

**SUSTAINABLE WELL-BEING:
CONCEPTS, ISSUES, AND EDUCATIONAL PRACTICES**

F. Deer, T. Falkenberg, B. McMillan, and L. Sims (Eds.)



ESWB Press

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PRACTICES**

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This book resulted from ideas and manuscripts presented at the first Interdisciplinary Conference on Educating for Sustainable Well-Being, organized in 2012 by the Education for Sustainable Well-Being Research Group at the University of Manitoba. We want to acknowledge the work done by the Conference Organizing Committee to make the conference a success and to set the groundwork for this book.

Last but not least, we acknowledge the Education for Sustainable Well-Being Press for providing the publishing opportunity for this project, as well as the financial support that the Faculty of Education of the University of Manitoba has been providing to the Press to support the publishing of its books.

Winnipeg, November 2014

Frank Deer
Thomas Falkenberg
Barbara McMillan
Laura Sims

Introduction

FRANK DEER, THOMAS FALKENBERG, BARBARA MCMILLAN, AND LAURA SIMS

In November 2012 the Education for Sustainable Well-Being Research Group at the University of Manitoba organized its first conference, entitled “Educating for Sustainable Well-Being: Concepts, Issues, Perspectives, and Practices“. Following the conference, participants were invited to develop their presentations into papers and submit those for consideration for inclusion in an e-book on the theme of the conference. We want to express our great appreciation to all those who submitted a manuscript for consideration. All manuscripts went through a blind review process, and the present book is the result of this process. We are very grateful to our many colleagues who volunteered their time to review the submitted manuscripts.

The work of the Research Group and the objectives it has given itself take their starting point in the concern for how we assess societal “progress”, how such understanding is and should be linked with our responsibility for future generations, and what role formal, informal, and non-formal education can and should play in addressing this concern. The conference was an attempt to initiate an interdisciplinary discourse around this concern. We are pleased that this very first volume published by the newly created Education for Sustainable Well-Being Press (www.ESWB-Press.org) reflects the interdisciplinary nature of this concern and the range of contributions that educational research, scholarship, and practice can make to this important discourse.

Only recently has the notion of well-being as a concern for and central focus of public policy found its way into public policy debates in Western countries: UK (Department for Education and Skills, 2003), France (Stiglitz, Sen, & Fitoussi, 2010), USA (Bok, 2011), and the Organisation for Economic Co-operation and Development (OECD) more generally (<http://www.oecdbetterlifeindex.org>). While the discourse on well-being as a central guide for public policy in Western countries is still in its infancy, the country of Bhutan has moved to using a Gross National Happiness Index (<http://www.grossnationalhappiness.com>) as a way of assessing the success of public policy in all domains of public life. The Research Group, through means such as this volume, intends to contribute to the promotion of the discourse on the idea of well-being as a guide for and measure of public policy more generally and educational policy and practice more specifically.

The Chapters

The chapters in this book are arranged alphabetically by name of the first author. There are a number of overlapping themes across the chapters, and we would like to identify some of those in order to provide readers of the book with some means of orientation; some chapters fit more than one theme. To that end we have also added a short overview of what the respective chapter is about.

Foundational Matters

Four chapters specifically deal with *foundational matters* concerning the concept of well-being. Cohen, Bai, and Rabi (**chapter 2**) develop the notion of relationship as teacher of sustainability; Falkenberg (**chapter 5**) discusses Western approaches to well-being as a basis for developing a framework for conceptualizing sustainable well-being; O'Brien (**chapter 10**) introduces the concept of sustainable happiness that she has developed; and Stewart (**chapter 12**) discusses the conceptual intersection between peace education and education for sustainable development.

In their introduction to "Relationship as Teacher of Sustainability: Post-individualist Education", Avraham Cohen, Heesoon Bai, and Shahar Rabi (**chapter 2**) state that human "change for sustainability has to be ontological" (p. 23). They draw upon research to suggest that concomitant with the Industrial Age came a new perception that conceived of humans as labourers for producing consumer goods and Earth as a resource base for creating these goods along with material wealth. Such perceptions, they argue, have resulted in attachment wounding (self-defeating and self-destructive behaviours) and developmental arrest. In three narratives, Cohen, Bai and Rabi show that it is through the rebuilding of ontological security in relational environments where individuals have the opportunity to experience what is lacking in their lives, and that it is possible to shift out of an individualistic ontology. This shift allows one to see one's self as interconnected with all other life forms. It is this inner work toward identity change - "becoming whole and one with nature and all its diversity" (p. 34), that the authors believe needs to occur and, thus, be the focus of education, before a human being is able to facilitate the change for sustainability.

In "Making Sense of Western Approaches to Well-being for an Educational Context", Thomas Falkenberg (**chapter 5**) aims to provide a conceptualization of well-being that will serve as the basis for assessing well-being in schools as well as education for well-being. He begins by conducting an analysis of the interpretations of well-being provided by scholars from a variety of Western academic disciplines. Based upon three core aspects of the notion of well-being derived from these interpretations, he poses three questions. These are: where is well-being in humans located; who decides if someone lives well and whose ideas of well-being are used to make this assessment; and what is the relationship between the well-being of the enculturated individual and social perspectives on well-being. In his response to each question, Falkenberg again draws upon well-being research from philosophy, psychology, economics, sociology, and anthropology and admits that the complexity of the notion of well-being owing to this interdisciplinarity seems daunting, but that the importance of this conceptualization overrides the difficulty associated with the task.

In the chapter "Sustainable Happiness: Assisting Pre-service Teachers to Understand the Relationship between Sustainability Education and Well-being", Catherine O'Brien (**chapter 10**) explores promising directions for assisting pre-service teachers to understand the relationship between sustainability education, happiness and well-being. She describes how the concept of sustainable happiness offers an innovative perspective to re-invigorate sustainability education and particularly how this concept has been integrated to provide a framework for a unique course in Cape Breton University's Bachelor of Education program. The chapter provides an overview of the sustainable happiness course followed by a discussion of the implications for the future of education.

Jan Stewart (**chapter 12**) in her chapter "Education for Peace and Sustainable Development in Conflict Affected Countries" examines the theoretical underpinnings of both Peace Education and Education for Sustainable Development and discusses the conceptual intersections with internationally-adopted principles and values. Findings are presented from a study conducted on the educational and psychosocial needs of children and youth in northern Uganda that illustrate the need

for a comprehensive Peace Education program that encompasses the proponents of sustainability and strives to transform systems to safe, sustainable, and democratic environments. In this chapter, Stewart argues that global security and sustainability rest on the collective sense of global interdependence and a shared responsibility for the well-being of people around the world. She explores how the two complementing fields of Peace Education and Education for Sustainable Development offer a holistic approach that is necessary to facilitate new thinking, concrete action, and transformational change. Together these intersecting fields contribute to a framework that can provide multi-disciplinary strategies, pedagogical approaches, methods, and skills for teaching and learning about peace and sustainability.

Addressing Sustainable Well-Being Challenges of Our Times

A number of chapters in this book address different challenges linked to the notion of sustainable well-being that we face at the individual and societal level by proposing educational perspectives on how those challenges can be addressed: obesity and our unhealthy relationship to food (Colatruglio & Slater, **chapter 3**); the socio-ecological crisis the world community faces (Hrynkow, **chapter 7**), food insecurity in First Nations communities in Canada (Kamal, Thompson, Linklater & Ithitno Mechisowin Committee, **chapter 9**); and peace and conflict (Stewart, chapter 12).

In their chapter “Food Literacy: Bridging the Gap between Food, Nutrition and Well-Being” (**chapter 3**), Sarah Colatruglio and Joyce Slate confront the poor nutritional health situation in North America more generally and the obesity epidemic more specifically. They identify in particular three recent trends around food that require a new approach to food: a shift from whole food ingredients to ultra-processed, low nutrient but energy dense food; a loss of food and cooking skills; and a shift of social practices and expectations around food, like the stronger orientation toward convenience, the greater loss of family meals, and the reduced role of home economics and food skills education in the school system. Colatruglio and Slater propose the notion of food literacy as the focus of an educational approach to address these problematic trends. In their paper they discuss a range of approaches to food literacy proposed in the literature and then argue that any such approach should be embedded within a well-being framework in order to re-establish a healthier relationship with food as part of a quality-of-life perspective.

