

Quality of Life in British Columbia: Connecting the Social Environmental Index to the School Setting

Sandra Vamos, Ed.D.
Julia Hayos, M.Ed.
Laura MacNiven, M.Ed.

ABSTRACT

Today's youth face significant health and environmental risks that can be offset by health and ecological literacy levels. The school setting has been deemed an instrumental institution for the development of empowered decision-makers across the lifespan. This paper recommends a curricular framework that is based on the concepts of health literacy, ecological literacy and empowerment theory and is informed by American National Health Education Standards (NHES) in order to foster the reciprocal relationship of health and the environment through skills-based pedagogy. Using the social environmental indicator within the quality of life index as an exemplar, this paper outlines a framework in the context of Vancouver, Canada related to leisure and recreational use of water. To instill and maintain high quality of life, individuals must be empowered to access, comprehend, evaluate and communicate information for health and the environment across the life-course.

Umwelt und Gesundheit Online, 2009; 2, 13-18.

Introduction

"Health is inextricably linked to educational achievements, quality of life, and economic productivity. By acquiring health related knowledge, values, skills, and practices, children can be empowered to pursue a healthy life and to work as agents of change for the health of their communities" (WHO, 1997a).

The World Health Organization (WHO) states that the school setting represents an optimal venue to prevent health risks of youth and positively influence environmental conditions necessary for optimal health to occur (WHO, 2008). It is vital that school curricula be comprehensive, grounded in theory, and skills-based to enhance youth's capacity to engage proactively in the environment in ecologically sound and sustainable ways. This combination will enable the future promotion and responsible management of conditions that support and promote positive health outcomes for all.

WHO defines *quality of life* (QOL) as being related to perceived personal health and wellbeing occurring within social, political, and economic contexts of people's lives: "It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of

independence, social relationships, personal beliefs and their relationship to salient features of their environment" (WHO, 1997b, p. 1).

In particular, the quality of one's social environment represents a fundamental domain impacting an individuals' QOL (Atlas of Canada, 2008a; WHO, 1997a). Based on the principle that "human activities impact the health of the environment and the environment in turn influences human health" (Vamos, 2008), this paper offers a tool to help educators facilitate this reciprocal relationship in a school setting. Informed by the concept of linking QOL indicators with educational objectives, as outlined in Vamos (2009), this paper recommends a curricular design translating important health and education research into practice within the school setting. The results include an adapted K-12 curricular blueprint that highlights the desired outcome of health and ecological literacy (eco-literacy) for youth.

The Problem

Canadian youth face a variety of health and environmental risks that are directly related to behavioural decision-making abilities and levels of empowerment. The Public Health Agency of Canada (PHAC) has

identified six risk behaviours related to youth health as primary targets for health promotion: alcohol and drug use, injury and violence, inadequate physical activity, poor nutrition, tobacco use, and sexual behaviours (PHAC, 2008a). Such risk behaviours are of extreme importance to local and global wellness as such behaviours "can escalate into larger problems and lead to risk-taking lifestyles" (PHAC, 2008a, p. 1). Therefore, there is an important need to frame adolescence as "as a stage between childhood and adulthood, not as a separate population" (PHAC, 2008a, p. 1) to foster healthy patterns across the life-course.

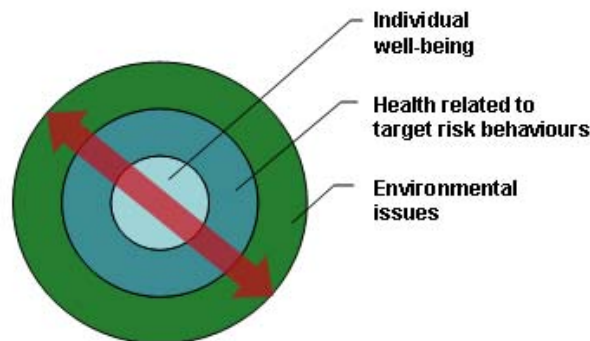
Concurrently, Canadian youth are impacting and being impacted by selected environmental factors: "Key environmental issues in Canada include, air, climate change, habitat and wildlife, pollution and waste, water and weather" (Environment Canada, 2008). Both health and environmental education models have evolved from a concept of treating disease or problem situations to proactive educational models that strive to foster decision making skills in order to empower individuals to simultaneously impact local and global health and environmental issues. Current environmental issues require active participation of

