

Education for Sustainability in Manitoba: What Should Be Done?

By Gary Babiuk and Thomas Falkenberg

In 2010 we, in collaboration with a team of university-based researchers and field-based research practitioners, completed an 18-month research study entitled Sustainable Development and Living through Changing Teacher Education and Teaching in Manitoba. This article is based on selected sections from the research report of this study (see Babiuk & Falkenberg, 2010). The first part of this article outlines foundational ideas that framed the research study, and the second part presents and discusses the report's recommendations and their rationales. The full report provides recommendations to the Manitoba government (Manitoba Education), school divisions, school-based educators, and faculties of education, and although all recommendations are interconnected, in this article, we limit our presentation to the recommendations to school divisions.

Sustainability is *not* a problem of and for the planet Earth. Whatever humans do, the Earth will still function as a planet in some way. *The problem of sustainability is a human values problem*, because sustainability is about sustaining something, which is (at least in its major part) a matter of human choice based on values. When Lester Brown introduced the concept of sustainability, he used the phrase “sustainable society” and defined a sustainable society as one that is able to satisfy *its needs* without diminishing the chances of future generations to satisfy their needs (Brown, 1981). What a society's needs are—maybe with the exception of basic survival needs—is a matter of societal values. The problem of sustainability, then, is *the problem of creating and sustaining the conditions for a particular way of human living for the current generation and future generations*. Thus, *the problem of sustainability is a human, a value, and a responsibility problem* (responsibility toward future generations).

From the historical beginning of the development of the concept of sustainable development, the response to the question of what it is that needs to and should be sustained was seen as having to be a multi-strand response that considers the different domains of human living, like the natural, the socio-cultural, the physical (health) and the socio-economical domains. The notion of human well-being has emerged as an attempt to comprehensively capture the multiplicity of human needs that would need to be considered in responding to the problem of sustainability, so, for instance, in the Millennium Ecosystem Assessment (www.maweb.org), the Canadian Index of Well-Being (www.ciweb.ca), or the Happy Planet Index (www.happyplanetindex.org).

Edwards (2005) identifies a widespread concern for sustainability in different disciplines and a shift in the way human living is conceptualized and lived to the degree that he speaks of a *paradigm shift*. This concern for sustainability in a wide range of disciplines has impacted all aspects of human living, for instance, how

we work together as a community, how we undertake commerce, how we treat natural resources, how we design buildings, how we educate our children, and how we consider the biosphere. Drawing together the communalities in the new thinking across the different domains, he concludes that there are seven common themes across these domains that characterize the paradigm shift:

- *Stewardship* emphasizes the importance of establishing an ecological ethic for managing and preserving the biological integrity of ecosystems.
- *Respect for limits* calls for living within nature's means by preventing waste, pollution and sustainable resource depletion.
- *Interdependence* covers not only the ecological relationships between species and nature but also economic and cultural ties at the local, regional and international levels.
- *Economic restructuring* appears in many principles as a need for expanding employment opportunities while safeguarding ecosystems.

- *Fair distribution* speaks to the importance of social justice and equity in areas such as employment, education and healthcare.
- *Intergenerational perspective* emphasizes the need for a long-term rather than a short-term view to guide the critical choices facing society.
- *Nature as a model and teacher* acknowledges the 3.5 billion years of evolution of living systems and nature's significance as a reservoir of "expertise." (Edwards, 2005, p. 128-129)

We have conceptualized sustainability as a value and responsibility problem, which leads to *education* as the most promising institutional response to the problem of sustainability. The next section will briefly discuss some fundamental points around education for sustainability.

Education for sustainability

The report by the World Commission on Environment and Development (WCED, 1987) recognizes that "sustainable development requires changes in values and attitudes towards environment and development" (p. 111) and that education plays a central role in achieving those changes in values and attitudes as well as the skills and responsibilities that go along with those changes.

Others go further and suggest that the environmental and societal conditions for living sustainably require values, attitudes, and competencies that our current formal education system does not focus on developing but in fact are *in conflict* with those values, attitudes and competencies it currently does focus on (see, for instance, Orr, 1994, p. 27; Smith, 1992, p. 15). In the eyes of these authors, school education needs to be completely *reoriented* toward a fundamentally different purpose. The notion of *ecological literacy* (Capra, 1996; Orr, 1992) has been developed to conceptualize this paradigm shift in formal education, so, for instance, by the Schumacher College in the U.K. (www.schumachercollege.org.uk), the Centre for Ecoliteracy in the U.S.A. (www.ecoliteracy.org), and the Royal Roads University (Ecological Literacy Certificate) in Canada (www.royalroads.ca).

How can such a paradigm shift be addressed in school education in the Manitoba context? Based on the review of relevant literature and responses from Manitoba educators from a range of backgrounds, we derived a number of recommendations for education and educators in Manitoba that together address how such a paradigm shift might be accomplished. The next sections outline some of the recommendations for school divisions. (For a complete list of recommendation, see Babiuk & Falkenberg, 2010.)

Recommendations concerning education for sustainability

The first recommendation concerns **the promotion of education for sustainability in Manitoba**. One aspect of this recommendation addresses the need for reconceptualizing and clarifying our understanding of education for sustainability and educating all members of the school divisions across Manitoba for this imperative. The rationale for these recommendations is that we need to help educators understand education for sustainability in the notion of a multi-strand approach that includes the socio-economic, socio-cultural, health and well-being and not just the environmental aspect of sustainability.