In his chapter “The New Story, Transformative Learning and Socio-Ecological Flourishing” (**chapter 7**), Chris Hrynkow argues that humans face the moral problem of a socio-ecological crisis, which he characterizes as humans’ responsibility for “the marginalization of members of its own species and putting the rest of the Earth community in peril” (p. 105). Suggesting that at the core of the crisis is “a lack of integral worldview” (p. 105), he proposes the educational project of addressing this lack of an integral worldview. For the fundamental ideas of such a project, Hrynkow draws on Thomas Berry’s work and that of a number of educational theorists who write in the field of transformative education. In the final section of his chapter, Hrynkow briefly discusses what and how different subject areas can contribute to the educational project to foster an integrative worldview in order to grapple with the socio-ecological crisis.

First Nations communities in Canada represent a variety of socio-economic realities that affect their states of well-being. For many First Nations, particularly those that are located adjacent to large urban areas in southern Canada, access to post-secondary education, sought-after employment opportunities and the basic necessities for healthy living have led to the establishment of healthy community contexts. For other First Nations, particularly those in northern regions, this is not necessarily the case. The chapter “Sustainable Livelihood Approach to Achieve Food Sovereignty in

O-Pipon-Na-Piwin” by Asfia Kamal, Shirley Thompson, Rene Linklater and Ithitno Mechisowin Committee (**chapter 9**), explores a unique community-based manifestation of food security. Access to healthy foods is explored with an emphasis upon the potential for land-based food sources as an alternative to dependence upon commercially produced and shipped food sources. The significance of this alternative, which may be of relevance to many First Nations Communities, is the strengthening of community capacity to provide sources of healthy food.

Sustainable Well-Being in Educational Contexts

All chapters in this book address sustainable well-being in some form of educational contexts. The following chapters were written with a focus on particular educational contexts: outdoor education (Borland, **chapter 1**); teacher education (Drake, **chapter 4**; Ji, **chapter 8**; O’Brien, chapter 10); educational practices in the school system (Drake, chapter 4; Henderson, **chapter 6**; Satran, **chapter 11**); and the context of self-study and inner work (Cohen, Bai, & Rabi, chapter 2; Ji, chapter 8).

In recent years, physical well-being has become a focus for numerous primary/secondary school jurisdictions in Canada. Some school districts have created and enforced healthy food policies. Some provincial jurisdictions have extended the requirement for physical education to grade 12. As provincial and school district authorities explore and implement initiatives commensurate with the emergent well-being imperatives, physical and geographical context has become an important consideration – especially with the potential that outdoor education may provide. In the chapter “Sustainability of Ontario School Board-Operated Outdoor Education Centres”, James Borland (**chapter 1**) explores this issue within a particular provincial context where the well-being imperative is as prevalent as it is in other provinces. Using a historical lens, the author explores how educational priorities have shifted over recent decades. This chapter may be particularly important to provincial and district authorities where well-being through outdoor education is a current topic of discussion and prospective change.

In “Designing across the Curriculum for ‘Sustainable Well-being’: A 21st Century Approach,” Susan Drake (**chapter 4**) explores the use of Delors’ four pillars of school, the causal modeling approach of Heidi Siwak, Fullan’s 21st Century skills, and Wiggins and McTighe’s backward design process in creating curricula that address “wicked” problems. She argues that curricula so designed not only assist students in examining and confronting complex problems associated with the negative consequences of ecological overshoot but are also relevant to students and accountable to local curriculum mandates. Drake provides the necessary background information for developing such curricula: she shows how Delors’ learning to know, learning to do, learning to be, and learning to live together can be addressed using the big idea of sustainability, the six Cs of 21st century learning (communication, critical thinking, creative thinking, collaborative problem-solving, citizenship, and character education), and holistic approaches that focus on the inner life of the learner and social responsibility. She includes a sample curriculum unit for Grade 7 social studies to illustrate what a curriculum focused on sustainable well-being can be.

In the chapter “Solar-Powered Learning: Educating for an Ecological Literacy”, Matt Henderson (**chapter 6**) writes about his reasons for creating and implementing a holistic, multidisciplinary study of energy for students in Grade 9. He briefly describes his collaborative planning with a science teacher and teacher of English Language Arts before focusing on the learning experiences with which students were engaged in his classes. These experiences were designed to develop students’ understanding of economics and the principles behind current

economic policies in Canada, to enable students to discover how energy policies in Canada are debated, created and implemented, and to develop students' awareness of provincial government and federal government approaches to the management of natural resources. Henderson concludes by showing how he and his two colleagues used the pedagogical foundations of David Orr's ecological literacy to assess the effect of the study on students' capacity to identify a solution to an ecological problem and take informed action.

In her very personal chapter "The Heart of Education and Well-Being Is Spiritual" (**chapter 8**), Xia Ji provides an "autoethnographic inquiry into the relationship between education, well-being and spirituality" (p. 123). Through her own inquiry she wants to make the case for using autoethnographic inquiry as an educational practice that can contribute to the well-being of the individual learner as well as a community of learners. Drawing on a number of scholars, including Parker Palmer and Arne Ness, Ji argues first for the interconnectedness of education, spirituality and well-being, and then provides an overview of autoethnographic inquiry as a research methodology. At the heart of her autoethnographic inquiry are two examples of her own inquiry into episodes of her life in China and her engagement with her university students to illustrate how this research methodology can be used as an educational tool to link education, well-being, and spirituality.

In her chapter "Meditation in the Classroom" (**chapter 11**) Cari Satran reports on her use of meditation in her middle-years classroom. She describes in detail how she uses particular meditation techniques and reflects on her experience using meditation with her students. With reference to a range of relevant authors, she argues for the benefits of using meditation with students regularly but flexibly for their well-being. Satran's chapter will be of great practical benefit to teachers of younger students who like to use meditation practices to benefit their students.

References

- Bok, D. (2011). *The politics of happiness: What government can learn from the new research on well-being*. Princeton, NJ: Princeton University Press.
- Department for Education and Skills (2003). *Every child matters*. London: HMSO.
- Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2010). *Mismeasuring our lives: Why GDP doesn't add up*. New York: The New Press.

Chapter 1

Sustainability of Ontario School Board-Operated Outdoor Education Centres

JAMES BORLAND

As people strive to design more sustainable communities, change requires creating more resilient regional education systems. Providing policymakers with factual knowledge about the historical dynamics that have made some facilities operationally successful, while others have struggled, can help school boards make better decisions about what facilities they pedagogically require and what they can sustainably support. A useful area to explore such phenomenon is through the design and use of school board-operated outdoor education centres throughout the Ontario provincial education system.

School facilities are not passive containers, but active agents that influence the pedagogy of educators and the experiences of students. They “should not be viewed merely as capsules in which education is located . . . but as designed spaces that, in their materiality, project a system of values” (Burke & Grosvenor, 2008, p. 8). School facilities are often “regarded as a backdrop for the essential human interaction with the curriculum in the learning process” (Burke, 2005, p. 494). The long term financial sustainability of school facilities is often assumed to be a stable sociological given, instead of something that is susceptible to political change. Although it may seem obvious that the establishment of new facilities should include long term planning, history demonstrates this does not always happen (Gidney, 1999). During times of economic struggle, such assumptions can threaten the operational viability of some facilities, particularly when school board administrators are forced to impose cuts. As people strive to create more sustainable communities, to support such change it requires creating more resilient regional education systems. Sustainability refers to that which can be continued over time. Resilience is the capacity of systems to absorb disturbances and still retain their basic function and structure (Walker & Salt, 2006). Providing policy makers with more factual knowledge about the historical dynamics that have made some facilities operationally successful, while others have struggled, can help school boards make better decisions about what facilities they pedagogically require and what they can sustainably support. A useful area to explore such phenomenon is through the design and use of school board-operated outdoor education centres within the Ontario provincial education system.

Research Problem

Since the 1960s, across Ontario, which is one of Canada's most populated provinces, it has been assumed that school board-operated outdoor education centres provide one of the few places where students can learn about and develop an appreciation for nature (Foster & Linney, 2007). *Outdoor education* (OE) is defined as a multidisciplinary teaching method where educators use outdoor spaces to teach skills and concepts deemed best learned through direct contact with nature (Borland, 2011). *School board-operated OE centres*, also known as natural science schools or field centres, are school board properties acquired by purchase or lease that provide controlled spaces for teachers and students with exclusive access to natural ecosystems for curricular study (Education Act, 1990).

