

ACCELERATE ACCÉLÉRER

CLIMATE CHANGE EDUCATION IN CANADIAN TEACHER EDUCATION

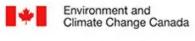
L'ÉDUCATION AUX CHANGEMENTS CLIMATIQUES DANS LA FORMATION DES ENSEIGNEMENTS AU CANADA

Impact Report

Accelerating Climate Change Education in Teacher Education

March 31, 2025

Partners



Environnement et Changement climatique Canada



Collaborators













Table of Contents

Accelerating Team	3
Overview	6
Overview of Project Impacts	7
National Roundtable	8
National Climate Change Education E-Courses	11
Accelerating CCE Projects	13
Teacher Education Webinar Series	20
Case Studies of CCE Professional Learning	28
Project Feedback	32
Conclusion	34



Accelerating Team

Project Leads



Dr. Ellen Field is an Assistant Professor in the Faculty of Education at Lakehead University. She conducts research related to the policy and practice of Climate Change Education in the Canadian K-12 system. She teaches courses in Environmental Education and Climate Change Education, and has engaged hundreds of in-service teachers in professional development workshops. Ellen is an Associate Editor of the Canadian Journal of Environmental Education and co-chair of the Canadian Regional Hub of Monitoring and Evaluation of Climate Change Education (MECCE).



Dr. Hilary Inwood is the Coordinator of the Sustainability & Climate Action Network at the Ontario Institute for Studies in Education (OISE) at the University of Toronto. She is an experienced teacher educator and educational researcher who teaches courses in Environmental & Sustainability Education (ESE) and Place-based Education. She is one of the leads of a Community of Practice focused on Sustainability Teaching at UofT, and coordinates an innovative partnership between OISE and the Toronto District School Board focused on teachers' professional learning in ESE. She is one of the founding members of the ESE-TE national network of Canadian scholars that aims to better embed ESE into preservice and inservice teacher education.

Team Members



Dr. Marie Tremblay's professional experience includes over a decade of teaching in elementary schools and in universities, including five years in Indigenous communities of Canada's far north. She was an active member of Alberta's environmental community for over two decades as a graduate student, conservation scientist, and senior manager in the public and non-profit sectors. She is particularly passionate about addressing the climate crisis through community engagement and helping the next generation think critically, appreciate Indigenous perspectives on sustainability, and become active agents in creating a sustainable and just future for all.



Sarah Urquhart is a PhD student at the Ontario Institute of Studies in Education (OISE) at the University of Toronto. Her research is exploring environmental justice education as experienced by newcomer youth in Toronto. Previously she was a secondary teacher working internationally in Mexico, Hong Kong, and Japan. Sarah supports teacher education as an environmental education instructor with Queen's University, and is a research assistant for the collaboration between OISE and the Toronto District School Board. Sarah's interests are in developing community engaged, place-based, and justice-oriented learning in K-12 and teacher education contexts.



Dr. Maria Vamvalis is an experienced public school educator and a facilitator of professional learning to support engaging, transformative pedagogies. She is currently a PhD candidate at OISE (University of Toronto) where her doctoral research focuses on holistic climate justice pedagogies for well-being. Maria is passionate about supporting educators to meaningfully address climate change in their classrooms.



Kahsenniyohstha Lauren Williams is a turtle clan Kanyenkehá:ka artist and educator from Six Nations, Ontario. Lauren has an M.A. from the University of Bristol in Ancient History and Historiography, with a focus on Haudenosaunee oral tradition, and a B.Ed. from York University's Waaban Indigenous Teachers Education Program. She currently teaches at Prince of Wales Elementary school in Hamilton, Ontario. Lauren is passionate about empowering learners of all ages to explore and deepen our relationships with the natural world through authentic, respectful engagement with Indigenous languages, cultures, and pedagogies which embody meaningful reciprocity with the earth.



Dr. Erin Sperling is a white settler on Turtle Island, in Tkaronto. She is a teacher educator in science and environmental education at the Ontario Institute for Studies in Education (OISE) at the University of Toronto. Erin's research and teaching practices focus on the role of Environmental and Sustainability education on empowering learners and change-making for eco-social wellbeing, from both the space of science and interdisciplinarity.



Felicia Mikrogianakis is an MA student at the Ontario Institute for Studies in Education (OISE) at the University of Toronto. She is studying Curriculum and Pedagogy with a specialization in Engineering Education. Her research seeks to tell the stories of undergraduate engineering students' experiences with social and ecological justice. She is interested in empowering engineers and scientists to consider how their work connects to issues of justice, social impact, and sustainability.



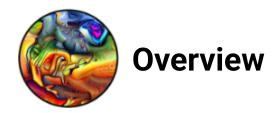
Caitlin Hastings is a MEd student at Lakehead University with a specialization in Social Justice Education and has an Honours Bachelor of Community Safety. Caitlin's interests are advocating for social and environmental justice and building community awareness about social issues. Caitlin aims to continue to support and network alongside educators whose goals are to empower future generations for equitable social changes and autonomy.



Daniel Paradis is a MEd student at Lakehead University in Orillia. He brings almost a decade of outdoor education and adventure therapy experience to his studies. He aims to encourage teachers to embrace the challenges of incorporating experiential outdoor curriculum into their pedagogy in order to help students enter into their growth zones while recognizing the role they play in the interconnectedness of the environment.

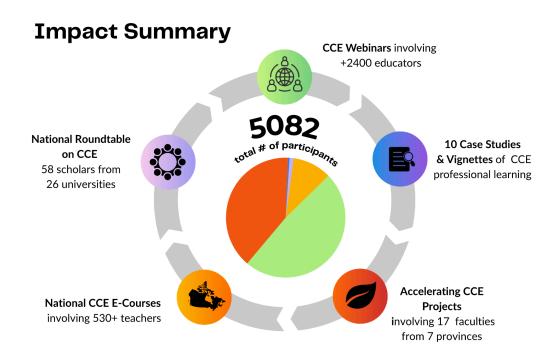


Tashya Orasi is an artist, teacher and researcher, and a PhD candidate in Leadership & Policy Studies at Lakehead University in Thunder Bay, ON. She has worked on a number of interdisciplinary arts based research projects and is a contract lecturer in the Faculty of Education. Her graduate work and teaching seeks to decolonize data, knowledge and learning in educational research, and uses the arts as a pathway to reach these aims. As an emerging Metis scholar, she views land stewardship as fundamental to restoring and sustaining Indigenous ways of life and culture.



The ACCE-TE project (Accelerating Climate Change Education in Teacher Education) is a pan-Canadian initiative designed to increase the capacity of faculties of education to address climate change education (CCE) through responsive, justice-oriented, and evidence-informed teacher education. The project responds to growing recognition of the importance of CCE in preparing future generations to face ecological challenges and promote systemic transformation.

Funded through the Climate Action and Awareness Fund administered by Environment and Climate Change Canada, the project has engaged over 5000 teacher educators, inservice, and pre-service educators from across Canada. It supports the integration of CCE into teacher education through five primary areas: a national roundtable, e-course, accelerating projects (micro-grants), webinar series, and case studies of CCE professional learning.



Overview of Project Impacts

- 1) **National Roundtable on CCE in Teacher Education** held in November 2023, this brought together 58 participants from 26 faculties of education across 8 provinces to discuss current practices, curricula and pedagogy, and next steps for advancing CCE in teacher education (read the National Roundtable Report).
- 2) National CCE E-Courses we developed and facilitated a national e-course for preservice and inservice teachers focusing on growing teachers' knowledge and practice of CCE by learning collaboratively with other educators on topics such as socio-emotional learning, Indigenous ways of knowing, climate justice, hope and age-appropriate climate action. There were over 500 teachers from across Canada registered in five sections of these E-courses.
- 3) Accelerating CCE Projects we received 42 proposals and awarded 17 grants to faculties of education across 7 provinces for a total disbursement of \$84,288. Projects funded include 10 new courses on CCE (8 credit, 1 MOOC, 1 CEGEP bridge course); 5 professional development collaborations (e.g. climate action summit, podcast initiative, and multi-day climate camp); an open-access resource library of trauma-informed CCE children books; and a seasonal calendar of Land-based pedagogy (amongst others).
- 4) **Teacher Education Webinar Series** we created and delivered 25 free webinars in two series: 13 sessions for K-12 teachers (1241 registered) and 12 sessions for teacher educators (1222 registered). These shared the expertise of over 50 teachers, curriculum consultants, school board leaders and CCE teacher educator experts. Recordings were played back 1927 times (and counting).
- 5) Case Studies of CCE Professional Learning supports the documentation and dissemination of effective Climate Change Education (CCE) practices for pre-service and in-service educators. These 6 case studies and 4 vignettes, written by teacher educators across Canada, highlight promising CCE programs and practices that have already been implemented—offering insights into their theoretical foundations, curriculum design, and impact. From multi-day institutes and Land-based learning programs, to university-school board partnerships and experiential workshops, these case studies serve as open-access resources for educators looking to adapt successful models to their own contexts



The National Roundtable on Climate Change Education in Teacher Education was the starting point of the ACCE-TE project. Hosted in February 2023, the event brought together 58 participants from 26 faculties of education from 8 provinces, including faculty members, teacher candidates, educational administrators, and community partners.

