How we think about science can make a difference

October 4 2016

Climate change is one of the greatest threats to future generations. Credit: Massey University

If, as Barack Obama says, the greatest threat to future generations is climate change, then environmental policies to combat it need an

outpouring of public support to be effective – and in places like America, that support is low despite the overwhelming scientific evidence.

New research from Massey University sheds light on a promising new approach to help increase public support for pro-environment policies by encouraging people to appreciate science as a method of accumulating understanding, rather than simply a body of knowledge.

Lecturer in the School of Psychology Dr Aaron Drummond says it's not enough for the public to simply be aware of scientific facts.

"In the United States there is a big divide among the public. Almost 98 per cent of scientists agree that climate change is an issue, whereas only 70 per cent of the public agree with that proposition. It's not just about having basic scientific literacy – where people know facts and concepts that are relevant to core areas of science. Our research found that when people perceive science as a valuable way of accumulating knowledge, they were more likely to support a pro-environment policy.

"Our research tells us something about how we should be communicating science more broadly – while often we do a good job of teaching the nuts and bolts, we also need to be teaching the philosophy of science and why it's such a useful tool. It's really important to understand how things work and why science is a valuable method for accumulating knowledge," he says.

For their first study, Dr Drummond and his colleagues, Dr Matt Palmer and Dr James Sauer, analysed data from the 2006 Programme for International Student Assessment (PISA) run by the Organisation for Economic Co-operation and Development (OECD). Study participants included over 198,000 15-year-old students from 26 countries. In addition to standardised tests of scientific literacy, they were also

assessed on their attitudes towards science and support for environmental policies. The results showed stronger support for pro-environmental policies by students who were more supportive of scientific inquiry.

In the second study, the team recruited 215 adult volunteers from the United States who were then randomly allocated to one of two conditions in an online experiment. Participants had to read one of two fact sheets, and then answered a brief set of questions on their views about science and pro-environment policy.

One fact sheet contained scientific content, but didn't address the value of scientific inquiry. The second fact sheet delved deeper into the value of scientific inquiry, providing examples of scientific research and the usefulness of acquiring knowledge scientifically. Those who read the second fact sheet increased their endorsement of scientific inquiry and, subsequently, their support for pro-environmental policies.

Dr Drummond says he was fascinated to discover that in this study, differing socio-political attitudes had little bearing on the change in attitude.

"Some other studies have shown that people with differing socio-political attitudes tend to become polarised in their opinions. People tend to interpret information in a way that is consistent with their worldview. By highlighting the benefits of scientific inquiry in a more politically neutral way we found an increase in support for pro-environment policies across socio-political attitudes.

"This is very much a first step in investigating this concept, based on a one-page fact sheet. We want to see if these effects would flow on with a more substantial intervention," Dr Drummond says.

More information: Aaron Drummond et al. Enhancing endorsement of scientific inquiry increases support for pro-environment policies, *Royal Society Open Science* (2016). DOI: 10.1098/rsos.160360

Provided by Massey University

Citation: How we think about science can make a difference (2016, October 4) retrieved 26 April 2024 from https://phys.org/news/2016-10-science-difference.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.