environmentally literate individuals, which can begin locally, to impact globally (Hsu & Roth, 1998). Understanding the inherent connections among health and environmental issues is paramount to the maintenance and sustainability of youth lifestyle

choices across the lifespan. As demonstrated in Figure 1, the impact of individual empowerment with regards to health affects overall environmental issues. By using areas of health and the environment as priorities for youth empowerment, we can

simultaneously educate to facilitate critical thinking and decision-making skills while supporting this key reciprocal relationship. To do so, this paper recommends a mechanism or strategy that incorporates critical theory with the outcomes of health and eco-literacy.

Figure 1. Connecting Health and Environmental Factors with Youth Well-being



Contextualizing Quality of Life in British Columbia, Columbia

According to PHAC, there is a grave need to expand on non-medical determinants of health in efforts to sustain and improve the overall health of Canadians (PHAC, 2008b). In Canada, QOL is measured through a comprehensive assessment of the quality of the physical, economic and social environments. Each of these concepts is important in determining QOL for each city within Canada. As it is outlined in Figure 2, this paper focuses on the social environmental indicator, within QOL, as it can be applied to the school setting in order to impact youth living in Vancouver, B.C.

According to the Atlas of Canada (2008b), the social environment represents the external conditions under which people engage in social activity within their community. This includes: social opportunity; leisure and recreation; education;

access to health services; health status; and participation in democratic processes. All of these components are critical in the determination of the quality of the social environment for a given city. It has been suggested that “opportunity for and access to leisure and recreational activities directly influences quality of life, since they are necessary for individual health and wellbeing” (Atlas of Canada, 2008c). This paper uses the particular indicator of leisure and recreation related to water-based activities to illustrate a curricular thematic exemplar representing the reciprocal relationship between health and the environment to promote health and eco-literacy within the school setting. However, it is important to note that this curricular tool can be utilized for any of three domains of QOL.

Vancouver is rated highly for its quality of social environment (Atlas

of Canada, 2008b); therefore, it is particularly important to consider youth empowerment within this domain in order to enhance health while reducing ecological footprints. Such environmental preservation efforts will impact QOL in terms of health as well as overall environmental conditions. Public access to waterfront in Vancouver represents one of its natural amenities that have contributed to its designation as being one of the most inhabitable cities in Canada. Approximately 18 km (11 miles) of beaches surround Vancouver, including eight expansive ocean side locations and one fresh water lake (Vancouver Parks and Recreation, 2008). Multiple activities can be engaged in through access to and use of the water in Vancouver including: swimming, sailing, canoeing, kayaking, fishing, etc. The reciprocal relationship between the health benefits received from

activities within the social environment and the preservation of environmental conditions will allow for the maintenance of a high quality social environment within this area. For this reason, there is an urgent need to promote the responsible social use of this environment within our youth.

Relevance to the School Setting

“Promoting the health of children through schools has been an important goal of WHO, UNESCO, UNICEF, and other international agencies since the 1950s” (WHO, 1997a, p. 5). The school represents an optimal setting for the facilitation of health and environment education relating to knowledge, skills, and attitudes necessary to enable increases in youth health and eco-literacy. Canadian youth, need to become empowered in terms of health and ecological issues to become active participants in individual and community health and environmental endeavors. The social environment of the school has an integral impact on youth health and wellness: “The school itself—through its culture, organization, and management; the quality of its physical and social environment; its curricula and teaching and learning methods; and the manner in which students’ progress is assessed – has a direct effect on self-esteem, educational achievement, and therefore, the health of its students and staff” (WHO, 1997a, p. 2).

Curriculum needs to go beyond the transfer of knowledge to the facilitation of skills-based learning regarding health and ecological empowerment. As St Leger (2001) outlines: “It is therefore vital that we look at what schools can do to equip young people with knowledge and skills at the highest level to enable them to be active participants in shaping those policies and practices that impact on their own health, and the health of their community and country” (p. 197).