Over the past decade several scholars who specialize in the study of Ontario-based OE programs, have alleged that from the 1990s to the early 2000s many school board-operated OE centres were closed across the province because of financial constraints imposed upon school boards by the provincial government (Andrews, 2003; Potter & Henderson, 2004; Foster & Linney, 2007; Breunig & O'Connell, 2008; Sharpe & Breunig, 2009). Andrews (2003) states that over the last few decades, school boards across Ontario have "gradually reduced their financial commitment to outdoor education. . . . As a result, many residential field centres have been closed, the frequency of day trips to field centres has been significantly reduced" (p. v). Potter and Henderson (2004) contend that "Starting in the early 1990s many school board outdoor education centres closed" (p. 80). Foster and Linney (2007) claim that financial constraints placed upon school boards by a past Conservative majority government, resulted in the closure of several centres, and left "the remaining ones in constant jeopardy" (p. 32). Breunig and O'Connell (2008) argue that the most significant cuts to school board-operated OE centres occurred in the late 1990s, when six metropolitan school boards in the Greater Toronto Area (GTA) were consolidated into a single large district school board. Sharpe and Breunig (2009) assert that proceeding into the early 2000s, a shift in the ideology of the provincial education system from educational progressivism to a fiscal conservative ideology of economic accountability contributed to the closure of numerous board-run OE centres.

Several southern Ontario classroom teachers, who participated in a study by Tan and Pedretti (2010), substantiate the claims of these scholars, reporting that several decades of cuts to school board-operated OE facilities reduced their ability to access and use outdoor spaces for learning. In response to these cuts, the Council of Outdoor Educators of Ontario (COEO) is now lobbying the provincial government to increase funding to school boards for the construction of new OE centres. Recognized by the Ontario Ministry of Education as the professional body that represents Ontario-based OE practitioners (Working Group, 2007), COEO argues that students from kindergarten to grade 8 should be ensured a minimum of two one-day OE programs and one five-day OE program throughout their school career (Foster & Linney, 2007). Although this combination of accounts promotes a shared belief that prior to the 1990s, these types of facilities were the predominant vehicle of delivery used by Ontario school boards for the provision of OE opportunities, no empirical evidence has been used by these proponents to support their claims.

The only study ever to analyze the state of Ontario school board-operated OE centres is now more than 20 years old. Published by Eagles and Richardson in 1992, this study provides data for the 1988-89 school year. Acknowledging that the first school board-operated OE centre was established in 1960, Eagles and Richardson report that by the 1988-89 school year, the number of school boards that operated an OE centre had grown to 26.7% of all boards, providing 20.6% of all students with access to OE programs offered through these facilities. What Eagles and Richardson did not report

is that for this same school year, their statistics indicate that 73.3% of school boards did not report being involved in the operation of a board-run OE centre and as a result 79.4% of students did not have the opportunity to attend OE program provided through such a facility. Based on this single year of data, Eagles and Richardson felt it was acceptable to conclude that from 1960 to 1989, the use of school board-operated OE centres had grown slowly, but steadily across the province. As a result of this evidence, Eagles and Richardson claimed that Ontario school boards made “extensive use of specialized field centres” (p. 9).

Although these stakeholders continue to advocate that school board-operated OE centres provide one of the best ways of delivering OE across the province, a lack of empirical evidence used to support these claims raises the question: *Are school board-operated OE centres the most financially sustainable way to deliver OE through the Ontario provincial education system?* It could be inferred that these claims represent what MacMillan (2009) calls an abuse of history. Abuses of history, whether perpetrated consciously or subconsciously, occur “when people try to ignore or even suppress evidence that might challenge their preferred view of the past” (MacMillan, 2009, p. 69). Although it is commonly assumed by the general public that once historical events have been established in text, a particular history does not require further critical investigation. MacMillan (2009) states:

It is wiser to think of history *not* as a pile of dead leaves or a collection of dusty artifacts but as a pool, sometimes benign, often sulfurous, that lies under the present, silently shaping our institutions, our ways of thought, our likes and dislikes. (p. x, italics added for emphasis)

MacMillan asserts, “Political and other leaders too often get away with misusing or abusing history for their own ends because the rest of us do not know enough to challenge them” (p. 36). She argues that it is important to challenge one-sided or false historical accounts, because, “If we do not, we allow our leaders and opinion makers to use history to bolster false claims and justify bad and foolish policies” (p. 37).

This study provides a factual account which illustrates how the sustainability of school facilities can be susceptible to political change. Through a historical exploration about how Ontario school board-operated OE centres have evolved from 1960 to 2012, this study demonstrates why it is critically important that educational policy makers consider the long term financial sustainability of new school facilities prior to encouraging their development and use. Guided by the following two research questions: *What were the official goals for the development of Ontario school board-operated OE centres in the 1960s? What significant changes happened with Ontario school board-operated OE centres from the 1960s to 2012?* This study provides educational policymakers responsible for developing future policy regarding the establishment and use of school board-operated OE centres, with a more factual account about the historical dynamics that have made some of these facilities operationally successful, while others have struggled. The goal of this study is to provide educational policymakers with a factual exemplar that can be used to help school boards negotiate the complex intersection of decisions between what facilities they pedagogically need and what facilities they can sustainably support.

Methodology

The empirical research methodology of Historical Geographic Information Science (HGIS) was used to conduct this investigation. HGIS draws upon archival research methods, statistical analysis, and GIS mapping, to help researchers analyze how over time human social systems are shaped by their physical geography (Gregory & Ell, 2007). Data for HGIS analysis was collected through archival sources and an online appraisal of contemporary Ontario district school board websites (Baym & Markham, 2009) and then analyzed to construct a factual account about the state of Ontario school board-operated OE centres. Archival data was collected from: Martindale's (1974) *Catalogue of Environmental and Outdoor Education in Ontario Schools*, to provide data on board-run OE centres for the 1972-73 school year; the *Catalogue of Programs and Personnel Sites and Services in Outdoor Education in Ontario*, which was published for the years 1979, 1986, and 1992; Eagles and Richardson's (1992) study, which provided statistical data for the 1988-89 school year; Ontario Ministry of Education statistical documents for 1973, 1979, 1986, and 1992-93; data for the 2011-12 school year was collected through an online appraisal of district school board websites identified through the Ontario Ministry of Education's (2012) *Find a School Board* webpage. These sources provided six school years (1972-73, 1978-79, 1985-86, 1988-89, 1992-93, and 2011-12) that were used to analyze the history of school board-operated OE centres.

Statistical data regarding the school board type, student enrolment, and facility location was organized into five Microsoft Excel databases for each year of study, with the exception of 1988-89 school year where data was drawn from Eagles and Richardson's 1992 study. Database information was imported for statistical analysis into the software program SPSS. Descriptive statistics were generated for the following Ontario school years: 1972-73, 1978-79, 1985-86, 1992-93, and 2011-12, then compiled into a table to compare with Eagles and Richardson 1988-89 data. Database information was then imported into the Geographic Information System (GIS) software ArcGIS, to map the geospatial history of these specialized facilities. Student enrollment data was aggregated from past school board jurisdictions, and fitted to contemporary district school board boundaries of the 2010 Ontario Ministry of Education *Generalized District School Board* ArcGIS file. A comparative analysis was conducted to examine how the location of past facilities is correlated to its associated student enrolment demographics. Qualitative data was then drawn from archival sources and was then used to craft a factual account about the history of school board-operated OE centres from 1960 to 2012.

Results

The results of this HGIS inquiry challenge the accounts of Eagles and Richardson (1992), Foster and Linney (2007), Breunig and O'Connell (2008), and Sharp and Breunig (2009). The first section provides an analysis of the official goals that guided the development of Ontario school board-operated OE centres through the 1960s. The second section discusses how changes to the provincial education system from 1960 to 2012, have shaped the operational sustainability of these school board facilities.

Official Goals – 1960s

During a period of provincial fiscal opulence throughout the 1950s and 1960s, the Ontario legislature was governed by a Progressive Conservative majority. At this time, the demographic bulge of the baby boomer generation was entering the provincial school system. With a triple-A global credit rating and a robust manufacturing sector, the government allocated 60% of its total budget to the public education system (Gidney, 1999). With a pressing need to build new school facilities to accommodate these students, in 1954, the government enacted the *Schools Administration Act*, passing legislation to guide the purchase and operation of school properties. Previously left undefined, school properties were defined as “the land necessary for a school house, school garden, teacher’s residence, caretaker’s residence, drill hall, gymnasium, offices and playgrounds connected therewith, or other land required for school purposes or for the offices of a board” (p. 491). School boards were now permitted to purchase property “for any education or other lawful purposes which it deems proper” (Ontario Statutes of the Province of Ontario, 1954, p. 482). In response to this act, new school facilities hastily began to be constructed across the province.