This event fostered inter-institutional dialogue and collaboration, offering a unique opportunity for faculties of education to share promising practices and challenges in implementing CCE. The Roundtable sessions addressed themes such as curriculum integration, equity and justice in climate education, interdisciplinary approaches, and faculty-level strategies to accelerate climate change education across institutions.

National Roundtable Summary Reports:



Report

from the National Roundtable on Climate Change Education in Teacher Education

November 23, 2023



Rapport

de la table ronde nationale sur l'éducation aux changements climatiques dans la formation des enseignants

23 novembre 2023

Available here

Consultation 1: Current Status of CCE in Preservice Teacher Education in Canada

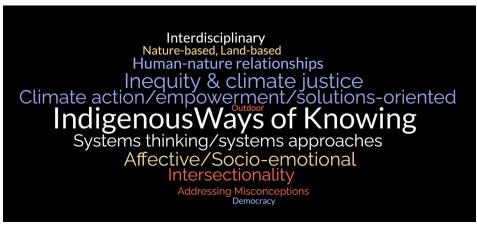
Findings at a Glance:

- 177 courses offered in Environmental & Sustainability Education courses within Canadian Preservice Programs
- Only 3.4% have a CCE course
- 57% of Preservice Programs offer ESE courses in 10 provinces

Challenges:

- CCE is integrated in a piecemeal fashion. Credit requirements should guide students to take CCE courses.
- Integrating CCE in preservice courses is inconsistent.
- Elective courses in CCE are very limited in smaller preservice programs
- Challenging to add CCE courses due to overcrowded curricula in preservice programs unless mandated
- Consensus that Teacher Certification in Canada should require CCE as a mandatory component

Consultation 2: Curricular and Pedagogical Approaches to CCE in Teacher Education Recommend Curriculum/ Content for CCE



Visual of prominent themes in consultation on CCE curriculum / content

- Indigenous Ways of Knowing and Being and Decolonization
- Inequity and Climate Justice
- Climate Action / Empowerment / Solutions-orientation
- Affective / Socio-emotional Learning
- Systems Thinking/Systems Approaches
- Intersectionality
- Human-nature relationships
- Addressing Misconceptions

CCE Pedagogical Approaches



Visual of prominent pedagogies discussed in consultation on CCE curriculum / content

- Community/ Local-focused
- Inquiry
- Indigenous Land-based education
- Affective Learning
- Empowerment/ Building Agency
- Modeling
- Arts-based Approaches
- Interdisciplinary Pedagogy
- Experiential Learning
- Transformative Learning

Consultation 4: Future Directions for Advancing Climate Change Education in Teacher Education.

Prominent themes in discussion:

- Integrate CCE across all subjects and practices
- Develop mandatory CCE courses
- Mainstreaming of CCE into teacher education programs
- Policy support advocacy
- Build network capacity



National Climate Change Education E-Courses

The national Climate Change Education E-Course was developed to support and equip both pre-service and in-service teachers (Primary–Junior and Intermediate–Senior levels) with the knowledge, skills, and resources needed to integrate climate change education into their schools and classrooms. This free program offered a collaborative learning space for educators and provided tools to help them address climate change through age-appropriate approaches. The course integrates socio-emotional learning, Indigenous ways of knowing, climate justice, hope and age-appropriate climate action.

The course consists of eight weekly synchronous sessions delivered via Zoom and was offered in both 2023, 2024, and 2025. It blends expert-led discussions with practical activities, enabling educators to tailor climate change education to their unique learning environments. Participants were required to complete 45 minutes of independent study before each session to help them apply their learning to the course's discussions as well as developing a climate action plan for their teaching.

Key Topics

The e-course focused on a range of climate change education topics including: climate science, where participants built their understanding of the causes and effects of climate change, climate justice, where participants explored the social impacts of climate change on marginalized communities, Indigenous ways of knowing, which aided educators in integrating Indigenous knowledge, Socio-Emotional Learning, to help participants address climate change emotions in their students through emotional resilience strategies, and Climate Action, where educators learned how to effectively teach their students how they can contribute to positive environmental change.

The course structure focused on providing participants information on these key topics through inclusive learning, collaborative approaches, and expert led discussions. In order to make the course more accessible and inclusive, it offered the course in both English and French, with the overall goal of reaching more educators across Canada. Facilitating group discussions provided educators with a collaborative environment where they could share existing knowledge, strategies, and support one another in the implementation of climate change education. The course was co-taught by Dr. Maria Vamvalis, a climate change education scholar and Kahsenniyohstha Lauren Williams, a turtle can artist and educator from Six Nations in Ontario.

Outcomes:

- 535 registered participants across two cohorts
- 149 educators fully completed the program
- Participants reported significant impacts, including enhanced understanding of core competencies related to climate change, biodiversity loss, and environmental issues, as well as greater clarity on actionable steps to mitigate and adapt to environmental challenges. Notably:
 - 95% strengthened their desire to teach CCE through the e-courses;
 - 93% of participants improved their understanding of CCE teaching strategies,
 88% improved their understanding of climate justice education;
 - 88% felt more hopeful about the future;
 - o 88% improved their understanding of Indigenous education; and
 - 86% improved their understanding of climate issues.

Feedback from educators highlights rich learning that occurred with the course:

It is an excellent professional development course and I hope you will be offering more in the future. It has been very valuable for me and my teaching practice.

Overall, I felt the course really situated CCE firmly and powerfully within the context of this historical moment, in relation to where we have been and where we are going as a nation and as a community. The emphasis on local, land and place-based learning, in community, drawing on Traditional Indigenous Knowledge - and values - was balanced, appropriate, and research-based.

I have found it to be very enriching and inspiring. I am excited about bringing it into my classes.

Just lots of gratitude to all the course leaders. The course reaffirmed many of my beliefs on how to implement climate teaching. I feel like it has reenergized me to approach the teaching with more hope. I really enjoyed participating in the inquiry learning model.

I am taking away so many ideas and information related to regenerative climate change education to improve my practices.

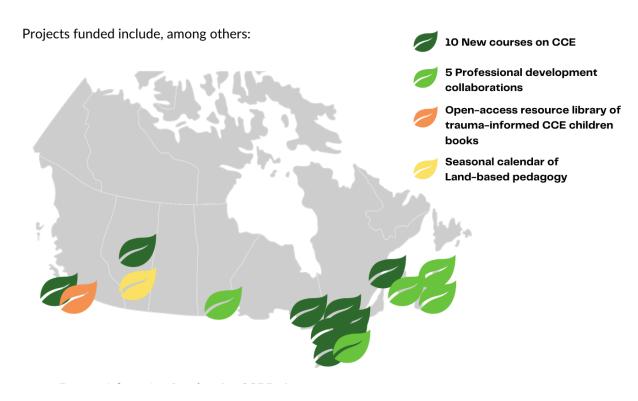
Fantastic! Theory and action together at last!

The facilitators were not just well prepared and very professional but they brought an unexpected amount of spirit and warmth to their teaching. Their care and deep humanity was a key part of what they modelled for us all, and will remain with me as something to carry forward in my teaching.