Empowerment Theory

In Canada, the recent *Healthy Settings for Young People* study reveals that the school setting *does* have a positive association with most youth health behaviours and outcomes, and that academic

achievement also affects behaviours (PHAC, 2008c). Consequently, there is a need for education to go beyond the transfer of knowledge from teacher to student: “Health education has a new role. Its prime concern is no longer with trying only to persuade individuals to adopt a healthy lifestyle; rather its new role is to influence policy makers by adopting a political stance and a revolutionary brand of ‘radical’ or ‘critical’ education” (Tones, 2000, p. 29).

As health and the environment are socio-cultural concepts, they must be taught and experienced in a “hands-on” practical manner in for students to transfer learning from the classroom to daily life. Canadian youth require revolutionary education that promotes active participation and engagement. “Information is crucial, but will never be sufficient to address many of the major challenges faced by disenfranchised and marginalized populations” (Kickbusch, 2000, p. 8). With health and the environment being such key components within quality of life, health and ecological education curriculum must empower students and teachers to contribute to the local community, and take political action to improve policy and support systems for the promotion of healthy environments: “Education should have as one of its main tasks to invite people to believe in themselves: “It should invite people to believe they have the knowledge” (Wallerstein & Bernstein, 1988, p. 381).

Recommendations

There is a need to integrate health literacy and eco-literacy as educational objectives to foster high QOL utilizing the school settings approach (Vamos, 2008). This paper recommends a curricular framework that integrates US National Health Education Standards with corresponding skill cues in order to have students actively experience the health/eco-literacy process. As Figure 3 shows, the delivery of the curriculum is conducted through a skills based process based on the four domains of health literacy: students must access, comprehend, evaluate and communicate in order

to improve their literacy (British Columbia Health Literacy Team, 2008). This framework can be utilized for any health or environmental theme, and offers a *green print* for facilitating the health/eco-literacy process and emphasizing associated skill-based learning experiences within the learning domains.

In Vancouver, to highlight the relationship of water use on individual health and ecological preservation, students are invited to go through the process of eco-health literacy development, within one lesson, as they develop skills within each domain to become empowered with health and environmental information and skills. Educators can modify this exemplar with appropriate NHES and skill cues to empower students within contexts appropriate to local QOL indicators. It is important to note that the curricular exemplar is meant as a mechanism for educators to facilitate the design of their individual lessons and to incorporate as many of the eco-health literacy domains and associated skills cues into their strategies to enhance student eco-health literacy. The challenge with educators often lies with implementation of health-related lesson strategies given that no standardized guidelines currently exist in Canada or within British Columbia that require teachers to receive mandatory training in health education (Vamos & Zhou, 2007). Consequently, many teachers have received limited course work in this area making the functionality of a needed framework to help guide practice not quite as effective as it could be.

Conclusion

In a context where youth are constantly bombarded with decisions related to health and the environment, K-12 schools must foster opportunities for youth to develop skills related to health and eco-literacy levels. There has been a significant international movement towards fostering skills-based pedagogy in order to empower youth within contexts outside of the classroom. Deemed an influential