By 1960, another amendment was made to the *Schools Administration Act*, permitting school boards to “. . . provide or pay for board and lodging for a pupil for a period not exceeding two weeks in any year while he attends a school for a course in conservation or natural science (Ontario Statutes of the Province of Ontario, 1960, p. 434). Following this amendment, the Toronto Board of Education opened the first school board-operated OE centre, called the Island Natural Science School, to provide grade 5 and 6 students from city schools the opportunity to study on Centre Island for a week in order to develop their knowledge and appreciation for nature (Passmore, 1972). After 1962, when Rachel Carson’s book *Silent Spring*, spurred the development of the contemporary environmental movement (Winfield, 2012), in 1965 another amendment was made to *The Schools Administration Act*, permitting school boards with an average daily attendance of 10,000 students, the freedom to purchase land to establish and operate a natural science school (Ontario Statutes of the Province of Ontario, 1965). Following this amendment, several school boards including North York, Oxford County, and Windsor, established facilities (Birchard, 1996).

Shifting Priorities

From 1960 to 1972, Ontario school board-operated OE centres experienced a state of growth across the province. As illustrated in Table 1 and Table 2, by the 1972-1973 school year, the growth in facilities peaked. From 1973-2012, school board-operated OE centres would experience two subsequent waves of decline and growth. These findings challenge the conclusions of Eagles and Richardson (1992), who claim that from 1960 to 1989, school board-operated OE centres experienced a state of slow progressive growth. These statistics also illustrate that the greatest reduction in school board-operated OE centres occurred during the 1992-93 school year, which occurred under the majority governance of Ontario’s most socially-oriented political party: the New Democratic Party (NDP). This evidence substantiates the account of Andrews (2003) who claims that several school boards progressively reduced funding to OE over the past few decades, as well as the account of Potter and Henderson (2004) who state that “Starting in the early 1990s many school board outdoor education centres closed” (p. 80). This evidence challenges the accounts of Foster and Linney (2007), Breunig and O’Connell (2008), and Sharp and Breunig (2009), who each allege that a past Conservative majority during the 1990s to early 2000s, is solely to blame for the closure of numerous facilities across the province.

<u>School Year</u>	<u>1978-79</u>	<u>1985-86</u>	<u>1988-89</u>	<u>1992-93</u>	<u>2011-2012</u>
1972-73	-5.8%	-15.4%	150%	-19.2%	3.8%
1978-79		-10.2%	165.3%	-14.3%	10.2%
1985-86			195.5%	-4.1%	22%
1988-89				-67.7%	-64%
1992-93					28%

Table 1. This table illustrates the percentage of growth or decline in the total number of Ontario school board-operated OE centres for the selected Ontario school years of study. Positive results indicate growth, while negative results indicate decline. Data for the 1988-89 school year is drawn from Eagles and Richardson's (1992) study.

<u>Category</u>	<u>1972-73</u>	<u>1978-79</u>	<u>1985-86</u>	<u>1988-89</u>	<u>1992-93</u>	<u>2011-12</u>
Ontario school boards	180	175	161	170	165	72
Boards with OE centres	34 (18.9%)	34 (19.4%)	27 (16.8%)	46 (27.1%)	28(17%)	24 (33.3%)
Total OE Centres	52	49	44	130	42	54

Table 2. Scope of Ontario school board-operated OE centres for the following provincial school years. Data reported for the 1988-89 Ontario school year was drawn from Eagles and Richardson's (1992) study.

The 1970s. By 1972-73 school year, 34 (18.9%) of province's 180 school boards operated an OE centre, with a total of 52 facilities in operation across the province. A total of 2,018,276 students were enrolled in the provincial education system (Ontario Ministry of Education, 1973). Approximately 741,224 or 36.7% of Ontario students had access to a school board-operated OE centre. As illustrated in Figure 1, the highest prevalence of school board-operated OE centres was located throughout the province's southern peninsula, with 38 facilities in operation from the city of London to Ottawa (including two facilities in the province of Quebec). Across northern Ontario, school boards operated 9 facilities, predominantly located near densely populated cities such as Thunder Bay and Timmins. Most facilities clustered in areas with more than 23,000 students, which could infer that the 1965 amendment to *The Schools Administration Act* strongly influenced the location of school board-operated OE centres.

Although school board-operated OE centres peaked in the 1972-73 Ontario school year, as the manufacturing sector began to struggle in the early 1970s and the baby boomer generation began to graduate, school boards began to be burdened by increasing costs required to operate surplus school facilities which had been hastily built in the 1950s and 1960s, which they could no longer afford to fund. In 1972, the Ontario Ministry of Education imposed a five year fiscal ceiling on school board spending. The Education Minister announced that school boards would now focus on making more efficient use of existing resources (Gidney, 1999). The pedagogical use of outdoor spaces was one area the government strategically targeted.

In 1972, another amendment was made to the *Schools Administration Act*, which allowed all school boards to establish an OE centre (Ontario Statutes of the Province of Ontario, 1972). Although all school boards were now permitted to establish a facility, such acts now required "the approval of the Minister" (Ontario Statutes of the Province of Ontario, 1972, p. 408). Through this

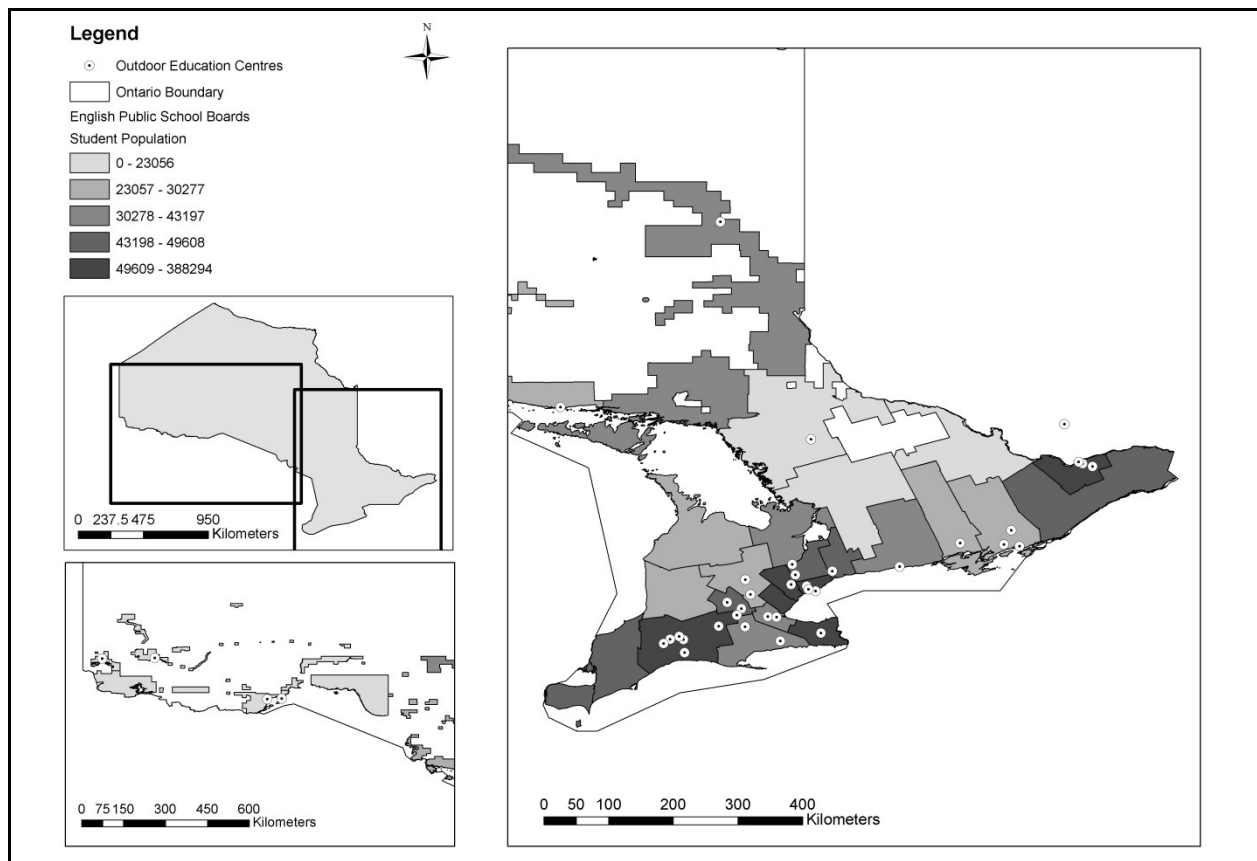


Figure 1. School board OE centres for the 1972-73 school year (English public school system). Data Layers: Ontario Ministry of Education (2010) [computer file]; Martindale (1974) [archival document]; Ontario Department of Education (1973) [archival document]. Map Generated by James Borland & Xue Luo, April 4, 2013, University of Windsor, Windsor, ON, Canada.

amendment, instead of purchasing new properties, the Ministry encouraged school boards to partner with conservation authorities to use land already under government jurisdiction.