Accelerating CCE Projects

Through its Accelerator Funding grants, ACCE-TE has supported Climate Change Education (CCE) initiatives led by faculties of education across Canada, investing \$84,288 in 17 projects to advance innovative approaches to CCE targeting primarily pre-service teachers. These projects span curriculum development, professional learning, research, and Indigenous and land-based learning, strengthening climate education at multiple levels.



The funded projects include the development of 10 new Climate Change Education courses (8 credit courses, 1 MOOC, and 1 CEGEP bridge course) and 5 professional development collaborations, such as a climate action summit, a podcast initiative, and a multi-day climate camp. Additional outputs include an open-access resource library of trauma-informed Climate Change Education children's books and a seasonal calendar of Land-based pedagogy. Several of these projects have been showcased in webinars to inspire and inform educators about innovative CCE practices.

List of Accelerating CCE Projects:

Cape Breton University - Enhancing Climate Change Education in Teacher Education through Community Partnerships and Networks / Université du Cap-Breton - Renforcer l'éducation aux changements climatiques dans la formation des enseignants grâce à des partenariats communautaires et réseaux This project aims to address the need for Climate Change Education to be grounded in social justice and a local context. The participatory symposium brings together educators, youth, community organizations, and Indigenous leaders to emphasize the importance of collaboration on the topic of climate change. Through the sharing of Mi'kmaw principles of Netukulimk (sustainable living) and Etuaptmumk (two-eyed seeing) the symposium aims to form partnerships and formulate action plans that advance Climate Change Education in Teacher Education.

St. Francis Xavier's University - Podcasting for Climate Change Education / Université St. Francis Xavier Podcasts pour l'éducation aux changements climatiques

In recognizing the power and role of education to transform practice in addressing the climate crisis, this project provided the Faculty of Education at St. Francis Xavier University with an opportunity to deepen Climate Change Education (CCE) and to build the capacity and knowledge of faculty and teacher education using podcasting. In addition to an initial workshop that focused on supporting faculty to integrate podcasting for climate change education in their courses, another three-part workshop series entitled Podcasting for Climate Change Education was developed by request from faculty and covered 1) Storytelling, Social Change & a Community Based Approach; b) Hosting and Interviewing; and c) Recording and Editing. The workshop sessions were undertaken in-person and online to support faculty and students to explore podcasting production as a medium to integrate climate change education in curriculum and community-based research. Sessions were grounded in social and climate justice and engaged participants to deepen knowledge and relationality for climate action and activism.

St. Thomas University - Climate Change Education (CCE) Initiative / Université St. Thomas - Initiative pour l'éducation aux changements climatiques (ECC)

The Climate Change Education Course offered at Saint Thomas University worked with the Climate Action Group at Harbour View High School to provide pre-service teachers with practical school based experiences. The partnership aimed to provide students with the opportunity to plan and facilitate sustainable initiatives that include garden/greenhouse revitalization, Indigenous led talking circles, workshops in upcycling, and an art and music collective focusing on the theme of climate resilience. The project culminated in a community celebration that features student performances, Indigenous blessings, and a sustainable lunch. This project enhanced the training of 30 pre-service teachers and 20 practicing teachers by providing them hands-on experience designing and implementing climate change education projects. Additionally, this project aimed to enhance community engagement by involving over 275 K-12 students and educators in collaborative, sustainability-themed activities resulting in the development of a culture of environmental stewardship and relational learning. Students of Harbour View High School benefit from the long term educational tools produced from this project including revitalized gardens, greenhouses and foodlabs.

Université du Quebec en Outaouais - Inter-order Eco-citizen Training to Promote a Fair Socio-Ecological Transition / Université du Quebec en Outaouais - Formation écocitoyenne interordres pour favoriser une transition socioécologique juste

The interdisciplinary and inter-institutional eco-citizen training project has enabled the implementation of

an innovative programme of education on climate change and eco-citizenship for students of the Cégep de l'Outaouais and the UQO. Between August 2024 and February 2025, nine 1-credit courses were developed, including six new ones on environmental education, psychosocial intervention in nature and feminist and indigenous epistemologies in the face of climate change. Offered in a university environment and in the field, these courses promise to attract a significant number of students and arouse strong interest among teaching staff.

Université du Québec à Rimouski + Université du Québec en Outaouais / <u>Setting Up a Free Training Program, Online and In French in Climate Change Education (MOOC-ECC) for Teachers; Mettre en place une formation gratuite, en ligne et en français en éducation aux changements climatiques (MOOC-ECC) à <u>l'intention des enseignantes et des enseignants</u></u>

This project focused on developing a free and accessible online course that addressed the lack of French-language training in Climate Change Education for teachers. By building on prior work, the online course aimed to equip educators with strategies to incorporate Climate Change Education into their classrooms through transformative, interdisciplinary approaches. The six-part series included themes such as environmental education principles, curriculum design, and Indigenous perspectives, which aligned with Quebec's professional competency frameworks and UNESCO's Sustainability Competencies. Through the formulation of an open, online Climate Change Education Course, this project aimed to provide an accessible French training resource for 90,000 practicing and 2,000 pre-service teachers in Quebec. It enabled French-speaking educators to gain skills to develop eco-citizenship in their students, helping to align sustainability with educational goals. Through the project's collaborative development, the course included transferable materials that ensured sustained impact and usability.

University of Ottawa - Climate Change Education: Fostering a Community-based & Partnership-Oriented Approach in/for Teacher Education / Université d'Ottawa - Éducation aux changements climatiques: favoriser une approche communautaire et partenariale dans/pour la formation des enseignants Following the launching of the Year of Action for Education & Climate Action, the Faculty of Education has developed an Action Plan for Education & Climate Action. One of the many actionable strategies included in this plan is the offering of a new elective course in Environmental Education and Climate Action in both Teacher Education Program (English) and Formation à l'enseignement (French). The English course has been created and the approval process for the French version has been initiated. In addition, we have been working on developing and strengthening community partnerships with local school administrators, teachers, environmental organizations, climate education experts and activists, businesses, and Indigenous Elders and Knowledge Keepers to create opportunities for joint socio-ecological action, workshops, seminars, and the development of teaching resources (videos, lesson plans, template course syllabus, and course survey). On such example of such collaboration is the upcoming Climate Action Professional Learning Conference (PLC) event* that will take place on April 3rd. Finally, the funding received has also allowed for the continuation of the public consultation phase of the plan. Notably, all the opportunities (present and future) listed here are meant to enhance B.Ed. students' understanding and first-hand perception of the destructive impact of climate change on the relationship of humans with the planet. They evidence the urgency of climate change education and equip students to incorporate real-world examples (e.g. case studies and testimonials) related to climate change in their teaching repertoire. Therefore, they may ultimately support the integration of climate change topics into other courses within the teacher education curricula.

Ontario Tech University – Indigenous Knowledge, Environmental and Sustainability Education Course / Université technique de l'Ontario - Cours sur les savoirs indigènes, l'éducation à l'environnement et à la durabilité

The objective of this project was to develop a new course for teacher candidates in our Faculty of Education program that addressed both Indigenous Knowledges and Environmental and Sustainability Education. This 36-hour course was offered in Fall 2024 to all 250 teacher candidates at Ontario Tech.

Ontario Institute for Studies in Education - Climate Camp: Deepening Professional Learning in Climate
Change Education for K-12 Teachers / Institut d'études pédagogiques de l'Ontario - Camp climatique :
Approfondir l'apprentissage professionnel dans le domaine de l'éducation aux changements climatiques pour les enseignants de la maternelle à la 12e année

This project aimed to integrate Indigenous education and sustainability principles into the teacher education curriculum. It developed and implemented two mandatory half courses: Environmental Sustainability Education and Indigenous Education, as a way to ensure all teacher candidates gained foundational knowledge in these critical areas. The creation of two mandatory courses ensured the universal exposure of all teacher candidates in the teacher education program (approximately 250 annually) to Indigenous ways of knowing and sustainability practices. By connecting local Indigenous communities and school boards, the project facilitated authentic learning for teacher candidates, allowing them to apply Indigenous knowledge and sustainability principles in their teaching practices. Additionally, the project provided professional development opportunities for faculty by offering 60–70 members the guidance needed to integrate Indigenous education and sustainability practices into their courses and teaching.

