



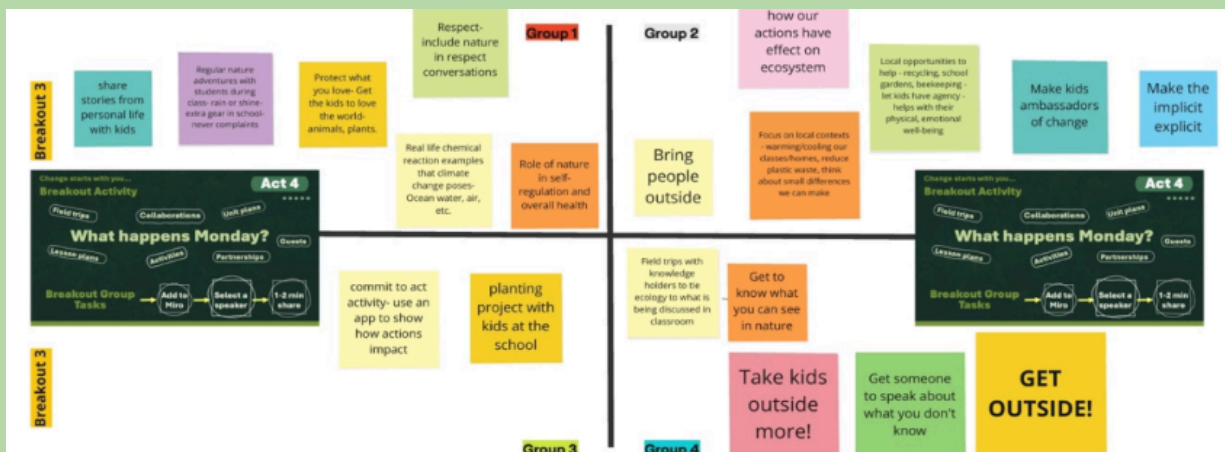
ACCELERATE / ACCÉLÉRER

CLIMATE CHANGE EDUCATION
IN CANADIAN TEACHER EDUCATION

L'ÉDUCATION AUX CHANGEMENTS
CLIMATIQUES DANS LA FORMATION
DES ENSEIGNEMENTS AU CANADA

CCE IN TEACHER EDUCATION PROJECT REPORT

Climate Change Education in Teacher Education (CETE)



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Summary

The Climate Education in Teacher Education (CETE) project, based at the University of Northern British Columbia (UNBC), aims to equip K-12 teachers in northern British Columbia (BC) with the tools and strategies needed to address climate change education in their local contexts in consequential ways. Initiated in response to the 2022 Accord on Education for a Sustainable Future, CETE utilizes the Education Design-Based Research (EDBR) methodology to develop localized, practical approaches for integrating climate change education into curriculum and pedagogy through a lens of place. To date, the CETE project has engaged over 250 pre- and in-service northern BC teachers through ten workshops, fostering community

collaboration with local school districts, Indigenous knowledge holders, and environmental organizations.

Key outcomes include the development of seven high-level conjectures that guide CETE climate change education efforts. For the Accelerator grant, CETE focused on developing two new threads: 1) the integration of Indigenous perspectives and 2) a self-study investigation of the researchers’ own climate change education efforts, all towards the creation of practical approaches and resources to support teachers. CETE is an action-oriented approach to research through intentional design that is developed through community engagement, permitting the incorporation of diverse perspectives to empower educators around tailored climate change education.



Note: A collective mind-map generated by participants in a workshop on health from November 22, 2024 with Prince Rupert educators. The mind-map invited reflections on what attendee educators would do in their practice next Monday.

Gaps & Needs Addressed

CETE addresses the critical gap in climate change education within northern British Columbia’s K-12 system, where teachers often lack the resources, knowledge, and support to effectively integrate climate change topics into their teaching and the provincial curriculum. Despite the increasing urgency of the climate crisis, particularly in northern BC, where warming occurs 2-3 times faster than in southern regions, there has been limited institutional support for climate change education.

A 2020 survey revealed that 33% of BC teachers felt unprepared to teach climate change, with only 41% feeling empowered to do so. Anecdotally, CETE has learning that sentiments of how to approach climate change education in northern BC exceed the numbers from the survey. CETE responds to this need for northern BC by providing localized, practical strategies and fostering teacher agency, through creative pedagogy,

leadership, and preparation, enabling educators to confidently incorporate climate change education into their teaching practices and developing a local climate change education community.

Theoretical Framework/s or Guiding Concepts

CETE is grounded in the principles outlined in the 2022 ACDE Accord on Education for a Sustainable Future, emphasizing the urgent need for education to respond to the climate crisis. The project employs Education Design-Based Research (EDBR) as its core methodology, allowing for iterative, pragmatic interventions in real-world educational settings that are guided by a design-team that includes UNBC researchers, as well as a collective of researchers from around Canada. Conjecture mapping, a key EDBR method, guides the development and refinement of climate change education strategies and research directions.

Additionally, CETE aligns with the School of Education's signature pedagogy of People, Place, and Land, emphasizing localized, culturally responsive teaching. Ethical considerations, including Truth and Reconciliation and more-than-human rights, further inform the project's guiding concepts.

Outcomes

Overarchingly, CETE aims to develop and implement localized climate change education strategies, foster teacher agency & leadership, and create a sustainable network of educators and community partners. To date, the CETE project is successfully achieving these outcomes, evidenced by the engagement of over 250 teachers in ten workshops and the development of seven high-level conjectures guiding climate education.

Accelerator grant initiatives particularly focused on two high-level conjectures: 1) Indigenization of CETE efforts and 2) exploration of CETE researcher efforts through a self-study. Neither of these two threads existed before the Accelerator support, and now both have received ethics approval from UNBC and are being implemented. The self-study project includes regular reflections by the UNBC research team around their efforts and an analysis of researcher course outlines to assess how climate change education manifests in practice.

CETE is preparing to engage in 15-20 "conversations" with local Indigenous Elders and knowledge-holders around climate change and climate change education starting in April 2025. New paths continue to emerge. Presently, the CETE design-team is engaged in revising the high-level conjectures, which is leading to novel research directions.

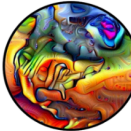
In future iterations, CETE will benefit from more extensive integration of Indigenous perspectives, as well as increased focus on supporting teachers in managing climate anxiety in their teaching contexts. Expanding outreach efforts to include more remote communities could also enhance the project’s impact.

Advice & Resources

For colleagues interested in similar initiatives, CETE emphasizes the value of grounding projects in local contexts and fostering strong community partnerships. Utilizing methodologies like Education Design-Based Research can support iterative, responsive project development. Conjecture mapping is a particularly effective tool for guiding and refining interventions.

Engaging diverse perspectives, including Indigenous knowledge holders and community organizations, enriches the project and ensures cultural responsiveness. Addressing emotional aspects, such as climate anxiety, is also crucial for supporting both educators and students. Finally, creating practical, adaptable resources and providing ongoing professional development opportunities can empower educators to integrate climate change education confidently and effectively.

CETE is open to working with others interested in learning about our process.



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