In 1973, the Ontario Ministry of Education released a publication titled *Principles of Site Development: Elementary Schools K-6*. This publication focussed “attention on the various aspects of school programs that relate to outdoor use” (p. 4). The purpose of this publication was to help school administrators “determine what facilities are needed to fulfil the objectives of modern education at the least possible cost” (p. 4). This document encouraged the redesign of school grounds to provide students with daily access to a variety of representative ecosystems such as woods, meadows, and marshes for curricular study and play. Teachers were encouraged to use natural environments on school grounds and throughout their school neighbourhoods, so students could learn about the natural and urban aspects of their communities.

In 1975, the Ontario Ministry of Education introduced a new elementary curriculum called *The Formative Years: Circular P1J1*. This curriculum established a new pedagogical direction for teachers, where broad subject areas were identified by the provincial government such as literacy and numeracy skills, but classroom teachers were mandated to design their lessons to teach towards the

needs of their students. To guide the implementation of this curriculum, the Ontario Ministry of Education (1975) released a support document titled *Education in the Primary and Junior Divisions*, which mandated three pedagogical areas to direct the curriculum design of elementary teachers: communication (which included language arts and mathematics), the Arts (music, drama, visual arts, and physical education), and environmental studies (health and out-of-classroom studies). Out-of-classroom activities were expected to occur in natural and urban areas “throughout the year as a natural extension of classroom activity” (p. 102). Teachers were encouraged to use outdoor spaces beyond the confines of OE centres that could be found in a students’ local community such as “a ravine, a meadow, a woodlot, a street, a factory, or a shopping plaza” (p. 103).

After several years of encouraging school boards and classroom teachers to use outdoor spaces within their local school communities to provide OE opportunities, in 1976, as the province found itself in the midst of an economic recession, the Minister of Education announced that in the subsequent year when the fiscal ceiling on school board spending would end, the province would begin to reduce funding for public education. Aikman (1976) reports that one of the first areas identified for cuts was school board-operated OE centres. Although many OE centre employees contested this announcement, these proponents did not provide school boards with any solutions to keep their facilities in operation. In response to this outcry, the government passed legislation that permitted school board trustees to offset the costs of operating ancillary programs, by allowing them the unrestricted freedom to raise their local education property tax levies to pay for such services. The government based this strategy on the belief that if local taxpayers were willing to pay for such programs, school board trustees would be allowed to raise taxes, or otherwise be voted out of office in the next municipal election (Gidney, 1999). By the 1978-79 school year, the total number of school board-operated OE centres had declined by 5.8%. Several facilities, particularly in northern Ontario, that were operational in the 1972-73 school year, were no longer listed in operation.

The 1980s. In 1985, as the provincial recession ended, the Progressive Conservatives were replaced by an Ontario Liberal government (Gidney, 1999). By the time the Liberals came to power in 1985, the Progressive Conservatives had successfully reduced total government spending on the provincial education system from 60% to 20% percent. To maintain an equal level of funding for schools, school board trustees had exercised their right to increase local property tax levies to fund ancillary school services, including school board-operated OE centres. By the 1985-86 school year, as student enrolment had continued to decline by 11%, with a total enrollment of 1,796,244 students, the total number of school board-operated OE centres had also declined by 15.4%, with a total of 27 or 16.8% of school boards now operating an OE facility, and a total of 44 facilities in operation.

Over the next few years, the Liberal government would encourage school boards to increase spending through the use of local property tax levies. School boards and the government would argue that spending increases needed to be raised to cover the costs of increasing student enrolment numbers from immigration and the echo generation. School board spending quickly rose from “\$6 billion in 1985 to \$9 billion in 1993” (Gidney, 1999, p. 192). By the 1988-89 school year, a total of 130 school board OE centres were in operation across the province (Eagles & Richardson, 1992), representing a 195% increase in the total number of OE centres since the 1985-86 school year.

The 1990s. By 1990, as the province entered another economic recession the Liberals were replaced by the Ontario New Democratic Party (NDP), the provinces’ socialist-oriented democratic party. From 1990 to 1991, the NDP attempted to combat the recession through government stimulus and tax increases. As tax revenues plummeted and unemployment grew, by 1992 the NDP

government implemented a complex plan to save public spending by forcing civil servants including teachers to take scheduled days off of unpaid leave. Upon the implementation of these scheduled days off, the NDP froze the fiscal growth of provincial grants the government annually provided to school boards to finance the education system at a 1% percent increase for the 1992 and 1993 fiscal years, and 2% increase for the 1994 and 1995 fiscal years. Consequently, government funding for the provincial education system failed to match the cost of inflation. Over fear that they might be voted out of office, many school board trustees refused to raise their board's property tax levy. Instead they choose to cut funding to ancillary services to keep schools open (Gidney, 1999).

By the 1992-93 school year, several school board-operated OE centres abruptly closed across the province, with a total of 28 school boards operating an OE centre, and 44 facilities remaining in operation. This represented a 67.7% decline in the total number of facilities in operation since the 1988-89 school year. As illustrated in Figure 2, the geographic distribution of Ontario school board-operated OE centres had significantly contracted since the 1972-73 school year, with the greatest clustering of facilities remaining near or within the Greater Toronto Area (GTA). It can be inferred that school boards within these areas were able to keep their OE facilities in operation because of their ability to acquire greater funding through their more affluent property tax bases.

