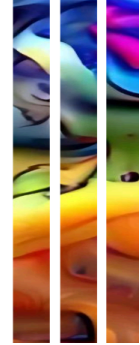


ACCELERATE / ACCÉLÉRER

CLIMATE CHANGE EDUCATION
IN CANADIAN TEACHER EDUCATION

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



CCE IN TEACHER EDUCATION PROJECT REPORT

Accelerating Climate Change Education in the Manitoba Education System Webinar Series

THE UNIVERSITY OF WINNIPEG

**ACCELERATING
CLIMATE CHANGE
EDUCATION**

in the Manitoba K-12 Education System

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WEBINAR SERIES

Oct 1	The Story of Climate Change for People in Manitoba	Oct 22	Climate Change & Climate Justice
Oct 8	Climate Change Education and the Manitoba K-12 Curriculum	Oct 29	Climate Change Education & Children
Oct 15	Growing the Good: Climate Action in K-12 Schools	Nov 5	Supporting Youth with Climate/Eco-Anxiety

eca ACCELERATE Prairie Climate Centre

Will Burton
University of Winnipeg
March 2025

Summary

The intention of this project was to provide a series of free to access webinars for K12 pre-service and in-service teachers, support staff, administrators, post-secondary educators and policy makers, specifically those in Manitoba on climate change education. Six webinars running from October 1st to November 12th were hosted on

Zoom via the University of Winnipeg Events Office. These webinars were promoted through the University of Winnipeg Faculty of Education via posters and through Nexus (an online course program), and emails to K12 school divisions and post-secondary institutions. Further promotion was undertaken through personal LinkedIn accounts.

Research undertaken by myself (Will Burton) with pre-service teachers in Winter 2024 term indicated that there was an overall lack of confidence and competency about climate change and how to teach it in the K12 system, but a strong desire to learn more. Given the climate emergency, it was deemed an imperative to get knowledge to teachers quickly, while also working in tandem at the post-secondary level to increase the presence of climate change content in courses, but with recognition that the latter takes significant time and resources.

Our intention was to provide those with expertise in six different areas of climate change education with a platform to share their knowledge and research with a wide range of stakeholders in the Manitoba K12 education system in a prompt and accessible manner. A series of seven webinars, free to access, recorded and posted for later viewing was deemed as the most effective avenue for this.

Pre-service teachers from the University of Winnipeg were offered a certificate of attendance and entered into a book draw if they attended all seven webinars.

Gaps & Needs Addressed

My recent research on climate change education in the Manitoba curriculum (Burton, forthcoming) determined that despite K12 science and social studies curriculum being 19 and 20 years old, there were ways that learning outcomes could be interpreted to offer avenues for K12 teachers to bring that content into their classrooms. At the pre-service level, research (Burton, forthcoming) indicated that there was a deficit of content on climate change in the pre-service program, leading to a lack of confidence and competency. The project attempted to quickly fill a knowledge-gap on climate change, while promoting the need for teachers to take on this work confidently and competently, and provide suggestions for further professional development.

Theoretical Framework/s or Guiding Concepts

Each presenter was tasked with developing and presenting a 1-1.5 hour webinar on an area of expertise. Presenters were identified based on the Accelerate CCE-TE proposal template, but given the freedom to curate a webinar that fit with their specific area of expertise. Within each webinar theories were presented that aligned with the research of the presenter. The webinar titles included:

- Climate Change and the People of Manitoba
- Climate Change Education and the Manitoba K12 Curriculum
- Growing the Good: Climate Action in K12 Classrooms

- Climate Justice, Part 1
- Climate Change and Children
- Supporting Youth with Eco/Climate Anxiety
- Climate Justice, Part 2

The ACDE Accord on Education for a Sustainable Future was used as a tool to advocate for financial support from the Faculty of Education in this project.

Outcomes

The desired project outcomes were to:

- Increase awareness about the theories and practices related to climate change education
- Increase confidence in bringing climate change education into K12 classrooms
- Increase the quality of climate change education in K12 classrooms
- Gather data from attendees on next steps for supporting climate change education in K12 classrooms and at the post-secondary level.

At the close of the seventh webinar, a post-survey was distributed to all registered participants. 25 pre-service teachers and 8 non-pre-service educators responded. Their responses are grouped into the following five themes:

Theme 1: The webinar series led to an increase in self-reported interest in climate change education. On a scale from 1 to 5 (1 = Very Low, 3 = Moderate, 5 = Very High), pre-service students went from an average score of 3.56 (Moderate/High) to 4.48 (High/Very High) interest in climate change education. In-service teachers went from an average score of 4.38 (High) to 4.6 (Very High).

Theme 2: The webinar series led to an increase in self-reported confidence in climate change education. On a scale from 1 to 5 (1 = Very Low, 3 = Moderate, 5 = Very High), pre-service students went from an average score of 2.12 (Low) to 3.76 (Moderate / High) confidence in teaching climate change. In-service teachers went from an average score of 2.75 (Low / Moderate) to 4 (High).

Theme 3: The webinar series led to an increase in self-reported competency in climate change education. On a scale from 1 to 5 (1 = Very Low, 3 = Moderate, 5 = Very High), pre-service students went from an average score of 2.24 (Low) to 3.2 (Moderate) competency in teaching climate change. In-service teachers went from an average score of 2.75 (Low / Moderate) to 4 (High).

Theme 4: The webinar series changed attendees thinking about climate change education. In written feedback, a number of respondents indicated that they now feel more strongly about the importance of climate change education and the urgency to do so. One respondent stated, "I have always believed that climate change education is

important; now, I believe it is crucial for all our students”, while another wrote, “The webinar has changed how I think about framing climate change in a way that will actually get people engaged. It has also made me reflect on the importance of education in climate action.” Many respondents also indicated that they see climate change education needing to be embedded across the curriculum. For example, one response stated, “I realize now that I can introduce climate action education in a number of areas in the curriculum” with another writing, “Climate change education is necessary for all grade levels and can be molded to fit all grade levels”.