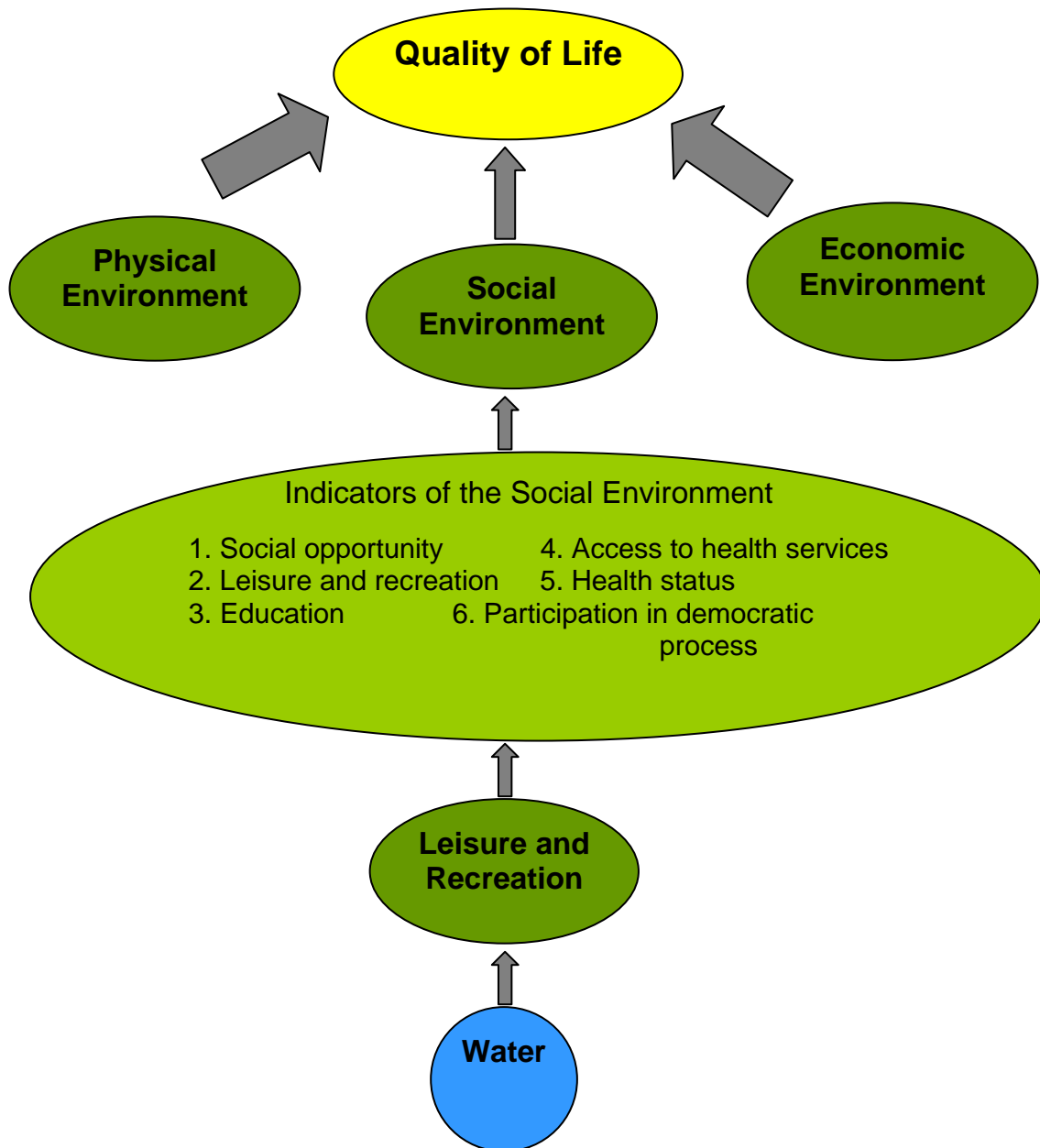
and impacting reciprocal relationship for this generation, and future ones, health and environmental educational objectives must be highly prioritized within the school setting. Current curricular documents often focus on knowledge outcomes, which do not ensure transferability of skills that are essential for real-life contexts.

This curricular recommendation is informed by current theory, national guidelines, conceptual frameworks, and includes direct evaluative measures in order to guide lessons for the facilitation of health and eco-literacy.

Knowledge surrounding health and environmental concerns is dynamic. Consequently, individuals