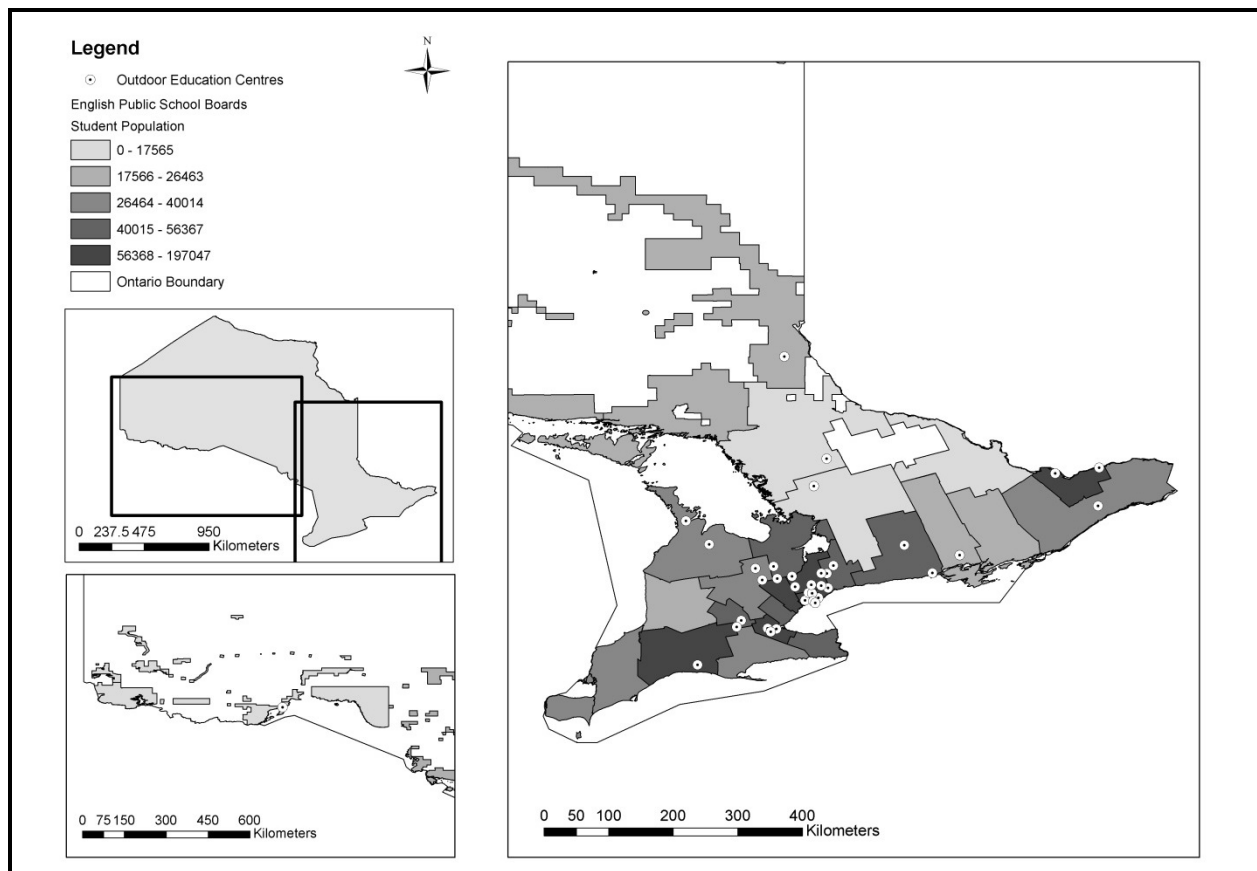


Figure 2. School board OE centres for the 1992-93 school year (English public school system). Data Layers: Ontario Ministry of Education (2010) [computer file]; Council of Outdoor Educators of Ontario (1992) [archival document]; Ontario Ministry of Education (1993) [archival document]. Map Generated by James Borland & Xue Luo, April 4, 2013, University of Windsor, Windsor, ON, Canada.

As the province began to pull itself out of another provincial recession, the NDP was replaced by a new Conservative majority which would govern the province from 1995-2003. Guided by a platform called the Common Sense Revolution, from 1995-1999, the Ontario Conservatives sought to reduce overspending in the public service. In 1997, the Education Minister announced that systemic academic inequities existed within the provincial education system. Arguing that less affluent school boards in the provinces' north could not afford the same diversity of educational opportunities that their more affluent counterparts in the provinces' south could afford because of their access to a more affluent property tax base. To resolve this issue, the Conservatives passed Bill 160. Bill 160 restructured how the provincial education system was financed. Through the consolidation of 129 school boards into 72 district school boards, administration costs were reduced. The ability of school boards to levy property taxes was eliminated, and all education funding was now provided to school boards by the Ministry of Education, calculated by an annual base rate for each student enrolled in a school board. Many of these imposed cuts were very unpopular with the public service. Through this financial restructuring, several newly consolidated district school boards were placed into a state of administrative and fiscal uncertainty which resulted in the layoff of several employees and the cancellation of redundant programs (Gidney, 1999), including the closure of 3 out of 12 OE centres operated by the Toronto District School Board (TDSB).

While Ontario's northern school boards had historically struggled to provide services such as classroom computers and school board-operated OE centres, because they governed less populated and geographically larger areas that had a significantly lower property tax base (Brisco, 1997). In news-media saturated areas like the Greater Toronto Area (GTA) threats to the closure of TDSB OE centres received a lot of media coverage (Borland, 2011). Commentary reported by TDSB school board employees who wished to maintain the status quo, overlooked the fact that the Conservatives' argument did hold some merit. Although scholars such as Breunig and O'Connell (2008) argue that the most significant cuts to school board-operated OE centres occurred in the late 1990s, when six metropolitan school boards in the GTA were consolidated into a single large district school board, the loss of three facilities by the TDSB in the late 1990s is insignificant in comparison to a 67% reduction in total facilities for the 1992-93 school year. After the financial restructuring of the provincial education system, based on the new funding formula two northern district school boards were able to announce the establishment of new school board-operated OE centres (Brisco, 1997). These are Eco-Camp Bickell operated by the District School Board of Ontario North East, and the Killarney Experiential Education Program (which became the Killarney-Shebanoning Outdoor Environmental Education Centre in 2009) operated by the Sudbury Catholic District School Board.

The 2000s. In 2003 the Conservatives were replaced by a new Ontario Liberal majority government, which governed the provincial legislature from 2003 to 2012 (Winfield, 2012). After several decades of cutbacks and closures to school board-operated OE centres, by the start of the 21st century several rural and metropolitan communities had devised unique community/corporate partnerships to ensure the operation of their facilities. In Waterloo Region, its two school boards partnered with the Corporation of the City of Kitchener to open a new shared OE facility on city property (Glew, 1996); the District School Board of Ontario North East partnered with a corporate charitable organization to use their summer camp in the offseason as a board-run OE facility (Coté, Jordinson, Kent & Kleinhuis, 2003); community members from Toronto and Ottawa-Carleton regions formed the corporate charitable organization called Friends of Lasting Outdoor Education (FLOE) which helped raise funding for board-run OE centres (FLOE Staff, 2003; Veit, 2004); in

Bruce County, the Bruce-Grey Public Education Foundation was established and subsequently purchased the school board-operated OE centre to protect it in perpetuity from budget cuts (Greig & Wollerm 2004); the Greater Essex County District School Board established a corporate partnership with the BASF Chemical Company located in the Detroit-Windsor region, to operate an natural science school on BASF's property Fighting Island, located in the Detroit River (Bradd & Bachmeier, 2004). Each of these school boards, among others, helped to create a new model for the operation of school board-operated OE centres that shares financial and social responsibility for these facilities between school boards and their local corporate communities.

In 2007, the Liberal government released a report titled *Shaping Our Schools, Shaping Our Future*, which recommended developing a new cross-curricular environmental education curriculum that could be implemented across all grades (Working Group, 2007). Within this document *environmental education* was defined as “education about the environment, for the environment, and in the environment that promotes an understanding of, rich and active experience in, and an appreciation for the dynamic interactions” (p.6) about how human-created systems are dependent upon the planet's physical and biological systems for our subsistence and survival. Acknowledging that the global health of the environment had become a prevalent political concern over the past decade, the Ministry stated that “Schools have a vital role to play in preparing our young people to take their place as informed, engaged, and empowered citizens who will be pivotal in shaping the future of our communities” (p. 1). To support this vision the government identified OE as a critical component of this initiative “concerned with providing experiential learning in the environment to foster a connection to local places, develop a greater understanding of ecosystems, and provide a unique context for learning” (p. 6). In 2009, the Ontario Ministry of Education published a policy framework titled *Acting Today, Shaping Tomorrow*, which mandated that schools and classroom teachers will “enrich and complement students’ classroom learning by organizing out-of-classroom experiences and activities” (p. 17). To accomplish such actions, with the help of the Ministry of Education, school boards were now expected to develop “partnerships with community organizations (such as non-profit organizations, businesses, farms, and industries) to help extend engagement in and responsibility for environmental education to the broader community” (p. 17).

By the 2011-12 Ontario school year, 2,043,117 students were enrolled in Ontario's publicly funded education system across 72 district school boards (Ontario Ministry of Education, 2013). A total of 24 district school boards (33.3%) now operated one or more OE centres, providing 1,205,382 students (59%) with access to a school board-operated OE facility, with a total of 54 facilities in operation across the province. As illustrated in Figure 3, school board-operated OE centres were predominantly located within jurisdictions with student enrolments above 17,000 students, with the greatest cluster of facilities still centralized in areas either adjacent to, or within the GTA. It can be inferred that through the development of corporate partnerships and the new mandate stipulated within the provinces' new environmental education curriculum, the prevalence of these facilities appears to have regained a similar broad distribution that they previously had in the 1972-73 school year.