Theme 5: The webinar series offered important guidance on next steps for supporting climate change education in the pre-service program and wider K-12 community. Within this theme there was the desire from pre-service teachers to learn more about climate/eco-anxiety within courses, as well as increased understanding of how Indigenous knowledges connect to climate change education. Both of these themes were evident in recent research on pre-service teachers experiences and perspectives on climate change education (Burton, forthcoming). While some pre-service teachers responded with requests that more would be done to infuse this content into their current courses, or that the Faculty would offer courses specifically on climate change education, many respondents were thankful that these webinars were recorded and hosted for future access, but also hoped that a second series would be offered that built on the themes of the first.

A common piece of feedback from non-pre-service teachers was around community building. For example, in responding to a question regarding the most impactful part of the series, one respondent wrote, “That you have to work as a community and gather people that are doing the same work. I don't have to do it alone”, with another stating, “It has reminded me that there is a whole community of like-minded climate-action-focused teachers out there and that I'm not alone.” The most consistent feedback from pre-service and non-pre-service respondents was the appreciation for resources that supported practices in the classroom.

A number of non-pre-service teachers called for greater engagement from leaders across Manitoba, including the Faculty of Education in supporting climate change education. For example, one respondent wrote, “More of these please. Every year. Offer funding so a certain number of people from each division can attend a whole day conference about this. Offer a conference to school board trustees and superintendents”, while another wrote, “I hope to see (more) resource and pedagogical leadership positions created within schools and especially Divisions for consultants supporting CCE, education for sustainable development, outdoor learning and indigenous perspectives as these areas have lacked where I've been and they are absolutely essential fields and direct support is game-changing for teachers and ultimately students”.

Successes & Challenges

Four successes stand out from this project:

- **Pre-service teacher attendance:** 25 UW pre-service teachers attended all

seven webinars live. This amounted to approximately 10 hours of professional development on top of their coursework.

- **Overall interest:** Live webinar attendance ranged from 32 to 78 attendees. Throughout the series I responded to emails almost daily from those registered who either missed a webinar or wanted to share a recording.
- **Quality of presentations:** Beyond the positive feedback during and in response to the post-survey, the quality of content presented and resources shared was very high.
- **Recording and posting of webinars:** There was overwhelming appreciation for the decision to record and post the webinars. A dedicated website linked off the main [University of Winnipeg webpage](#) now hosts the webinar series.

The biggest challenges/disappointments of this project were:

- **Poor attendance from other post-secondary institutions and post-secondary instructors outside of those involved in the project:** Other than those who were presenters in the webinar series, the Associate Dean of Education and one other Professor were the only Faculty members from the University of Winnipeg to attend the webinars (we are very thankful for their attendance!). There was one attendee from the University of Manitoba, and one attendee from Brandon University. If climate change education is to reach across disciplines in higher education, then faculty members outside of sustainability and well-being scholars need to be open to learning about how to integrate content into their discipline.
- **Difficulty securing support from stakeholders in distributing information on the webinar series:** Manitoba School Divisions, Manitoba Education, and Manitoba Association for School Superintendents were all contacted for requests to distribute information on the webinar series. While some School Divisions were supportive, many did not respond to requests for distribution. Successful distribution was often (though not always) owing to prior relationships with leaders in these Divisions.
- **Lack of Indigenous representation in webinar facilitation:** It was very important to me that we would include experiences and voices of racialized and/or Indigenous knowledges in this series. An agreement for a department to support the webinar series with an Indigenous researcher was reneged on without communication. This prompted the creation of an additional (seventh) webinar focused on environmental racism and climate justice, facilitated by a BIPOC faculty member. I am still disappointed that we were not able to secure a dedicated webinar on Indigenous perspectives on climate change education. To me, this remains the biggest failure of the webinar series.

Lessons Learned

Overall, myself and fellow webinar facilitators see this project as a success. From the feedback provided through the questionnaire, webinar attendees tend to agree. I would

not change the structure (1-1.5 hour webinars, running weekly), the presenters, and would certainly not proceed without recording the webinars.

I would think more deeply about how to bring a broader array of faculty members on board and how to promote the webinar series 'beyond the bubble' of Winnipeg. Collaborating with colleagues from the Faculty of Education at Brandon University and the University of Manitoba could have expanded the audience. However, at the time of designing this project I did not have relationships with these institutions.

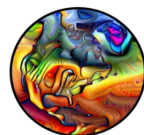
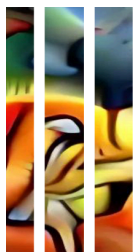
Pre-service teachers from the Faculty of Education were awarded a 'Certificate of Attendance' and entered into a book draw if they attended all seven webinars – without data to support this, I consider these incentives as important in securing their consistent attendance.

As shared, I remain upset that we did not have a webinar dedicated to Indigenous perspectives on climate change education.

There were three main deviations between the project as proposed and project as lived. Firstly, it was determined that offering professional books and a certificate of attendance for pre-service teachers was preferable to offering a gift card draw to those who completed the survey. Secondly, owing to time and logistics, it was deemed as not possible to hire a research assistant to complete this project; the vast majority of this work was undertaken by the project lead. Thirdly, and relatedly, a term-appointment in the UW Events office misquoted the fee for website hosting and webinar support, which led to original costs budgeted at \$330.00 increasing to \$1765.00.

Advice & Resources

Beyond what I have shared, not at this time.



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