York University – Rooted and Rising Co-Design Labs for Climate Change Education / Université de York Laboratoires de co-conception "Rooted and Rising" pour l'éducation aux changements climatiques With the Accelerate grant, the Rooted and Rising (R+R) team facilitated two 'design-days', bringing together alumni (9) and advisors (5) with passionate in-service teachers from GTA districts in grades 7-12 (4) and educational experts (4) to co-develop an outline for unique CCE teacher training. R+R developed a training centered in caring and disruptive climate and environmental pedagogies and guided by the findings of the National Roundtable on Climate Change Education in Teacher Education (2023). The first design day took place in person at the Global Strategy Lab at York University, and focused on curriculum and format, while day two took place online with a focus on financial sustainability. Out of these design days, we created an eight-week program which was then paired down to a two-day professional development training. We also developed a pathway for sustainably offering these trainings in partnership with school boards. These trainings will bring Rooted and Rising's nourishing approach to the formal education system, introducing teachers to the methods we have developed through co-learning with young climate leaders.

<u>Wilfred Laurier University – A Course in Climate Change Education in Teacher Education / Université</u> <u>Wilfred Laurier - Un cours sur l'éducation aux changements climatiques dans la formation des enseignants</u>

This project focused on designing a unique credit course on Climate Change Education for Bachelor of Education students. The course integrated climate change topics into the curriculum and explored connections to the UN's 17 Sustainable Development Goals. Additionally, the project created resources for K–12 education and built partnerships with various departments to promote sustainability and environmental justice. The development of the new course provided BEd students with important

knowledge and strategies to support the incorporation of climate change issues into their teaching practices. By incorporating place-based education, outdoor learning, and local environmental engagement, students gained a deeper understanding of climate change at both local and global scales. Additionally, the project produced a resource bank that could be shared with associate teachers, school boards, and community educators by collecting materials on environmental education developed within the course. The project also created collaborative relationships between multiple departments at the university, including Social Work, Environmental Studies, and Indigenous Studies. Its partnerships with local organizations provided professional development opportunities for both pre-service and in-service teachers.

<u>Laurentian University – Developing Climate Change Education Leadership Among Pre-service Teachers – Learning from the Land / Université Laurentian - Développer le leadership en matière d'éducation aux changements climatiques chez les enseignants en formation – Apprendre de la terre</u>

This initiative aimed at developing leadership in Climate Change Education for pre-service teachers at Laurentian University. By developing a unique course that combined both land-based Indigenous teachings with sustainability education, the project focused on developing curriculum that integrated teachings from Indigenous Elders and Knowledge Keepers as a way to highlight the importance of incorporating Indigenous knowledge in addressing climate change. This project provided students with knowledge and strategies that could be used to integrate Climate Change Education across different subject areas. By designing a course that incorporated and utilized the knowledge of Laurentian faculty from multiple disciplines, this initiative gained institutional support, resulting in Climate Change Education becoming embedded into general education at Laurentian University. Additionally, through the exploration of Indigenous perspectives on climate change and sustainability, this project aligned Climate Change Education with Indigenous ways of knowing, resulting in a holistic understanding of climate change for students. With a focus on land-based learning and the involvement of Indigenous Elders, this initiative produced a new generation of educators capable of leading sustainable change in their communities grounded in accurate local knowledge. The implementation of this course is projected to lead to long-term impacts, with an estimated 500 students expected to participate in the Climate Change Education Leadership course over the next five years, resulting in lasting impacts in classrooms across Ontario.

<u>University of Winnipeg – Accelerating Climate Change Education in the Manitoba Education System</u>
<u>Webinar Series / Université de Winnipeg - Accélérer l'éducation aux changements climatiques dans le système éducatif manitobain série de webinaires</u>

This project was developed by Will Burton, with a focus on building a foundation for Climate Change Education for pre-service teachers enrolled at the University of Winnipeg. The project is divided into two parts: (1) Utilize a survey to assess the levels of knowledge already residing in pre-service teachers and their willingness to to teach Climate Change Education and (2) provide these teachers with a professional development webinar series with the goal of filling in the gaps in their climate change education knowledge. Part one of this project, the survey, has led to increased awareness by providing baseline data on the levels of understanding and readiness of pre-service teachers to teach Climate Change Education. This data can be utilized to facilitate the development of teacher training materials and climate change curriculum to build a strong foundation of Climate Change Education at the University of Winnipeg. Part two, the webinar series, provides pre-service teachers with professional development opportunities through the exploration of a variety of topics including Indigenous perspectives, eco-anxiety,

and age appropriate climate change education. With the project projecting to reach over 100 participants, the webinar series will significantly impact University of Winnipeg pre-service teachers' confidence and competency in Climate Change Education. By opening the webinar series to all 37 Manitoba school divisions, this project provides a broader reach by providing professional development opportunities not just to pre-service teachers studying at the University of Winnipeg, but also in-service teachers across Manitoba. This wide reach offers opportunities to further embed Climate Change Education into K-12 pedagogies across the province.

Concordia University of Edmonton - Opening Spaces for Climate Change Education in Alberta / Université Concordia d'Edmonton - Ouvrir des espaces pour l'éducation aux changements climatiques en Alberta Climate change education (CCE) is crucial in responding to global challenges brought about by the climate crisis, yet integrating it into teacher education remains challenging, especially in Alberta. The project was designed to provide preservice teachers and practicing teachers with innovative approaches through a stand-alone course to promote holistic understanding, climate change education, and intersectional teaching strategies. The objectives met for this project were 1) design a course in the faculty of education for preservice and in-service teachers and 2) develop resources and community connections to facilitate the course. In addition, a literature review of academic and grey sources related to climate change education was conducted, including a review of the current course offerings of faculties of education in Canada.

Mount Royal University – Land as Relation in Climate Change Education in Teacher Education / Université Mount Royal - La terre en tant que relation dans l'éducation aux changements climatiques dans la formation des enseignants

In partnership with the Brown Bear Woman Cultural Event Centre we hosted a seasonal calendar of Tsuut'ina Elder-led land-based learning opportunities for teacher candidates, mentor teachers, and university faculty and staff. The events occurred on the Tsuut'ina Nation. The fall events occurred on Oct 4th, 21st, 23rd, and 25th. The winter events took place on January 17th and 24th. The fall events included Elder storytelling, Tipi teachings, and plant walks. The winter events included Elder storytelling and medicine pouch making. In total 207 participants attended the learning series. 144 attendees took part in the fall events. The composition of the participation was made up of 99 teacher candidates, 39 mentor teachers, 2 school administrators and 4 MRU faculty and staff. 63 participants attending the winter events comprised 18 teacher candidates, 32 mentor teachers, 2 school administrators, 10 MRU faculty/staff, and 1 external partner.

<u>University of Northern British Columbia - Climate Change Education in Teacher Education (CETE)</u> / <u>Université du nord de la Colombie-Britannique - Éducation aux changements climatiques dans la formation des enseignants</u>

The Climate Education in Teacher Education project utilizes design based research to enhance Climate Change Education for teachers in northern B.C. By focusing on decolonization and Indigenization the project focuses on incorporating Indigenous Elders, knowledge holders, and educators to develop strategies that address the climate crisis. The project will include interviews, workshops, design practices aimed at the inclusion of Indigenous perspectives and expanding Climate Change Education across northern B.C. This project helps to Indigenize climate education by integrating Indigenous knowledge into the curriculum, aligning with Truth and Reconciliation Commission Calls to Action as well as northern B.C educational goals. Additionally, the project enhances educator's professional development by revising

education courses to support Climate Change Education within the School of Education. Through the collaboration of over 800 educators, students, Elders, and community members, this project provides positive changes to teaching practices, increasing participation in climate change initiatives.