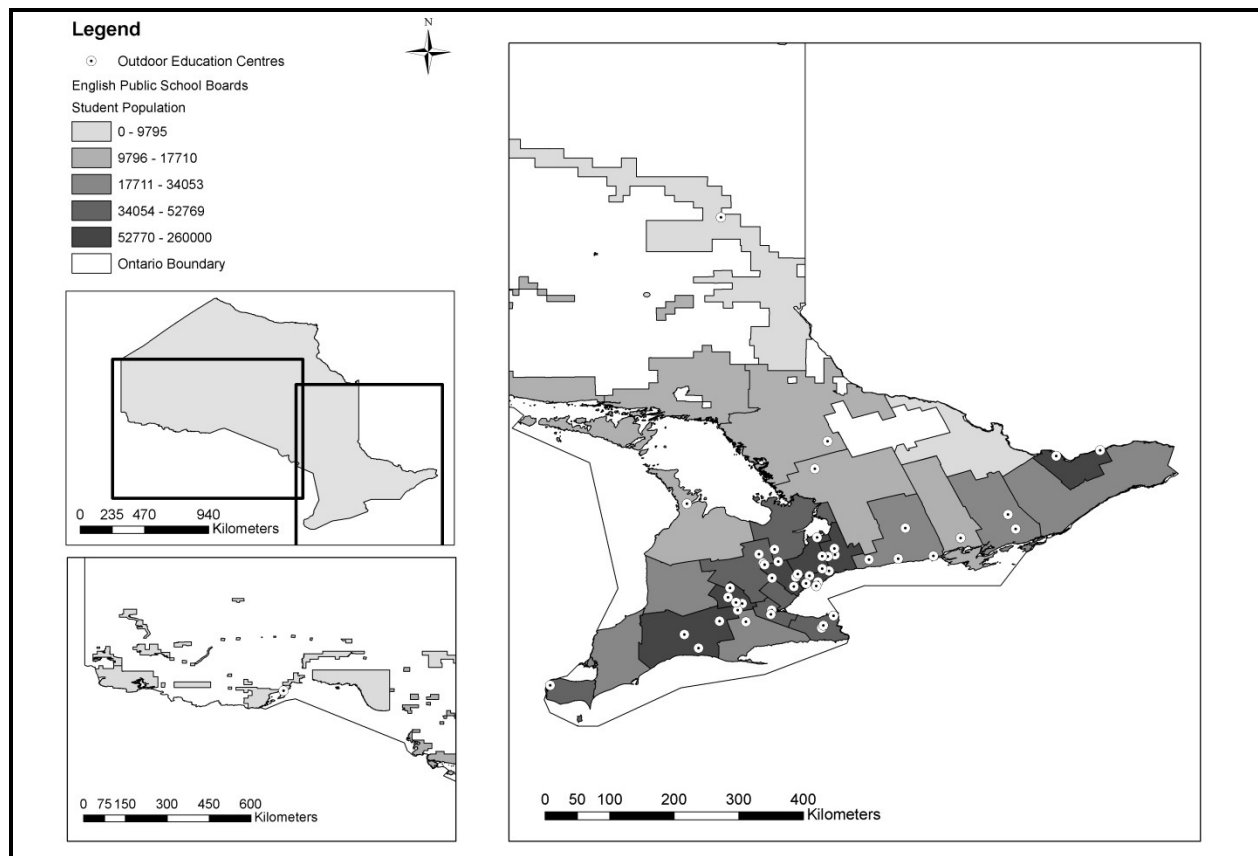


Figure 3. School board OE centres for the 2011-12 school year (English public school system). Data Layers: Ontario Ministry of Education (2010) [computer file]; Ontario Ministry of Education (2012) [database]. Map Generated by James Borland & Xue Luo, April 4, 2013, University of Windsor, Windsor, ON, Canada.

Conclusion

The long term sustainability of school facilities is frequently assumed to be a stable sociological given, instead of something that is susceptible to political change. To create more sustainable communities, it is important to design more resilient regional education systems. From 1960 to 2012, the state of Ontario school board-operated OE facilities underwent several waves of growth and decline. Although these facilities evolved during the 1960s, when the provincial government was operating on an economic surplus, since the 1970s many school board-operated OE centres closed under the governance of four different political parties. What historically enabled some Ontario school boards to continue to operate these specialized facilities are the privileges afforded to a school board being located in a smaller geographic, high density urban area that has access to a more affluent property tax base. Consequently, from 1960 to 1997, these circumstances created academic inequities between students enrolled in the province's more affluent southern school boards, compared to students who were enrolled in the provinces' less affluent northern school boards. Based on this system, successful school board-operated OE centres were predominantly operated by urban southern Ontario school boards.

In 1992, when the NDP froze inflation rates on provincial grants, the state of school board-operated OE centres experienced its sharpest decline, except in major metropolitan areas such as the GTA. In 1997, after Bill 160 was passed, which eliminated the local property tax levies and spread education funding more equitably across the province, southern Ontario school boards were forced to adjust to these changes. Located in news-media saturated areas, school board employees within these areas were provided with opportunities to express at a provincial level, their discontent with changes to the status quo. As a result, it can be inferred that these news-media sources may have unintentionally promoted a misleading historical interpretation, which spread the idea that since TDSB OE centres faced cutbacks and closures in the late 1990s, all facilities across the province were facing the same fate at the same time. This study shows that the prevalence of school board-operated OE centres have predominantly grown during times of economic opulence, and contracted during periods of economic recession. Arguments that call on the provincial government to provide funding for the establishment of new school board-operated OE facilities based upon the historical premise that prior to the Ontario government of 1995-2003 that school boards across the province prevalently operated such facilities, is an argument that is factually incorrect.

It is unrealistic and not financially sustainable to establish new school board-operated OE centres based purely upon an assumption that governments have the ability to fund these facilities. This does not mean that school board-operated OE centres cannot serve a role within the regional education systems, but it is important to recognize that centers should not be considered catch-all facilities for the provision of OE opportunities. As the Ontario Ministry of Education advocated as early as 1973, it is more cost effective and resilient for school boards to make use of outdoor areas within their local school communities for the provision of regular OE opportunities. Consequently, if school boards still wish to operate a school board-operated OE centre, recent partnerships between school boards and corporate organizations appear to have garnered a greater sense of financial sustainability for some facilities which now may be better prepared to maintain operational status during periods of economic uncertainty.

The history of Ontario school board-operated OE centres illustrates that during opulent economic times it is easy to establish school facilities for the provision of unique programs. If the long term sustainability of school facilities is not planned for, the financial viability of these structures can quickly threaten their operational status during periods of economic struggle. It is important for educational policy makers to understand the historical dynamics that have made some school facilities successful, while others have struggled, so that prior to establishing new school facilities, they understand the need to consider the long term financial sustainability of educational infrastructure.

References

- Aikman, J. H. (1976). Outdoor education – Wheat or chaff. *The Newsletter*, 5(7), 6-8. Retrieved from http://www.coco.org/images/stories/COEO_Newsletter_1971-1977.pdf
- Andrews, B. (2003). *Accountability in outdoor education*. Toronto, ON: Andrews Education Services.
- Baym, N. K., & Markham, A. N. (2009). Introduction: Making smart choices on shifting ground. In A. N. Markham & N. K. Baym (Eds.), *Internet inquiry: Conversations about method* (pp. vii-xix). Thousand Oaks, CA: Sage.
- Birchard, C. (1996). To find a better way. *Pathways: The Ontario Journal of Outdoor Education*, 8(2), 19-24.