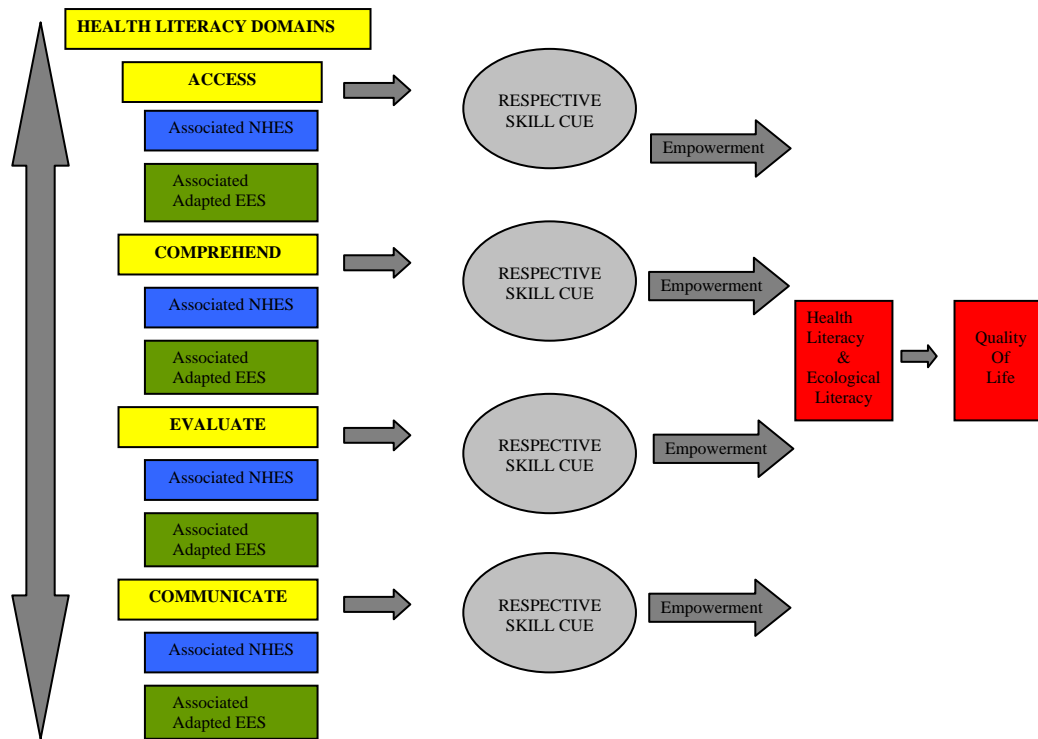
require skills that can be transferred to a wide range of evolving issues. In a day in age where health and environmental issues are intertwined, it is the responsibility of educators to foster critical decision makers within the school setting. Today's youth must, in effect, think *and act* locally, in order to act globally.

Figure 2. Contextualizing Exemplar within Quality of Life



Source: Atlas of Canada. (2008)

Figure 3. Green Print



Note: NHES (National Health Education Standards); EES (Ecological Education Standards)

Source: Adapted CCSSO-SCASS. (2002). *Health education assessment project skills cards*. Santa Cruz, CA: ToucanEd. Adapted Joint Committee on National Health Education Standards. (2008). *National health education standards: Achieving excellence*. Atlanta, GA: American Cancer Society.

Note: Ecological Education Standards are adapted from the NHES through the lens of the health literacy domains

References

Atlas of Canada. (2008a). *Overall quality of life*. Retrieved November 30, 2008, from http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/QOL/ove_qol_uc.

Atlas of Canada. (2008b). Overall quality of life: Social environment index. Retrieved November 30, 2008, from http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/QOL/soc_qol_uc.

Atlas of Canada. (2008c). *Data and mapping notes*. Retrieved November 30, 2008, from <http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/QOL/dataandmappingnotes.html>.

Austin, E., & Johnson, K. (1997). Effects of general and alcohol-specific media literacy training on children's decision making about alcohol. *Journal of Health Communication*, 2, 17-42. Retrieved November 10, 2008, from <http://web.ebscohost.com.proxy.lib.sfu.ca/ehost/pdf?vid=2&hid=5&sid=256de977-094b-46d7-a57a-db5eaa3c3192%40sessionmgr8>.

British Columbia Health Literacy Research Team (2008, March). *CIHR school health literacy research symposium*. Symposium Conducted at the meeting of the First International School Health Literacy Symposium and Working Meetings, Vancouver, Canada.

Canadian Council on Learning. (2008). *State of learning report*. Retrieved December 2, 2008 from <http://www.cclca.ca/CCL/Reports/StateofLearning/UnlockingCanadasPotential.htm>.

CCSSO-SCASS. (2002). *Health education assessment project skills cards*. Santa Cruz, CA: ToucanEd. Environment Canada. (2008). *Environmental issues*. Retrieved December 02, 2008, from <http://www.ec.gc.ca/education/default.asp?lang=En&n=3AD65317-0>.

Hsu, S., & Roth, R. (1998). An assessment of environmental literacy and analysis of predictors of responsible environmental behaviour held by secondary teachers in the Hualien Area of

Taiwan. *Environmental Education Research*, 4(3), 229-240. Retrieved November 30, 2008, from http://pdfserve.informaworld.com.proxy.lib.sfu.ca/195898_770885140_739490859.pdf.