Vancouver Island University – Operationalizing the Accord on Education for a Sustainable Future in Vancouver Island University Teacher Education Programs / Université de l'île de Vancouver - Mise en œuvre de l'Accord sur l'éducation pour un avenir durable dans les programmes de formation des enseignants de l'Université de l'île de Vancouver

This project's focus is on addressing the lack of accessible teaching resources for Climate Change Education through the curation of a collection of children's picture books. These picture books aim at incorporating the ACDE Accord on Education for a Sustainable Future's principles by utilizing Indigenous knowledge and promoting social justice. The goal is for these resources to be shared and have open access, made available through Vancouver Island University's library. This project enhances the availability of Climate Change Education resources by reviewing around 200 picture books through an Indigenous and sustainable focused lens. As a result, this project will generate culturally relevant resources for Climate change education based on solid pedagogic approaches. The project, additionally, has a direct impact on teacher education, in that, the curated library can be utilized to educate pre-service teachers in courses of sustainability and critical literacy. Through integrating these resources into teacher education, this project will ensure preparedness in teachers for teaching Climate Change Education through the use of accessible and age-appropriate materials. This project also aims at utilizing community engagement by inviting community educators, especially Indigenous educators and literary specialists, to share their knowledge in order to ensure the collection of resources highlight diverse perspectives while remaining relevant to various community contexts.

<u>University of Victoria – Climate Change Education: Collaborative Course Development</u> / <u>Université de Victoria - Éducation aux changements climatiques: Développement de cours en collaboration</u>

This project focused on integrating Climate Change Education into the University of Victoria's existing teacher education program. The project aimed to accomplish two components: creating a Climate Change Education course for pre-service teachers, and providing workshops on food security and art-based responses to climate change. The developed course was designed to provide educators with the knowledge and skills to teach Climate Change Education with a focus on social justice, Indigenous perspectives, and community engagement. This project enhanced curriculum by introducing approximately 150 teachers annually to Climate Change Education within their teacher education program, equipping them with the tools needed to integrate climate change into their teaching practices. The course and workshops also emphasized the intersectionality of climate change, fostering a deeper understanding of the climate crisis and empowering educators to address systemic inequalities. The project further enhanced cultural understanding by incorporating Indigenous ways of knowing and land-based practices into the curriculum, strengthening relationships between teachers and local Indigenous communities.



Teacher Education Webinar Series

To support widespread engagement in CCE, the ACCE-TE project designed and delivered two national webinar series tailored for K-12 educators and teacher educators. Across 2023 and 2024, the series offered 25 professional learning webinars in total:

- o 13 sessions for K-12 teachers, with 1,241 registered participants
- o 12 sessions for teacher educators, with 1,222 registered participants

These webinars featured 55 presenters, including practicing teachers, curriculum consultants, school board leaders, and CCE experts from faculties of education. The series provided accessible, high-quality professional development on topics including socio-emotional learning, Indigenous and land-based perspectives, climate justice, and pedagogical innovation in CCE.

Recorded sessions were accessed 1,927 times, indicating ongoing interest and utility beyond the live events. Sessions were designed to be interactive and practical, supporting participants in embedding climate change content and critical pedagogies into their own educational contexts.



Teacher Education Webinar Series

This webinar series focuses on meeting the needs of those working in pre-service Teacher Education programs (e.g. teacher educators/faculty members, deans, and graduate students). It centres on the development of curricula, pedagogy and promising practices in CCE by featuring scholars, instructors and researchers from Canadian and international teacher education programs who are leading CCE in their programs.

1. <u>Sustainability 101: From Sustainability to regeneration or bust?</u>

October 30, 2023.

Since catching fire in the late 20th century, the notion of sustainability is now firmly set as a recognizable and necessary design principle in virtually all aspects of modern society, from food to textiles to tourism. Some argue that this dawn of sustainability has been nothing less than revolutionary, while others consider the notion to be vague, easily exploitable, and largely a new packaging of business as usual. In this talk Dr. Loring will ask you to consider that both can be true at the same time. He will discuss how culture and world-view change works, explore the recent trajectory of sustainability, ways that it has been redefined and reimagined over the last few decades, and offer thoughts regarding lessons learned and prospects for the future —such as its relationship with the emerging notion of regeneration

2. <u>Implementing Climate Change Education Courses in Faculties of Education</u>

November 22, 2023

After a summer of wildfires, heatwaves and floods, introducing Climate Change Education (CCE) as a part of pre-service teacher education has never been more critical. Join Dr. Paul Berger and Dr. Ellen Field as they share their experiences and research (forthcoming, 2024) into implementing CCE courses in Lakehead University's pre-service teacher education program. They will introduce how to engage students in the grim prognosis, political chaos, available solutions, climate activism, and emotional processing practices, all components of CCE, as well as invite participants to share their thoughts on climate emergency teaching in their programs.

3. The Canada Context: Climate Change Education in Teacher Education

January 18, 2024

Why is consensus on the need for Climate Change Education (CCE) in Teacher Education rapidly growing around the world? And what does CCE look like in the context of teacher education in Canada? Join panelists David Zandvliet (SFU), Carrie Karsgaard (CBU), Geneviève Therriault (UQAR), and Hilary Inwood (OISE) as they discuss developments in CCE in teacher education in their regions, and what needs to be done to further develop this critical field.

4. Emerging Principles & Pedagogies of Sustainability Teaching

February 15, 2024

Shifting conceptions of sustainability make teaching it a challenging undertaking, yet there are growing calls for faculty in every discipline in higher education to integrate it into their course curricula and pedagogy to address the climate crisis. What are the key principles and pedagogical strategies that inform teaching related to sustainability? How do they change from one discipline to another? Panelists Blake Poland (Public Health), Sherry Ann Ram (Engineering), and Alexandra Rahr

(Humanities) from the University of Toronto discuss the ways in which sustainability principles inform their teaching practices in their disciplines

5. Reconciliation and Climate Action in Teacher Education

March 6, 2024

How are truth and reconciliation connected to addressing climate change and its impacts? How do decolonial approaches intersect with climate justice education within educational spaces? How can reconciliation be integrated with climate action in teacher education? Join Indigenous scholars, Drs. Joshua Hill (Mount Royal University), Sharla Mskokii-Kwe Peltier (Lakehead University), and Kaviq Kaluraq (Nunavut Arctic College) to explore these questions in a panel discussion on the critical roles Indigenous Knowledges and ways of Knowing and Being are playing in Climate Change Education in preservice and inservice teacher education.

6. Climate, Complexity & Relational Accountability

April 10, 2024

The climate and nature emergency are results of the ongoing systemic violence that we perpetuate towards one another and the planet we are part of. How can we show up to each other and to the planet differently in these challenging times? Led by Dr. Vanessa Andreotti, Dean of the University of Victoria's Faculty of Education, this webinar introduces a methodology designed to assist us in confronting the painful realities of climate destabilization and biodiversity loss, and the complexities of addressing these challenges, without feeling overwhelmed or immobilized. This methodology calls us to take 7 steps back from what can hinder our capacity to navigate complexity, to coordinate effectively and to exercise intergenerational responsibility. It also invites us to take 7 steps forward (or aside) to show up to each other and the planet with humility, patience, discernment, humour, compassion and accountability

7. Earth-wise and Heart-centred Teacher Education in the Anthropocene

October 16, 2024

We are in urgent need of teacher education that fosters climate stewardship and a sense of responsibility to the more-than-human-world. Join Alysha Farrell (Dean of Education, Brandon University) as she discusses ways for pre-service teachers and teacher educators to call in the wild unknown to support and enrich Climate Change Education (CCE). In the webinar, Alysha shares a process called Rooted Inquiry using nature-based storytelling. She hopes to contribute to the growing conversation about loosening teacher education from the grips of anthropocentrism and to the cultivation of CCE pedagogies that are rooted in justice and joy.

8. Accelerating CCE initiatives in Canadian Faculties of Education - Part 1

November 13, 2024

Join us for an inspiring webinar showcasing the innovative projects from the first round of Accelerator Grant funding provided by the Accelerate Climate Change Education in Teacher Education. This opportunity has supported faculty members in Canadian Faculties of Education with the financial support needed to advance a wide variety of Climate Change Education (CCE) initiatives within their institutions. During this session, we will hear from Dr. Hart Banack (UNBC), Dr. Grant Williams (St. Thomas University) and Dr. Geneviève Therriault (Université du Québec à Rimouski) and their collaborators/colleagues about how they are further integrating climate education into teacher education in a range of formats. Don't miss this chance to learn from and engage with leading

educators who are driving change through their creative and impactful projects.

