

## Learning about Climate Change Conventional teaching is not up to the challenge

By Stan R. Kozak

Climate change is a challenge for the entire world, and it may present formal education with its greatest challenge. How do teachers teach about a long-term problem that is evolving rapidly and changing the environment in real time?

Yet a challenge is often an opportunity too. And when it comes to education, climate change offers an opportunity for educators of all sorts to advance and evolve their practice.

This evolution should start from a position of humility. One thing we know already because of climate change is that the future is not going to be like the past, and learning about new solutions to the many complex problems humanity faces will not be achieved through the rearview mirror of conventional teaching.

Until now, most conventional teaching approaches have fallen short from meeting the learning challenge posed by climate change. **That's because** conventional teaching is based on transferring information that is usually suitable for generally accepted, relatively simple concepts.

Think for a moment about how a typical school is set up today. The teacher, often a specialist in one subject area, is there to help students deliver the right answers. Learning is chopped into time-slotted subjects, and learning is often based on set textbooks and confined to within the classroom.

In science, abstract concepts and information is prized, while emotions tend to be ignored. Yet climate change is an inherently emotional subject — discussion about it can lead students to incessant worry or to angry debates with climate change deniers who hold opinions contrary to the overwhelming preponderance of research and facts.

Fortunately, educators have been thinking about how to teach a complicated subject like climate change more effectively.

In Canada, a not-for-profit organization called Learning for a Sustainable Future (LSF) has been developing learning strategies about climate change, in both official languages that are imaginative, broad-based and most importantly, interesting to students.

These learning strategies take cues from various education reform initiatives put together by leading educators — initiatives such as Transformative Learning, Education for Sustainable Development, 21st Century Learning. The common element among these is that they are more aligned than conventional

educational strategies with the challenge of climate change.

The new strategies start with the understanding and experiences that students bring with them. They help build an atmosphere of confidence and trust among students, allowing them to explore the range of perspectives and ask questions they have on climate change without fear of being ridiculed or shouted down.

These climate change learning strategies are based on building knowledge and on critical reflection. They assume that students will have instant access to comprehensive information from around the world on their smartphones.

As part of their role, teachers act as facilitators — teaching is about far more than **just standing at the front “telling kids the stuff.”**

Good teachers guide learners with questions of their own. The process is often messy and idiosyncratic, yet it allows learners to follow their instincts, to do something with what they have learned and share insights with their communities.

That's really what learning should be about anyway. With the right tools educators not only help learners approach complexity, they also make it more manageable.

This helps students work more creatively, seeking solutions to challenges that **don't always have obvious answers** — like climate change.

Applying these new methods of learning will be especially important in a world where — **let's face it** — there is no political consensus on climate change.

With a climate-change-hostile administration in the United States and indifference to the issue in many other countries, we live in a quagmire of deeply conflicting social narratives on an issue that will define our century, and our future. Education is the only way out of this mess, and developing and enhancing new teaching and learning techniques is the only way that education will work effectively.

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