

2007 NAAEE Conference Proceedings

Conference Strand:

Sustainability Education - Poster Session

Title:

Bridging the Gap: Engaging Inner-City Youth in Stewardship Using Principles of Indigenous
Science

Natalie Swayze MEd Candidate

City of Winnipeg, Naturalist Services Branch

Abstract:

As an innovative, non-formal environmental learning program, the overall goal of *Bridging the Gap* is to assist in developing genuine attitude and value changes in learners, fostering not only increased environmental awareness but also a sense of empowerment and commitment to stewardship principles. The program serves Grade Four students from Winnipeg's Inner-City School District, many of whom are of Aboriginal. As a research study, the program is the intervention. Using an action research approach, this study attempts to improve understanding of how the integration of traditional Indigenous cultural values with science learning outcomes, affects student learning and the development of the capacity for and willingness to actively participation in sustainable living practices.

Why *Bridging the Gap*? The program title implies attempts to develop better understanding of "gaps" as disparities, inequalities and barriers, addressing the following issues: fewer opportunities for inner-city youth to visit and learn about high quality natural areas and engage in related stewardship activities; the distinct concepts and methods of western and indigenous science and the challenge of including both in a modern environmental learning

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program. Finally, as an action research study, it is “research in action” and seeks to overcome many of the noted obstacles involved in connecting research and practice.

Paper:

For most of history, children spent their days surrounded nature, where they were able to play, explore and interact with the natural world. With increasing urbanization, the lives of children today are much different and children today have fewer opportunities for regular contact with nature. With fewer opportunities for children to develop a connection with nature, future generations will have little desire to lead sustainable lives or become good stewards of the earth. This is particularly true for children in Inner City neighbourhoods, where the percentage of natural areas is significantly lower than in the suburbs.

Based in Winnipeg, Manitoba, Bridging the Gap initially began as an innovative environmental learning program providing free full-day field trips for Grade Four students from Winnipeg’s School Division’s Inner-City School District. With the generous support of Program sponsors all program costs were covered including round trip transportation to two of Winnipeg’s largest, high quality natural areas - the Assiniboine Forest and Living Prairie Museum.

Like many environmental learning programs for school aged children school-based nature education programs, the program subject matter and design was originally ecology-based. The content focused on addressing knowledge objectives and learning outcomes from Manitoba’s Science curriculum (Grade Four Life Sciences - Habitats and Communities) and discussing the concept of habitat (need for food, water, shelter, space, air). Students spent the morning at the Living Prairie Museum, exploring a pristine prairie habitat in the context of its unique ecological components, discussing the land’s ability to meet the habitat needs of

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animals, and recording observations in a data collection booklet. In the afternoon, students travelled to the Assiniboine Forest to replicate their discussions and data collection activities in forest and wetland habitats. As the program also aimed to support the development of environmentally responsible behaviour and sustainable living practices, at the end of the day students were invited to participate in stewardship activities, building wood-chipped trails and assisting with clean-up efforts.

First, many of the students participating in Bridging the Gap were noted to be of Aboriginal decent, an observation consistent with City of Winnipeg Census Data which reveals that the highest percentage of Aboriginal youth live and attend school within the Winnipeg School Division's Inner City School District. a close fit was acknowledged between Bridging the Gap's science-based content and traditional indigenous cultural values regarding the principle that humans share the earth with animals, resulting not only in a responsibility to care for this shared habitat, but a mutual dependence on thee earth to meet our own habitat needs. These cultural values, based on a worldview of collective responsibility for respecting the land, an interconnectedness and interdependence of all life forms, and a use of only what is needed for sustenance, exemplify qualities of earth stewardship. In this worldview, knowledge and understanding of the natural world is based on the importance of sustaining Mother Earth for seven generations to come, a concept at the heart of sustainability (Graham, K., & Peters, 2002, Manitoba Education and Training, 1995, 2000, Western Canadian Protocol for Collaboration in Basic Education, 2000). In light of these observations and noted appropriateness for the participating student population, a new the focus for improving the program was in finding ways to incorporate these traditional cultural ideas in the program. The challenge however, was in finding a respectful and appropriate way to do this.

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In this study, the modified program is the intervention to address the stated problem. The overall goal is to improve the effectiveness of the Bridging the Gap Program and find a way to ensure that the fifth program goal is achieved. This will be explored by making connections between the Western science based content of the EE/ESD program and relevant traditional indigenous cultural values. The study seeks to improve understanding of how the integration of traditional, indigenous cultural ideas with Western science based learning outcomes, affect students learning and interest in environmental stewardship and sustainable living practices. Using an action research approach, this research study employs a qualitative, naturalistic paradigm of inquiry. This approach was selected because it takes place in the natural setting, deals with interpreting individual values and attitudes, and because the researcher would be directly involved in delivering the program/intervention. Furthermore, the action research approach is considered highly appropriate given that this study deals with the use of traditional, cultural ideas and a high percentage of Aboriginal participants. With this in mind, the following strategies were and continue to be used: Guided focus groups for program stakeholders including School Division staff and teachers, sponsors, and other relevant partners to engage in collaborative brainstorming and discussions; Professional development for Bridging the Gap including formal training and consultation with relevant experts; and inviting local Elders to participate in the program.

With continued revisions to program structure and focus, regular evaluations and feedback from students and teachers, in addition to ongoing professional development for the Program Coordinator, attempts to incorporate indigenous knowledge in Bridging the Gap have proven successful. A key element of the program is the concept of *respect* – for the earth, for the animals and for each other. A new data collection booklet is being used, a pre/post program

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package is being refined, a local Elder provides traditional cultural teachings related to earth stewardship, and additional community volunteers are participating.

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