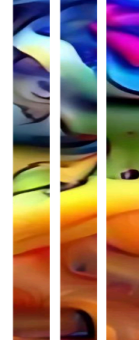


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CLIMATE CHANGE EDUCATION
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CCE IN TEACHER EDUCATION PROJECT REPORT

Enhancing Climate Change Education in Teacher Education Through Community Partnerships and Networks



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Summary

Climate change is a pressing issue in Cape Breton, where residents continue to rely on coal-generated electricity and oil. Communities are vulnerable to increased coastal erosion and flooding of low-lying areas, issues compounded by persistent socio-economic challenges, child poverty rates of 30%, and long-standing inequities facing rural and working class, newcomer, L'nu, and African Nova Scotian communities. The Department of Education at CBU has been a pioneer in both undergraduate and graduate programs in teacher education about climate change. The Department is working to deepen its commitment locally by creating formal partnerships with two

community organizations that are taking up the social justice challenges posed by climate change.

Through the funded project, *Enhancing CCE-TE Through Community Partnerships and Networks*, an interdisciplinary team worked towards this goal by hosting a participatory community Symposium on Climate Change, Education, and Social Justice. The Symposium brought together 45 relevant community partners, teachers, and students from across post-industrial Cape Breton to discuss the title issues in relation to nuanced regional culture, economics, history, place, and ecology. Three keynote speakers informed the conversation by sharing (a) Elder L'nu knowledge of climate change, social justice, and land-based education; (b) teacher activist efforts for food security in a changing climate; and (c) the role of the arts in imagining alternatives to post-industrialism. Following the guest speakers, participants together documented current issues and made proposals for moving forward. Interested participants engaged in interviews to deepen collective understanding of these issues and inform next steps towards reconfiguring teacher education at CBU.

Gaps & Needs Addressed

Teacher education is a cultural catalyst with an ethical imperative (Margrini, 2019) to care for and actively support the sustainable well-being of communities. Considering that educational inequities in Nova Scotia have been demonstrated to contribute to climate inequities (Waldron, 2022), teachers face challenges in creating climate education that supports social justice, even as they navigate emergent climate realities through curriculum, pedagogies, and practices (Eilam, 2022; Field et al., 2019; Foss & Ko, 2019; Monroe et al., 2019). In this context, we understand that faculties of education are not only providers of research and degree programs but have a duty to care for the communities in which they are embedded while recognizing the regional cultures, histories, places, and ecologies of those communities (Howard & Phillips, in press).



Participant discussion during Symposium

By engaging directly with a variety of community members, we therefore worked towards ensuring CCE-TE at CBU is locally situated and social justice oriented. The guiding ethos of the case study was participatory co-research with students, educators, academics, and community members, to reconstruct purposes and practices for teacher education and co-construct collaborative partnerships that both inform the preparation of future teachers and enhance community responses to local issues.

Theoretical Framework/s or Guiding Concepts

Critical, place-based education (PBE) examines power dynamics and socio-cultural constructions of place to unpack and remediate inequalities and injustices across social and ecological spheres (Graham, 2007; Gruenewald, 2003). Critical PBE helps us consider social justice issues of climate change by understanding inequities in relation to place, including in relation to the colonial and industrial histories of Cape Breton (Johnson, 2012, p. 832). Critical PBE is oriented around the counter-colonial goal of helping “colonial schools become disloyal to colonialism” (la paperson, 2017, p. xvi; see also Libeiro, 2021, p. 130), which in Cape Breton involves deeper grounding in L’nu concepts such as Netukulimk. Central to understanding the links between climate change and social justice in place in Cape Breton are the intersections of **settler colonialism** (Scully, 2020), **post-industrialism** (Green, 2020; Wray & Stephenson, 2022), and **rurality** (Galway, 2025).

Responding to this context, the study is also interested in the role of **community partnerships in teacher education**, which hold potential to benefit teachers, community organizations, and L’nu partners towards social transformation and ecological health (Aguayo & Eames, 2017; Ruiz-Mallén et al., 2022).



Participant painting with pigments made from post-industrial waste sites.

Outcomes

Desired Outcomes:

1. Establishment of a network that enhances CCE-TE at CBU.
2. Formation of at least three new partnerships between CBU’s Department of Education and local organizations.
3. Creation of a plan for community-department links to support social justice-oriented CCE-TE.

The Symposium was central to creating an informal network, thanks to participation by community organizations engaged in CCE and social justice; CBU students, staff, and faculty from multiple departments; and a few teachers from mainstream and Mi’kmaw Kina’matnewey Schools. Due to time limitations, partnerships and formal community-department links are still in progress. Initiatives underway include:

- Developing a course on Climate Change and Education for CBU's Master of Education program in Sustainability, Creativity, and Innovation
- Forming CBU research partnership with ACAP Cape Breton on youth civic engagement in watershed governance
- Strengthening CCE content in undergraduate science teacher education

Our team has conducted 9 interviews. Based on the symposium and these interviews, we plan to:

- Update the undergraduate course on Teaching and Learning for a Sustainable Future through community-engaged learning
- Develop a Connection or Partnership Engage Grant to further the efforts started here.

Successes & Challenges

Successes

Community Participation: The project successfully engaged the vast majority of the climate- and social justice-oriented community organizations in post-industrial Cape Breton, L'nu communities, and interested university students and researchers, indicating significant interest in these topics and desire for change. We expect this engagement will lead to the kinds of community partnerships we hope to see develop in CBU's teacher education program.

Interdisciplinarity: Our interdisciplinary team (education, political science, sociology, and a sustainability officer) enabled robust sense-making of the issues alongside community partners, who similarly reflected various sectors (e.g. natural resources, fine arts, conservation, energy, social programs). Relatedly, symposium guest speakers opened interdisciplinary conversations by contextualizing the issues in relation to (a) L'nu knowledge, (b) teacher activism for food security, and (c) fine arts in post-industrial landscapes. We see such an interdisciplinary approach as necessary to making sense of the entanglements of climate change and social justice in our context.

Challenges

Teachers and Youth: The project connected with only a few teachers and no school-aged youth or children. While we offered the symposium on a professional day to enable more teachers to attend, teachers preferred to "get away" to Halifax to attend professional development workshops. Specific teacher-and youth-oriented research will strengthen the community-based research achieved through this project.

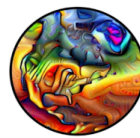
Lessons Learned

For us, the question is not what we would do differently but what we plan to do next. As described above, we plan to draw on interview data and develop a grant proposal

to further community engagement within CBU's teacher education program. Included in our subsequent research will be methods for engaging with teachers and youth to better understand the concerns of teachers and young people about climate change and social justice, what is already happening in classrooms, and what could be done moving forward.

Advice & Resources

Connecting with community members, non-profits, and internal academics interested in the interdisciplinary connections to education for climate education are relatively easy to coordinate. The most challenging groups to coordinate with are teachers and school district consultants. Organizing a symposium around previously scheduled PD days and conferring with school district PD planners, perhaps a year in advance, would be helpful in maximizing teacher participation. However, depending on other constraints this may not always be possible.



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