9. Accelerating CCE initiatives in Canadian Faculties of Education - Part 2

January 13, 2025

Join us for an inspiring webinar showcasing the innovative projects from Accelerator Grant funding provided by the Accelerate Climate Change Education in Teacher Education. This opportunity has supported faculty members in Canadian Faculties of Education with the financial support needed to advance a wide variety of Climate Change Education (CCE) initiatives within their institutions. We will hear from Dr. Carrie Karsgaard (CBU), Dr. Kathy Sanford (UVic) and Dr. Teresa Fowler (Concordia U of Edmonton) and their collaborators/colleagues share their climate change education projects.

10. Exploring Historical, Political, and Pedagogical Dimensions of CCE

February, 25, 2025

North American researchers share their exploration of the challenges and opportunities in advancing Climate Change Education (CCE) in teacher education through three critical papers. These papers investigate historical and political dynamics shaping climate change's place in education, present a heuristic of promising pedagogical practice, and examine how political orientation shapes teacher practice. Experienced and emerging scholars David Long, Joe Henderson, Andrea Drewes, Ellen Field, and Sidney Howlett share their recent findings for addressing the complexities of CCE in teacher education.

11. Our Great Work of Transformation: Anticipating the Symbiocene Era

March 6, 2025

We are called to the "Great Work" of transformation, where we situate our way of being within the story of the cosmos, the Earth, and the fate of species including the human species. How might we engage transformative learning to foster the transition from the Holocene/ Anthropocene eras to an anticipated Symbiocene era, where we learn to live in symbiosis with the living Earth? In this webinar, Dr. Elizabeth Lange, a transformative sustainability education leader, details some of the new "stories," principles and practices of transformative teaching for sustainability and climate justice, from a relationality approach. Organized in collaboration with the University of Toronto's CoP on Sustainability Teaching.

12. Accelerating CCE: Inspiring Professional Learning Case Study Projects

March 20, 2025

This webinar showcases case studies from Canadian educators who have successfully implemented professional learning programs in Climate Change Education (CCE) for pre-service and in-service teachers. These real-world examples will highlight diverse approaches, such as multi-day workshops, faculty partnerships, and place-based learning. During this session, we hear from Dr. Anne Corkery, Dr. Hilary Inwood, Dr. Travis Fuchs and Tom Harding as they offer insights into the context, impact, and future directions of these programs in advancing CCE in teacher education. Attendees will be encouraged to think about how they might adapt these successful practices in their own educational contexts and contribute to the ongoing efforts to integrate climate change education across Canada.

K-12 Education Webinar Series

This free webinar series is aimed at meeting the learning needs of pre-service and in-service teachers by focusing on a range of issues and practices related to Climate Change Education in K-12 education. Webinars in this series will draw on the expertise of teachers, curriculum consultants, school board leaders and teacher educators who are facilitating Climate Change Education allowing them to share promising practices in elementary and secondary classrooms and across school boards. This series is being offered in partnership with the Toronto District School Board's collaboration with OISE at the University of Toronto.

1. A Panorama of Effective Strategies for Climate Change Education

September 26, 2023

Climate change education is essential for an effective and equitable approach to addressing the climate crisis; however, many K-12 educators report not having access to teaching materials or local resources to teach about it. Join Lindsey Kirkland, Climate Change Education Manager at Climate Generation, as she offers a broad overview of the teaching practices that ignite climate literacy and advocacy at the local level. Educators will leave this webinar with a broad sense of the different components of climate change education and real-world examples and resources of how they can bring this global crisis into a local focus.

2. <u>Hope-Filled, Whole-School Climate Action: Report from a Pilot Program in Canadian Independent</u> Schools

November 15, 2023

The Climate Action Accelerator Program (CAAP) offers an approach to help K-12 schools build and implement a holistic climate action plan. Intergenerational school teams lead their communities in creating a compelling vision for the role their school can play in addressing the climate crisis, and then setting goals and plans through their school culture, physical infrastructure, and formal and informal learning opportunities for both students and adults. In this webinar, founder Michèle Andrews shares an overview of the CAAP, promising practices in K-12 schools, available resources, and lessons learned since the CAAP launched. She will also share her hopes for how this work can support teachers and schools going forward. Michèle will be joined by teachers who have been part of the CAAP pilot who will share their learning and take questions

3. <u>Learning from Living Schools: Connecting Schools to Nature & Wellbeing for All</u>

December 4, 2023

Living in a climate crisis requires a radical re-imagining of education, one that is centred on a vision of well-being for all. 'Living Schools' is an innovative model that does just this, by reconnecting people, communities and nature to become holistic learning environments where students and educators are collaborating on real world solutions to climate change. Join Drs. Catherine O'Brien and Patrick Howard as they introduce their concept of 'Living Schools', and learn from teachers who are implementing this model in their classrooms and schools.

4. Inspiring Hope Through Action

January 23, 2024

The recent UN Climate Conference, COP28, ended in December 2023, the Earth's hottest year on record. Issues like climate change, biodiversity loss, and environmental inequity, are enormous topics to tackle on their own, let alone addressing them as interconnected crises. Jane Goodall's message of hope - "Every individual matters. Every individual has a role to play. Every individual makes a difference" – is a great starting point for this critical work in education. In this webinar, join Bella Lam, CEO of the Jane Goodall Institute of Canada, to learn strategies for how to work with young people to understand these global issues while empowering them to take actions in their local communities.

5. Catalyzing Change: Climate Action Grantees/Projects Showcase

February 13, 2024

Join us to learn about some of the impactful projects funded by the Youth Climate Action Grants that are available to students through the City of Toronto. This webinar showcases initiatives aimed at addressing climate change in TDSB schools, led by students. Gain insights into possible projects and learn more about how you and your students can leverage available funding opportunities to support climate action

6. School Board Climate Action Plans

March 7, 2024

In this webinar, participants will hear from Lakehead University's Faculty of Education researchers on a new report that analyzed 380 school boards' environmental, sustainability, and climate policies. Representatives from Richmond District School Board (British Columbia) and Toronto District School Board (Ontario) will share how they are approaching climate action planning. Resources on climate action planning and a pledge that superintendents can make to improve climate policies in their district will be shared.

7. Climate Ready Schools with EcoSchools Canada

April 16, 2024

Join us for an inspiring webinar showcasing the efforts of "climate ready schools" where climate action is seamlessly woven into student learning experiences. In this engaging session, K-12 educators from across Canada (Kit Cairns, Mélanie Doucet, and Charlotte Cavalier) will share their innovative approaches to integrating climate education into their programming. Emilie Rayner from EcoSchools Canada will share how certification can support climate action. Whether you are a seasoned educator looking to enhance your curriculum or a newcomer seeking guidance on where to start, this webinar offers invaluable insights and resources. Join us and be part of the movement towards climate-ready schools!

8. Teaching & Leading Climate Change Education in the TDSB

May 22, 2024

Teachers have critical roles to play in adapting to and mitigating the climate crisis - education is key to support young people who will become agents of change in these unprecedented times. This webinar shares the innovative work of TDSB teachers and students who are finding creative ways to teach about and lead climate change education in their classrooms, schools and communities. Teachers featured include Nancy Gillis, Dan Kunanec, and Beka Ly. Teachers from the TDSB Climate Literacy & Leadership team and the Action Research Team will share their inspirational projects from the year.

9. Navigating Climate Emotions in the Classroom

September 25, 2024

Climate change impacts students' emotional well-being in dynamic ways, and can lead to feelings of anxiety, grief, or anger alongside feelings of hope and a desire for action or change. This webinar is designed for K-12 educators who want to create space for students to identify, understand, and express their feelings about living through a time of rapid environmental change. Meghan Wise, from the Climate Psychology Alliance North American network, will share key insights into the "Educator's Guide to Climate Emotions," introducing strategies to support students in fostering a sense of agency, efficacy, and purpose while navigating climate feelings and engagement with climate issues. Participants in this webinar will deepen their understanding of climate emotions, expand strategies for supporting students in navigating climate emotions, and the importance of nurturing opportunities to channel emotions into constructive action individually and collectively.