The UNESCO schools pillars model would be one that could assist in this reconceptualizing. All educators need to be brought up to speed in the vocabulary, concepts and urgency of education for sustainability. Although this process has begun, as a provincial system, we still have work to do to bring about lasting systemic change.

Another aspect of this recommendation is the need for personal change to help provide an urgency and passion for moving our society toward sustainability through our work in education. The more holistic understanding of education for sustainability can help overcome the tendency to view nature as "other," as outside of daily human life. An Aboriginal perspective can help us reconceptualize our concern for the natural environment as our interconnection with it and as our responsibility to future generations or, as

some would suggest, our responsibility toward the earth that our grandchildren will inherit.

The second recommendation deals with the issue of **whole-system change in education**. One concern of the notion of moving to a sustainable living focus in education is the issue of adding more to an already full agenda and curriculum for school personnel, resulting in possible teacher burnout or the ignoring of education for sustainability for self-preservation. Thus, we recommend that education for sustainability become the overarching focus for all levels of education in Manitoba and that a small number of ambitious goals be adopted. Too many disconnected, fragmented and episodic projects undermine the chances of achieving the ambitious, long-term goals underlying education for sustainability so urgently need to be undertaken.

The third recommendation deals with the **issues of systems thinking**. As a human society we must model the underlying principles of ecological understanding and recognize the interconnection of all aspects of the living system in our societal organizations. We must model the natural systems. If we wish to bring about sustained change toward a sustainable future we must consider all aspects of education and understand that they are interconnected and must be considered together.

A particular area of concern from the perspective of systems thinking is the need to revisit funding formulas for school-based education under the notion of equitability rather than equity. A sustainable education system will need to address the needs of all but understand that some aspects of the system need more attention at this time than others. Overall, the research findings indicated a need for a commitment to a systems approach in our educational system.

The fourth recommendation encourages school divisions to undertake an **audit based on the multi-strand concept of sustainability** (socio-economic, socio-cultural, environment, and well-being) in order to establish the respective division's current state of implementation of education for

sustainability. Although Manitoba Education has been addressing this issue since the late 1990s and has become a leader in this area, there has been an uneven focus and implementation of the different strands of education for sustainability.

As we move to a systemic approach, the goals of education for sustainability need to be imbedded in school divisional strategic plans. The understanding of the multi-strands for living sustainably needs to be promoted to assist educators in integrating this understanding into the curriculum. At this time, much of the student and teacher efforts in the form of sustainability initiatives have occurred outside the classroom in extra-curricular clubs.

The focus of our whole-school programs need to help our students learn the knowledge, skills and values of creating and living in a sustainable world. Our curricula must support the sustainable development of our communities through the teaching of knowledge, skills, and attitudes for sustainable living not just to our students, educators, and parents, but all members of our community.

Recommendations concerning professional development

Continuing with the systemic necessity of bringing about change, the first recommendation addresses the need

to strengthen the **school-university partnership for teacher development**. Although such a partnership has been in place since teacher education moved to the universities, the design of these partnerships has to fundamentally change and their goals have to support continuous teacher professional development with a focus on student learning in the area of education for sustainability.

The partnerships need to centre around the integration of pre-service preparation of teachers at the university and the ongoing professional development of teachers in classrooms. Such an integration, with a focus on education for sustainability, can strengthen whole-system educational change. The development of professional learning communities involving all educators would be a good starting point, an approach that many school divisions and schools across Manitoba have already begun to cultivate.

The second recommendation points to the need for **focusing our curriculum on the notions of interdisciplinary curriculum, pedagogy of inquiry, and systems thinking**. The multi-strand notion of sustainability is grounded in a holistic, system-theoretical view of the world. This view also mirrors the systemic understanding of the earth and its ecological systems. We need to

move away from the silo nature of subject-discipline based curriculum. The study of topics around education for sustainability within the regular course of teaching can provide the foundations for all learning in the classroom and provide the substance for the development of all the literacies (reading, writing, numeracy, media, technology, artistic, etc.) that are the general goal of education in Manitoba. As students inquire and investigate sustainability topics, they develop the knowledge, skills, and attitudes outlined in the curriculum. Professional development and teacher education through professional learning communities must work toward assisting teachers with developing a pedagogy of integration, inquiry, and systems thinking in order to prepare their students to act for a sustainable future.

Conclusion

This has only been a brief summary of the recommendations and rationale for implementing the education for sustainability initiative in Manitoba and the professional development necessary to support educators in their efforts to move it forward. However, the recommendations for school divisions cannot be seen to stand alone, but must be considered as interconnected with those recommendations outlined for the province and teacher education at the university level. As was outlined, there needs to be a systemic approach to education for sustainability if we wish to move ahead in the last half of UNESCO's Decade for Education for Sustainable Development (see www.unesco.org/en/esd). ■

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Manitoba
First Nations Education
Resource Centre Inc.

MFNERC Inc. Vision Statement

To support First Nations to develop and implement a comprehensive holistic education system inclusive of First Nations languages, world views, values, beliefs and traditions with exemplary academic standards, under First Nations jurisdiction.

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