

WHAT WORKS?

Research into Practice

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Research Monograph # 36

How can schools and teachers incorporate Indigenous ecological perspectives in environmental education?

Teaching for Ecological Sustainability

Incorporating Indigenous Philosophies and Practices

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We didn't inherit the earth from our parents.
We are borrowing it from our children.

– Chief Seattle

Research Tells Us

- Modern societies must recapture an ecologically sustainable orientation to their interactions with nature.
- Indigenous philosophies provide helpful lessons in how to reconnect with nature and to establish mutually beneficial and reciprocal relationships.
- Students are able to make the transition from learning through the typical western scientific mode of teaching to learning through cross-cultural science teaching.
- Teachers need not be steeped in knowledge of Aboriginal perspectives to start incorporating them into classroom practice.

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With a renewed focus on environmental education in the Ontario curriculum, teachers are considering which learning experiences will be most effective both in engaging students and in fostering responsible environmental citizenship. Including indigenous perspectives is one way to meet this curriculum goal.^{1, 2}

For Aboriginal students, the inclusion of indigenous perspectives can help to foster engagement in the learning process through increased relevance to their own experiences and culture, leading to increased self-esteem and better learning outcomes.³ For other students, indigenous perspectives extend and enrich the educational experience, provide intercultural knowledge and experiences and afford opportunities to explore and appreciate Aboriginal socio-cultural, economic and ecological contributions to Canadian society.

Insights of Indigenous Scholarship

Gregory Cajete writes, “The accumulated knowledge of the remaining indigenous groups around the world represents a body of ancient thoughts, experiences and actions that must be honoured and preserved as a vital storehouse of environmental wisdom. ... Modern societies must recapture the ecologically sustainable orientation that has long been absent from its psychological, social and spiritual consciousness” (p. 78).⁴

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Getting the terminology straight ...

The terms *indigenous* and *Aboriginal* are not always interchangeable. Indigenous is a broad category, which refers to the original inhabitants of any given region. In Canada, Aboriginal peoples comprise First Nations, Inuit and Métis.

Canadian First Nations scholar Marie Battiste advocates integrating indigenous knowledge into mainstream Canadian education.⁵ Others emphasize that the study of indigenous knowledge approaches to the natural world should go beyond the superficial and the sentimental, to the core of a more meaningful discussion.⁶ University of Saskatchewan science education professor Glen Aikenhead writes about the ease with which students make the transition from learning through the typical western scientific mode of teaching to learning through cross-cultural science teaching.⁷ Other Canadian writers argue that, while Aboriginal visions of the world are embraced by mainstream society when situated in romantic, sentimental and culturally subordinate contexts, these viewpoints are not considered on par with western academic notions.⁸ In the context of the multicultural nature of Canadian classrooms, and in the interest of inclusive pedagogies,⁹ it is important that mainstream educational institutions recognize the validity of indigenous knowledges and include them in their curricula.

Indigenous philosophies about human interactions with nature provide lessons that can help mainstream Canadian society reconnect with nature and establish mutually beneficial and reciprocal relationships. In the drive for a new ecological ethos, Aboriginal epistemologies can provide a framework for engendering an ethic of stewardship and sustainability.¹⁰

Key Tenets of Aboriginal Philosophy

Aboriginal environmental philosophies generally indicate recognition and understanding of the complex and interdependent relationships between human beings and nature. While differences no doubt exist across Aboriginal communities and societies, there seem to be identifiable common aspects of Aboriginal peoples' environmental philosophies. Our research in the Walpole Island First Nation, in southwestern Ontario found an emphasis on:

1. inseparable relationship between people and the natural world
2. respect for all aspects of the environment, everywhere – not just in the community
3. recognition of the dependence of people on the physical environment
4. view of the land as sacred
5. responsibility to future generations
6. respectful and responsible use of resources
7. preservation, conservation, and enhancement of the natural environment
8. belief in the link between environmental quality and quality of life

The Walpole Island First Nation experience is instructive because the community has managed to remain green and maintain a very high level of biodiversity, with many plant and animal species found nowhere else in Canada. Its environmental programs and ecosystems have earned it international acclaim and World Heritage status. Walpole Island First Nation has managed to do this through their native philosophies and their traditional values and attitudes, which are based on respectful human and environmental interactions.¹¹

Teaching Aboriginal Content in Mainstream Classrooms

For educators unaccustomed to teaching Aboriginal content in mainstream classrooms, infusing Aboriginal ecological perspectives may seem intimidating. But teachers need not be steeped in knowledge of Aboriginal perspectives to start incorporating them into classroom practice. Start by using Aboriginal



examples, illustrations, evidence, analogies and cases to elucidate ecological concepts and issues. Seek advice when unsure of how best to include Aboriginal perspectives. Accuracy of Aboriginal content should be verified, but greater confidence and expertise will develop over time, through continued work with Aboriginal content and resources and collaboration with Aboriginal people and communities.