10. Climate Change Ed in K-12 Education (Outdoor Learning School) October 22, 2024

Learn about integrating Climate Change Ed (CCE) into your teaching practice in this virtual webinar, which offers inspiring ideas for CCE for elementary teachers and their students. It will introduce promising practices from K-8 teachers that connect CCE to socio-emotional learning, Indigenous ways of knowing, climate justice, critical hope and age-appropriate climate action. Offered by Hilary Inwood and Maria Vamvalis of Accelerating CCE in Teacher Ed, which supports and accelerates Climate Change Education (CCE) in Teacher Education. Educators at all levels, from Kindergarten to higher education, are well-positioned to lead the cultural shifts needed for equitable, just and sustainable forms of living on the Earth. The ACCE-TE team supports professional learning in CCE for faculty and students in preservice teacher education programs, and for those already in the teaching profession (in-service teachers).

11. <u>Greening Every Curriculum: Guidance to Teach and Learn for Climate Action</u> December 5, 2024

UNESCO has recently released the "Greening Every Curriculum: Guidance to Teach and Learn for Climate Action" framework. A green curriculum integrates climate mitigation and adaptation in teaching and learning from all levels of education as well as in teacher training. It emphasizes the interconnections between the environment, economy, and society, engaging students across cognitive, socio-emotional, and behavioral domains to inspire action for sustainability. Join our webinar to hear from three co-authors, Dr. Felisa Tibbitts, Dr. Christina Kwauk, and Dr. Ellen Field as they discuss the key principles for integrating holistic climate change and sustainability into curricula, with the objective of 90% of countries adopting green curricula by 2030.

12. <u>Climate Kind Pedagogy: A Novel Framework for Advancing Climate Education</u>

January 21, 2025

Climate change and the related social impacts have necessitated a re-think of traditional pedagogies. Educators are faced with the challenge to not only engage learners in these multifaceted conversations, but to support and address the range of emotions and pedagogical complexities that involve socio-scientific realities. Join Dr. Kshamta Hunter (UBC) to learn about the Climate-Kind Pedagogy, which synthesizes climate, kindness and justice oriented educational approaches. This comprehensive pedagogy addresses the pressing need for both educators and learners to reconceptualize their relationship with one another and the planet, while offering a framework for embedding Climate Education in teaching and learning.

13. Connecting Energy Literacy and Climate Change: Tools for K-12 Educators

March 18, 2025

As the world transitions to sustainable energy solutions, it's essential to equip students with a deep understanding of energy concepts -renewable energy, conservation, environmental impact- and how these intersect with climate change. This informative webinar explores practical strategies for embedding energy literacy and climate change education into K-12 curricula as teachers prepare for leading learning around Earth Hour in March and Earth month in April. Educators will gain tools and insights to support critical energy education in their classrooms.



The Accelerating Climate Change Education in Teacher Education (ACCE-TE) project has supported Climate Change Education (CCE) in teacher education by funding and sharing case studies of innovative professional learning programs that target primarily in-service teachers. These six case studies and four vignettes, written by teacher educators across Canada, highlight promising CCE programs and practices that have already been implemented—offering insights into their theoretical foundations, curriculum design, and impact. From multi-day institutes and Land-based learning programs, to university-school board partnerships and experiential workshops, these case studies serve as open-access resources for educators looking to adapt successful models to their own contexts. Explore these case studies in English or French to learn about these promising programs and practices already underway in Climate Change Education across Canada.

Case Studies:

The Climate Collaborative for Gr. 7-12 Educators

The Independent Schools Association of British Columbia

Created in 2020, the Climate Collaborative for Educators professional development (PD) program ('the Collaborative' for short) aimed to enhance Gr. 7-12 teachers' abilities to integrate Climate Change Education (CCE) into their classrooms and schools in British Columbia (BC). The Collaborative began as an initiative driven by the Kimberley Foundation (KF), Tom Harding (an educator from West Point Grey Academy) and Travis 1 Fuchs (who at the time was a doctoral student at the University of British Columbia). Each year, the program brings together subject-specific experts (private sector innovators, scholars, education practitioners, Indigenous knowledge holders and community-grounded change-makers) in CCE, climate science, activism, policy, and environmental justice domains who can speak to the professional learning's overarching imperative of hope and resilience in the face of the climate crisis. They work with educators to create a community of practice centred on designing fruitful student learning experiences.

Professional Learning on Haida Gwaii

Simon Fraser University

This case study describes a unique educational experience on Haida Gwaii — an archipelago located on the westernmost fringe of British Columbia forming part of the Pacific Rim. It describes important aspects of a community unique for its connections between culture, ecology and the land. For this reason, it is the location for a longstanding environmental education program offered in a partnership between the Haida Nation and Simon Fraser University's Faculty of Education. In this case

description, we share excerpts of this in person teacher-education program through the 'science and stories' that inform our experiences there. Inherent in these perspectives are the voices of Haida leaders, students and academics who play key roles within the design and implementation of the program. Since its inception twenty years ago, the most recent program (24 students) involved a mix of pre-service and in- service teachers offered in August 2024. The story aspect of this case is especially important as we continue our work in decolonizing climate, environment and sustainability education. This case study also presents an ecological (place-based) framework for environment and climate education, its assertion is that grounding learning in a sense of physical and cultural environments are an essential component to a balanced view of environmental learning and teacher professional development. Through a combination of science and story, the perspectives inherent in a critical (place-based) framework on Haida Gwaii resist marginalization as our work takes the form of an epistemology rather than a curriculum implementation strategy.

The Climate Action Accelerator Program

Doornumberone.org

The Climate Action Accelerator Program (CAAP) was designed to support schools, as whole institutions, to build and begin implementing a climate and nature action plan. It is planned and delivered by DoorNumberOne.org, which was incorporated as a non-profit in 2020, and received charitable status in 2023. These plans include an aspirational vision for a thriving future and initiatives to support a transformation in school culture, curricular and co-curricular programs, buildings and grounds, policies and practices, governance, and community programming. CAAP began with independent schools primarily because they are intact institutions with agency over their policies, program, culture, buildings and grounds in a way that public schools do not have. It was our intention to find the leaders in the K-12 independent school networks willing to pioneer an approach to whole-school, system-wide change, and then share the learning and support other schools across the sector, including in public education, to follow. The CAAP is designed and facilitated by Danielle Delhaes, Stephanie Foster, Barb Macintosh, and Michèle Andrews, each with decades of complementary experience in schools as teachers, in operations and administration, as well as a variety of other organizational and community experience.

Climate Camp for K-12 Teachers

Toronto District School Board + Ontario Institute for Studies in Education

Since its inception in October 2017, the TDSB EcoSchools Program has collaborated with the Ontario Institute for Studies in Education (OISE) at the University of Toronto to offer a variety of professional learning opportunities for TDSB inservice teachers and OISE preservice teachers to help enact the educational components of the TDSB's Climate Action Report and OISE's Sustainability & Climate Action Plan. The most recent addition to these professional learning opportunities is Climate Camp, which was delivered for the first time in August 2024. Organized by the TDSB's Sustainability Office and Urban Indigenous Education Centre (UIEC) in collaboration with members of OISE's Sustainability and Climate Action Network, this Camp offered K-12 teachers and OISE graduate students three days of rich collaborative inquiry focused on CCE at the TDSB's Mono Cliffs Outdoor Education Centre in Caledon, ON. A variety of keynotes, workshops, indoor and outdoor activities offered opportunities for experiential and holistic learning to help educators prepare for teaching that centred equity, inclusion, justice and reconciliation as key tenets of CCE. By supporting the learning of these educational 'champions', the board aimed to develop teacher capacity and leadership in CCE to impact their students' learning and their influence in school communities in positive ways.

Climate Literacy and Leadership Program

Toronto District School Board +Ontario Institute for Studies in Education

The TDSB's Climate Literacy and Leadership Program (CLLP) was designed in collaboration with the Ontario Institute for Studies in Education (OISE) at the University of Toronto to support teachers to lead CCE with their students, beginning in kindergarten and continuing through grade 12. The CLLP is built on a collaborative inquiry approach, using teachers' interests, experiences and knowledge in CCE as the starting point. It aims to support teachers' ongoing learning about climate justice education, deepen their practice in leading CCE with their students, model CCE for their colleagues, as well as encourage community members to engage with mitigating and adapting to climate change locally. They are provided with four days of paid release time to engage in professional learning throughout the year, working in collaboration with other TDSB teachers, EcoSchools leaders, OISE faculty and graduate students. Engagement and feedback throughout the three days of meetings was very positive; teachers were immersed in their collaborative learning, and excited about implementing CCE in their classrooms.

