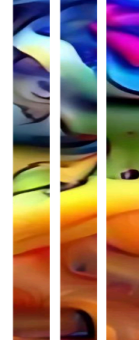


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CLIMATE CHANGE EDUCATION
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CCE IN TEACHER EDUCATION PROJECT REPORT

A Course in Climate Change Education in Teacher Education

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Summary

In collaboration with a university instructional designer and a content expert from the Faculty of Social Work, an instructor in the Bachelor of Education program, with expertise in environmental education created an online course designed for K-12 classroom teachers with the underlying principle of empowering students to be critical thinking changemakers, by providing tools to address the climate crisis in an age-appropriate way that builds on hope and resilience.

The focus of the course is on place-based education to ensure the integration of multiple perspectives such as developing natural and cultural knowledge of place, building connections with the land and local partnerships as well as developing a sense of wonder that leads to stewardship and care for the land, its inhabitants, and the climate from local to global scales.

Each lesson focuses on a different aspect of Climate Change Education that will help transfer knowledge into age-appropriate, classroom content.

The learning outcomes of the Online, asynchronous course of six weeks, include:

- Describe the basic system relations, causes and impacts of local and global climate change
- Examine the social and emotional effects of climate change on youth

- Identify aspects of organizations and materials that deal with adaptation and mitigation for students
- Explore a wide variety of resources that build resilience and hope
- Engage in experiential learning using solution-based thinking
- Identify curriculum content related to climate action and develop teaching strategies for engaging youth around climate change
- Explore Indigenous perspectives and land-based learning in each of the themes addressed

Gaps & Needs Addressed

The course is designed to address a gap in teacher preparation to teach climate change education. Climate change is recognized as a critical issue across disciplines but is not explicitly included in any one curriculum area in K – 12 and/or teacher education. This course recognizes the need to develop knowledge and practice for an integrated approach, embedding climate change education across curriculum areas.

Theoretical Framework/s or Guiding Concepts

Online pedagogy and principles of instructional design for an interdisciplinary course were used in course development. The course content was developed using a variety of theoretical frameworks and foundational documents, including:

- ACDE Accord on Education for a Sustainable Future
- ELWW from Learning for a Sustainable Future
- Theoretical frameworks:
 - Hope theory (Synder)
 - Active Hope (Macy and Johnstone)
 - Imaginative and Ecological Teaching Practices (Judson)
 - Eco Anxiety (Pihkala and Kurth)
 - Gratitude (Kimmerer),
 - Honourable Harvest (Kimmerer)
 - Biomimicry (Benyus)
 - SDGs in Curriculum (Williams)
 - Hope Matters (Kelsey)

Outcomes

The desired outcome for the project was the development of a course directed at teacher education with the possibility of further reach with continued development and collaboration with external and internal partners, e.g., Learning for a Sustainable Future, other Faculties within the university and ongoing student reach in teacher education. The outcome was achieved with a foundation for further expansion

following a pilot of the course this spring with an initial offering to all ~500 Bachelor of Education Students. The course development and the collaboration with experts in the Faculty of Social Work has led to renewed interest in a wider university offering of such a course at both undergraduate and graduate levels.

Successes & Challenges

One of the greatest challenges could also be considered in considering the greatest successes. In developing the course, it was noted that there is a plethora of resources related to climate change meaning that this course was successful in providing a critically evaluated portal for teacher education in the field. The interdisciplinary collaboration was a benefit in terms of content and expertise but sometimes a challenge in relation to specific approaches and pedagogies, making direct transfer of a relevant course somewhat of a challenge. The elective courses in the Bachelor of Education program are shortened courses (6 weeks). The limited funding for development forced a narrow focus but the process and outcome are an important and useful step in the direction of embedding climate change education in teacher education across the program and the wider university.

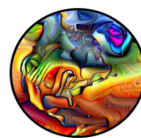
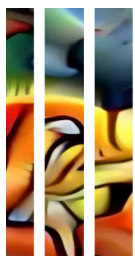
Lessons Learned

Lessons were learned in the course development process about the volume of resources available and the need to critically adjudicate them to support teacher education in the field. Additional advising from the Faculty of Education may have been useful in ensuring the cross-curriculum approach to the intent of the course and to recognize areas of integration to embed strategies in educational practice.

Challenges arose in attempting to ensure the meaningful inclusion of Indigenous content in a way that honoured Indigenous pedagogy in the online environment in a course that was not designed by and for Indigenous educators. Expanding the length of the course and incorporating Indigenous scholars may assist in navigating this approach.

Advice & Resources

Something is better than nothing! Jump in and get started with a project of any scale that can then act as a foundation for future development and design.



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