TIPS FOR PRACTICE

Be Open-Minded and Prepared

- Recognize traditional and indigenous ways of knowing as valid and useful.
- Understand the benefits of including Aboriginal and other indigenous ecological perspectives in lessons.
- Understand the potential of these perspectives to precipitate interrogation of current mainstream human and environmental interactions, broaden and deepen students' sources of information and engender social transformation.

Avoid Sentimentalism and Romanticism

- Aboriginal ecological knowledge should not be romanticized. Aboriginal societies do not possess a single view or type of relationship with nature;¹² there are often gaps between environmental philosophy and practice.
- Today, many Aboriginal cultures are quite westernized and have become estranged from the traditional knowledge and practices once associated with a custodial relationship with the land.¹³ Therefore, despite the many great lessons to be learned from indigenous relationships with nature, a realistic and balanced approach is prudent.¹⁴

Utilize Traditional Ecological Knowledge and Cultural Evidence

- Use factual accounts of the lived experiences of Aboriginal peoples to teach concepts like climate change. Stories of indigenous groups in the Canadian and American Arctic provide a rich source of cultural evidence of climate change, as manifested in impacts on economic livelihoods.¹² Examples include: negative impacts of changing ice conditions on hunting, trapping, fishing and ecosystems; wildlife exhibiting atypical consumption behaviours, which are linked to a diminishing supply of their traditional food sources; alterations in the migration pattern of birds and other animals, which adversely affect food security for local peoples; changes in animals' behaviour, fur condition, and meat colour and flavor, as a result of their feeding in polluted areas.
- Cree and Inuit hunters' traditional knowledge of animal anatomy enables them to distinguish between healthy and unhealthy animals. In a classroom this approach can be compared to the biochemical tests and laboratory analyses used by western science.

Teach Values of Sustainability

- Use Aboriginal ecological philosophy to teach positive environmental values and attitudes, stewardship, and sustainable consumption and lifestyles. For example, the principle of only harvesting the resources you need and minimizing waste could be used to introduce critical lessons to students in mainstream schools; it could be tied into lessons on cultural differences, consumption patterns, poverty, global hunger and resource conservation. This could be introduced across the curriculum through stories, mathematical games, case studies, poster competitions and poem writing.

Implications for Practice

Aboriginal Perspectives: The Teacher's Toolkit ...

The toolkit was developed by the Ontario Ministry of Education to support elementary teachers in integrating First Nation, Metis, and Inuit histories, cultures and perspectives.

Available at:

www.edu.gov.on.ca/eng/aboriginal/toolkit.html and www.goodminds.com



For numerous links to resources:

www.edu.gov.on.ca/eng/aboriginallibrary.queensu.ca/webedu/grad/aboriginal.pdf

www.nwmo.ca/aboriginaltraditionalknowledge

Utilize Aboriginal Expertise

- Invite Aboriginal persons – including elders or senators (the custodians of traditional indigenous knowledge), local community members, parents, and business and community leaders – into classrooms as resource persons and guest teachers.
- Plan and prepare for field trips to ensure cultural sensitivity and respect. Teachers and their students should work with Aboriginal community members to understand traditions and cultural values, including the roles of gift giving and knowledge sharing. Aboriginal community members can help you to make contact and act as guides and facilitators.
- Use examples of Aboriginal groups and indigenous peoples outside of Canada who have lived harmoniously with the natural world for thousands of years.

To be authentic, it is important that Aboriginal perspectives be seamlessly integrated into classroom practice. Activities like those listed below should, therefore, become part of the teacher's repertoire.

- Employ traditional Aboriginal activities like talking circles and explore their origins and importance to Aboriginal peoples.
- Introduce medicine wheels as graphic organizers.
- Add Aboriginal traditions, cultures and perspectives to the curriculum and co-curricula program.
- Be aware of Aboriginal students in class and draw on their knowledge and expertise of their culture.
- Build a bank of Aboriginal books, resources and classroom activities for students to use.

In Sum

Indigenous peoples' relationships to their land represent models for human interaction with nature. Taught through education, these can help change the negative attitudes that hurt environmental quality. Indigenous ecological perspectives are relevant in mainstream education and can be incorporated into elementary classrooms. This is important as "limiting ourselves to science as a way of knowing our world is myopic ... there are other, sometimes more relevant, ways of thinking, understanding, and constructing our world" (p. 46).¹⁴

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