<u>Using Lesson Study to Prepare Pre-service Educators for Nature-based Climate</u> Change Education

Trent University

Effective teacher preparation is essential for equipping educators with the knowledge, skills, and confidence to address Climate Change Education (CCE) and Environmental and Sustainability Education (ESE). As the urgency of the climate crisis grows, innovative approaches to teacher education are needed to ensure that future educators can integrate meaningful, action-oriented learning experiences into their classrooms. This project aimed to explore the potential of using lesson study to prepare pre-service teachers in an intermediate-senior biology course for CCE and ESE. Our focus was on fostering meaningful learning experiences for students while promoting climate adaptation and mitigation strategies through nature-based approaches in schoolyards. Specifically, we asked: Is lesson study an effective tool for preparing educators to address CCE and ESE through nature-based approaches while encouraging students to care for and engage with naturalized spaces?

Vignettes:

Exploring Climate Solutions Through Values, Systems, and Outdoor Learning

Outdoor Learning School and Store

The Yukon territory has been lacking in locally relevant CCE resources, as well as guidance on pedagogical best practices suitable for this region. Furthermore, educators have been struggling with how to navigate climate skepticism and complex climate emotions among youth and teens. Educators have also been grappling with the ever-more-sophisticated disinformation campaigns of bad-faith actors, most with ties to the fossil fuel industry. With this background, I conducted a day-long solutions-oriented and locally focused learning session with teens in April 2024, followed by a debrief with a group of educational stakeholders as a way to identify and address friction points in Yukon-based CCE.

<u>Lakehead Farm Lab Connects Teachers and Students with Garden-Based Learning</u> Lakehead University

Farm Lab, a project of Lakehead University in Orillia, is dedicated to fostering garden-based learning (GBL) through hands-on experiences, education, and community engagement. With a team consisting of university professors, contract lecturers, and an education student, Farm Lab combines various expertise to support sustainable gardening practices and food literacy education and is supported by the following team at Lakehead: Linda Grant, P/J instructor Faculty of Education, Lindsay Sargent, P/J Instructor Faculty of Education, Mellissa Spencer, BEd candidate, Jacob Kearey-Mooreland, PhD candidate and P/J Instructor Faculty of Education, Dr. Ellen Field, Associate Professor, Faculty of Education, and Dr. Chris Murray, Associate Professor, Physics Department. One of our key objectives is to integrate GBL with critical topics like Climate Change Education (CCE), providing both students and teachers with the tools and knowledge to connect environmental responsibility with academic learning.

Action Research for Transformative Climate Change Education

McGill University & Trafalgar School for Girls

This action research project was a professional learning experience and part of a graduate study on transformative Climate Change Education (CCE) in secondary schools led by PhD candidate, Stephanie Leite from McGill University and teachers, Amy Allison and Christianne Loupelle from Trafalgar School. The study was grounded in the theory of practice architectures, which asserts that individual teachers' CCE practices are enabled and constrained by systemic structures that influence classroom practices (Kemmis, 2022). Through participatory action research, the study aimed to: analyze teachers' CCE practices in terms of language, activities, and collaborations; identify the structures within and beyond the school that influence those practices; and create a participatory series of workshops for teachers to shift their practices towards transformative approaches to CCE.

Climate Change Education Otherwise

University of Victoria

As part of the Climate Education Fellowship Program at the University of Victoria, (supported by Drs. Mildred Shaw and Brian Gaines), we created a two-part workshop for local elementary educators guided by the following questions. How do we facilitate learning invitations with elementary learners that will help to repair and rebuild their relationships with the more-than-human world? How might we build children's stamina, intellectual, affective, and relational capacities to survive and thrive in a precarious future (Stein et al., 2023)?



Feedback from faculty and educators reflect impact across the ACCE-TE project areas:

Très sincèrement, je trouve ces programmes tous très pertinents. J'en profite personnellement et professionnellement. J'essaie de retirer le maximum de tous ces projets. Je pense que les milieux de l'éducation et de la formation en éducation aux changements climatiques en profitent aussi. Je participe à tous les projets énumérés plus haut, excepté les études de cas. C'est simplement que je connais moins cette initiative. J'adore toutes les ressources précieuses qui sont partagées à la suite des nombreux webinaires organisés. Je trouve que ces projets mettent bien évidence les initiatives inspirantes qui se déroulent dans les milieux scolaires à travers le pays. ~ Dr. Geneviève Therriault, Professeure titulaire, Chaire en éducation à l'environnement et au développement durable, Université du Québec à Rimouski

The Deans Accord on Education for a Sustainable Future proposes several principles: Indigenous ways of knowing, relationality, social justice, well-being, advocacy and hope. It is not always easy for teacher education programs to know where to begin with moving to ways of living in accordance with these principles. The ACCE-TE project managed to embody them all, providing examples of how teacher education might be rethought based on them. This work is important, since it shows what can be done or might be done or should be done if we take seriously the massive challenges we face. ~Dr. Richard Barwell, University of Ottawa

The ACCE-TE webinars were a particularly meaningful experience for my professional learning in the field of climate change education. These virtual community gatherings provided a rare opportunity to learn about diverse perspectives from colleagues from across Canada, deepening my understanding of how different contexts approach the integration of climate justice, Indigenous perspectives, and broader sustainability in teacher education. ~ Katrin Kohl, York University

As a recipient of a 2024 Accelerator Grant, the support and funding from ACCE-TE was invaluable in getting our project off the ground. We organized a series of webinars on climate change education for K12 pre-service and in-service teachers in Manitoba. The webinars focused on different aspects of the climate crisis - scientific, social, economic, and the impact on youth - making direct links to the Manitoba K12 curriculum. The funding meant that we could provide honoraria for our guest lecturers and offer the webinars for free which allowed us to reach a wide audience. ~ Will Burton, University of Winnipeg

I have found the ACCE-TE resources to be immensely valuable. The K-12 educator webinars were very informative and included a diverse range of topics. In addition to the content itself, providing a space for people to gather and connect allows for genuine community building to take place. As an outdoor educator who works primarily with K-12 groups, I really can't overstate how important it is to have up to date information about the needs and interests of teachers regarding climate change education. The national roundtable report and professional learning case studies were also great. We host outdoor education PD and have been in the process of developing additional CCE programming for teachers, so being able to learn from existing climate change PD practitioners has been very useful. Thanks for your hard work! - Emma White, FortWhyte Alive

J'adore le travail que vous faites! Cela me permet de me tenir à jour sur ce qui se fait actuellement en éducation à l'environnement pour la formation des enseignant.es. Mais surtout, cela me fait sentir moins seule et me motive à poursuivre. Le fait que les séminaires se réalise avec des petits groupes, qu'ils soient disponibles facilement et que des ressources les accompagnent est très utile. Honnêtement, je n'aurais pas vraiment de recommandations à faire. Un immense merci pour ce travail! ~ Dr. Emilie Morin, Université du Québec à Rimouski



The ACCE-TE project has aimed to accelerate climate change education in Canadian teacher education through a coordinated, multi-pronged approach, it has:

- Increased institutional capacity
- Strengthened educator networks
- Shared promising pedagogical innovations
- Elevated the urgency and importance of climate education

As climate change continues to impact communities across Canada and globally, equipping teachers with the knowledge, confidence, and critical perspective to address these challenges remains imperative. The ACCE-TE project offers a responsive model for collaborative, values-driven educational change.

Gratitude goes to all those who have been involved in the many components of the ACCE-TE Project, as well as to the full ACCE-TE team for their many contributions to this ongoing project: Dr. Marie Tremblay, Dr. Maria Vamvalis, Kahsenniyohstha Lauren Williams, Sarah Urquhart, Felicia Mikrogianakis, Caitlin Hastings, Daniel Paradis and Tashya Orasi, as well as support from Lakehead staff.



For more about ACCE-TE, visit the project website: accelerating-cce.ca

Explore the visual summary in the ACCE-TE Viewbook