

Review of: "Climate Change Denial Theories, Skeptical Arguments, and the Role of Science Communication"

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The article introduces an important topic and is well written. However, the authors should specify the methodological approach (could be PRISMA) and formulate some clear conclusions and recommendations.

The information on climate change must be more robust and supported with data and figures from AR5 and AR6 of the IPCC.

The suggestion for clear, plain word communications on climate change is important, but this recommendation should be more elaborated, including some media, social networks, age groups, etc.

Another important recommendation to avoid misinformation about climate change should be fostering environmental and climate change education.

Education can make a difference in the fight against climate change. Recent surveys show that people with more education were more likely to view climate change as a threat and that, today, most people see climate change as a major threat to our planet.

Environmental education is more than information about the environment and climate change. Environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions. Environmental education does not advocate a particular viewpoint or course of action. Rather, environmental education teaches individuals how to weigh various sides of an issue through critical thinking and enhances their own problem-solving and decision-making skills. This is particularly important today, as students need to be able to evaluate the long-term impact of social, economic, and ecological policies.

However, promoting environmental education in schools can be tricky. Climate change is seen as a bipartisan "political" issue in some countries, and many educational bodies push against climate education entirely.

That's why education is often overlooked in the fight against climate change. While policy changes and global commitments are necessary to prevent global warming from further worsening, improved education is the first step toward achieving the climate action goals.

Environmental education can help alleviate climate anxiety, too. This is broadly defined as a "chronic fear of

environmental doom” and may be exacerbated by a lack of understanding. Educational resources that clearly explain the mechanisms behind global warming equip students with the knowledge they need to do something about climate change. This can help them feel empowered and foster a greater appreciation for the planet’s resources.

UNESCO and UNFCCC are launching a series of conversations on climate change education for social transformation from May to December, 2024, in front of COP 29.

Climate action is one of the key thematic priorities of ESD for 2030, the Education for Sustainable Development’s global framework for the next 8 years. Through its programs, UNESCO has been working to make education a more central and visible part of the international response to climate change.

To wrap up, we need a vision and strategy for climate change that more explicitly addresses the role of collective action, multi-actor networks, and sociotechnical innovation not only through accessible communication but also through climate change education. Combating climate change effectively requires a global effort, and activism often relies heavily on a thorough understanding of the issue and the ability to persuade others that something must be done.

Some texts to review on environmental and climate change education:

UNESCO. (2021). Getting every school climate-ready: How countries are integrating climate change issues in education. UNESCO Paris, France. <https://unesdoc.unesco.org/ark:/48223/pf0000379591>

UNESCO. (2023). Youth demands for quality climate change education. <https://unesdoc.unesco.org/ark:/48223/pf0000383615>

Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., and van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey. *The Lancet Planetary Health*, 5(12), e863–e873.

Jorgenson, S. N., Stephens, J.C., & White, B. (2019). Environmental education in transition: A critical review of recent research on climate change and energy education. *The Journal of Environmental Education*, 50(3), 160–171. <https://doi.org/10.1080/00958964.2019.1604478>