Joint Committee on National Health Education Standards. (1998). *National health education standards: Achieving health literacy*. Atlanta, GA: American Cancer Society.

Kickbusch, I. (2001). Health literacy: Addressing the health and education divide. *Health Promotion International*, 16, 289-297. Retrieved November 30, 2008 from <http://heapro.oxfordjournals.org/cgi/reprint/16/3/289>.

Public Health Agency of Canada. (2008a). *Youth risk behaviours*. Retrieved October 30, 2008 from http://www.phac-aspc.gc.ca/dca-dea/7-18yrs-ans/index_ehtml.

Public Health Agency of Canada. (2008b). *Promoting health in Canada: An overview of recent developments and initiatives*. Retrieved December 01, 2008, from <http://www.phac-aspc.gc.ca/ph-sp/pdf/Promoting-Health-Web-eng.pdf>.

Public Health Agency of Canada. (2008c). *Healthy settings for young people in Canada*. Retrieved December 02, 2008, from <http://www.phac-aspc.gc.ca/dca-dea/yjc/index-eng.php>.

St. Leger, L. (2000). Developing indicators to enhance school health. *Health Education Research*, 15(6), 719-728. Retrieved November 30, 2008 from <http://her.oxfordjournals.org.proxy.lib.sfu.ca/cgi/reprint/15/6/719>.

St. Leger, L. (2001). School, health literacy and public health: Possibilities and challenges. *Health Promotion International*, 16(2), 197-205. Retrieved November 30, 2008 from <http://heapro.oxfordjournals.org.proxy.lib.sfu.ca/cgi/reprint/16/2/197>.

Tones, K. (2005). Health promotion in schools: The radical imperative. In S. Clift, & B. B. Jensen (Eds.), *The Health Promoting School: International Advances in Theory, Evaluation and Practice* (pp. 23-40). Denmark, Copenhagen: Danish University of Education Press.

Vamos, S. (2008). Promoting health literacy: Integrating environmental health education into teacher training. *Umwelt und Gesundheit Online*, 1, 11-16. Retrieved November 10, 2008, from <http://www.gugk.de/umwelt>.

Vamos, S. (2009). Canadian quality of life: Linking social environmental indicators to educational objectives. *Umwelt und Gesundheit Online*, 2, 8-12. Retrieved September 10, 2009 from <http://www.gugk.de/umwelt>.

Vamos, S. & Zhou, M. (2007). Educator preparedness to teach health education in British Columbia. *American Journal of Health Education*, 38(5), 285-293.

Vancouver Parks and Recreation. (2008). *Beaches*. Retrieved November 30, 2008 from <http://vancouver.ca/parks/rec/beaches/index.htm>.

Wallerstein, N., & Bernstein, E. (1988). Empowerment education: Freire's ideas adapted to health education. *Health Education & Behavior*, 15, 379-394. Retrieved November, 10, 2008 from <http://heb.sagepub.com/cgi/content/abstract/15/4/379>.

World Health Organization. (1986). *Ottawa charter for health promotion*. Geneva, Switzerland: World Health Organization European Office.

World Health Organization. (1997a). *Promoting health through schools: Report of a WHO expert committee on comprehensive school health education and promotion*. WHO, Geneva.

World Health Organization. (1997b). *Programme on mental health: WHOQOL measuring quality of life*. WHO, Geneva. Retrieved November 30, 2008 from http://www.who.int/mental_health/media/68.pdf.

World Health Organization. (2008). *School and youth health*. Retrieved November 20, 2008 from http://www.who.int/school_youth_health/gshi/hps/en/index.html.

ABOUT THE AUTHORS

Sandra Vamos (svamos@sfu.ca) is Assistant Professor of Health Education in the Faculty of Education, Simon Fraser University, Burnaby, British Columbia, Canada. Julia Hayos (juleshayos00@hotmail.com) and Laura MacNiven (laura.macniven@gmail.com) are candidates for the Master's degree at Simon Fraser University. An earlier version of this paper was presented at the Second Winter Meeting of the International Consortium on Interdisciplinary Education about Health and the Environment, Cologne, Germany, December 18-20, 2008. Copyright 2009 by *Umwelt und Gesundheit Online* and the Gesellschaft für Umwelt, Gesundheit und Kommunikation.

