can help to deflect classroom tensions based in personal biases and create conversations that are scientifically sound rather than politically skewed. To confront apathy, we feel it is important to encourage students to envision positive outcomes as this helps to both move beyond the pessimism of “doomers” and requires students to clearly articulate their vision for the future (Hopke & Willard, 2022). Drawing from Marshall Rosenberg’s work on Non-violent Communication (2015), it may be helpful to ask students to use positive language to describe the changes they want to see in the world. For example, if a student says, “shifting to electric cars won’t fix anything,” ask them to reframe their comment in positive language – what would work instead? One way to make climate change impacts less abstract is integrating the local context to ensure conversations remain grounded and concrete. Finally, restructuring classroom discussions so that the goal is not about debating or justifying one’s point of view, but instead finding ways to share perspectives and work towards a common ground that could lead to compromise and consensus. Consider crafting assignments that reward group cooperation. For example, instead of, or in addition to, individual participation grades, incorporate graded activities for the entire class with rubrics based on successful collaboration. This is not a complete list, and it cannot always guarantee a comfortable classroom, but we believe setting such parameters will help students to learn and practice the kind of communication skills necessary to participate in ongoing dialogues to address climate challenges in the future.

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