- Borland, J. (2011). Provoking dialogue: A short history of outdoor education in Ontario. *Pathways: The Ontario Journal of Outdoor Education*, 20(2), 31-32.
- Bradd, P., & Bachmeier, M. (2004). *Grade 8 water systems teacher/supervisor databook: "A study of Fighting Island"*. Windsor, ON: Greater Essex County District School Board.
- Breunig, M., & O'Connell, T. (2008). An overview of outdoor experiential education in Canadian K-12 schools: What has been and what is. *Taproot*, 18(1), 10-16.
- Briscoe, L. (1998). Equity in outdoor education: Bringing Northern Ontario on "board". *Pathways: The Ontario Journal of Outdoor Education*, 10(1), 20-21.
- Burke, C. (2005). Containing the school child: Architectures and pedagogies. *Paedagogica Historica: International Journal of the History of Education*, 41(4-5), 489-494.
- Burke, C., & Grovensor, I. (2008). *School*. London, UK: Reaktion Books.
- Coté, F., Jordinson, J., Kent, G., & Kleinhuis, P. (2003). *Eco camp*. Iroquois Falls, ON: District School Board Ontario North East. Retrieved on September 3, 2011 from <https://www.dsb1.edu.on.ca/ecocampbickell/ECOCampBickellBooklet2003.htm>
- Council of Outdoor Educators of Ontario. (1979). *Catalogue of programs and personnel in outdoor education in Ontario*. Retrieved from <http://www.coeo.org/archives.html>
- Council of Outdoor Educators of Ontario. (1986). *Catalogue of programs and personnel in outdoor education in Ontario*. Retrieved from <http://www.coeo.org/archives.html>
- Council of Outdoor Educators of Ontario. (1992). *Catalogue of programs and personnel in outdoor education in Ontario*. Retrieved from <http://www.coeo.org/archives.html>
- Eagles, P. F. J., & Richardson, M. (1992). The status of environmental education at field centres of Ontario schools. *Journal of Environmental Education*, 23(4), 9-14.
- Education Act of 1990, R.S.O., E.2 (1990). Retrieved from http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90e02_e.htm
- FLOE Staff. (2003). Become a friend of lasting outdoor education. *Pathways: The Ontario Journal of Outdoor Education*, 15(5), 22-23.
- Foster, A., & Linney, G. (2007). *Reconnecting children through outdoor education: A research summary*. Toronto, ON: Council of Outdoor Educators of Ontario.
- Gidney, R. D. (1999). *From Hope to Harris: The reshaping of Ontario's schools*. Toronto, ON: University of Toronto Press.
- Glew, F. (1996). Huron Natural Area – A community partnership. *Interactions: The Ontario Journal of Environmental Education*, 9(2), 14-16.
- Gregory, I. N., & Ell, P. (2007). *Historical GIS: Technologies, methodologies and scholarship*. Cambridge, UK: Cambridge University Press.
- Martindale, W. (1974). *Catalogue of Environmental and Outdoor Education in Ontario Schools*. Waterloo, ON: University of Waterloo.
- MacMillan, M. (2009). *Dangerous games: The uses and abuses of history*. New York: Modern Library.
- Ontario Department of Education. (1973). *Principles of site development: Elementary schools K-6*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Department of Education. (1973). *Education statistics Ontario, 1973*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Ministry of Education. (1975). *The formative years: Circular P1J1, provincial curriculum policy for the primary and junior divisions of the public and separate schools of Ontario*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Ministry of Education. (1975). *Education in the primary and junior divisions*. Toronto, ON: Queen's Printer for Ontario.

- Ontario Ministry of Education. (1979). *Education statistics Ontario, 1979*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Ministry of Education. (1986). *Key Education statistics Ontario, 1986*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Ministry of Education. (1993). *Key Education statistics Ontario 1992-1993*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Ministry of Education. (2009). *Acting today, shaping tomorrow: A policy framework for environmental education in Ontario schools*. Toronto, ON: Queen's Printer for Ontario.
- Ontario Ministry of Education. (2010). *Generalized district school boards* [computer file]. Toronto, ON. Available: Academic Data Centre, University of Windsor, Windsor, ON, Canada.
- Ontario Ministry of Education. (2012). *Find a school board*. Retrieved March 19, 2012 from <http://www.edu.gov.on.ca/eng/sbinfo/boardList.html>
- Ontario Ministry of Education. (2013). *Education facts*. Retrieved August 17, 2013 from <http://www.edu.gov.on.ca/eng/educationFacts.html>
- Ontario Statutes of the Province of Ontario. (1954). Toronto, ON: Queen's Printer for Ontario.
- Ontario Statutes of the Province of Ontario. (1960). Toronto, ON: Queen's Printer for Ontario.
- Ontario Statutes of the Province of Ontario. (1965). Toronto, ON: Queen's Printer for Ontario.
- Ontario Statutes of the Province of Ontario. (1972). Toronto, ON: Queen's Printer for Ontario.
- Passmore, J. H. (1972). *Outdoor education in Canada - 1972: An overview of current developments in outdoor education and environmental studies*. Toronto, ON: Canadian Education Association.
- Potter, T. G., & Henderson, B. (2004). Canadian outdoor adventure education: Hear the challenge - learn the lessons. *Journal of Adventure Education and Outdoor Learning*, 4(1), 68-87.
- Sharpe, E. & Breunig, M. (2009). Sustaining environmental pedagogy in times of educational conservatism: A case study of integrated curriculum programs. *Environmental Education Research*, 15(3), 299-313.
- Tan, M., Pedretti, E. (2010). Negotiating the complexities of environmental education: A study of Ontario teachers. *Canadian Journal of Science, Mathematics and Technology Education*, 10(1), 61-78.
- Veit, J. (2004). Advocating for outdoor education: A parent's perspective. *Pathways: The Ontario Journal of Outdoor Education*, 16(2), 12-14.
- Walker, B., Salt, D. (2006). *Resilience thinking: Sustaining ecosystems and people in a changing world*. Washington, DC: Island Press.
- Working Group on Environmental Education. (2007). *Shaping our schools, shaping our future: Environmental education in Ontario schools*. Toronto, ON: Queen's Printer for Ontario.
- Winfield, M. (2012). *Blue-green province: The environment and political economy of Ontario*. Vancouver, BC: University of British Columbia Press.

Chapter 2

Relationship as Teacher of Sustainability: Post-Individualist Education

AVRAHAM COHEN, HEESOOON BAI, AND SHAHAR RABI

In the face of destructive human presence, sustainability has become a prominent and central theme of the contemporary environmental and wellbeing discourse. Our chapter takes the current environmental and sociopolitical challenges humanity faces as our species' developmental issue precipitated by the bonding rupture between human beings and other beings. We propose that the sustainability discourse be taken in the direction of healing the wounds of bonding rupture and facilitating the evolution of human consciousness and development of a more mature identity. We posit that the latter is concomitant with overcoming materialistic individualism and moving towards the relational integration of self, community, and world. We make the case that these relational practices are intrinsic to evolving and developing sustainable humanity. In particular, this chapter shows, by way of narrative illustrations, how we may create teaching and learning environments in schools and other institutions that are conducive to experiencing and internalizing a relational sense of self.

Evidence for the destructive patterns of human presence on this planet is ample and unarguable (Gillis, 2014). The earth is under duress and in distress, and we humans with our current manner of presence are a major contributor to environmental problems (Merchant, 2005; Orr, 2004). Through misguided worldviews of modernity and its implications for human prospect, progress, and good life (Fromm, 1976), we humans have managed to disrupt and spoil delicate ecosystems, eradicate indigenous cultures, and have triggered a massive extinction of species in both the animal and plant worlds. Surely, we cannot go on with the current ways and patterns of human life on this planet without destroying our own nest, not to mention the rest of the biosphere. In the face of this growing realization, sustainability has become a prominent and central theme of the contemporary environmental and wellbeing discourse. This is a good thing.

We believe that the key question at the heart of sustainability as an environmental movement is: how do we conduct human life activities in ways that do not overstress and overwhelm the carrying capacities of the planet Earth? And sustainability as a practical or experimental philosophy asks this question: how do we change our selves and our consciousness so that we will not continue the legacy of destructive patterns of being and living? Our response, as will be shown, is that the change for sustainability has to be ontological. We need to become sustainable in all ways of our

being. Only such change will facilitate and lead to an interactional ‘ripple effect’ into the ecosystem, and back again to ourselves.

Specifically, the change we seek has to do with disrupting the damaging habit of *perceiving* Earth and its inhabitants as a resource base for creating material wealth and warehouse of consumer goods, and the human inhabitants as ‘tools’ whose main task is to provide the labour for producing consumer goods. For such a habit to drop, we need nothing less than a radical change to our understanding of who we and our fellow earth beings are as inhabitants of this planet, and what our relationships are to each other.

Moreover, we the authors of this chapter advance an understanding that all the pain and horror we witness today is the growing pain associated with humanity’s developmental process that seems to be manifesting developmental arrest (Shepard, 1982). Our reading of the human history is that humanity has sustained a substantial measure of attachment wounding (Bowlby, 1988) at the collective level, particularly since we have entered the Industrial Age. This is an area of research that has been insufficiently explored. In this chapter, we will make a foray into questions arising from our speculations about our collective attachment issues.

In keeping with the interpretation we make above, we will propose that the sustainability discourse be taken in the direction of facilitating the evolution of human consciousness and development of a new and more mature identity for the human species. In short, we see the sustainability project as the collective process of ‘growing up’ through increasing immersion in an individual and collective healing process.

Our chapter makes a contribution to the field of sustainability education by showing how we may create teaching and learning environments that are conducive to our own healing, and to stimulating and fostering development of human consciousness. We propose a seamless practice of sustainability as a way of being and living.

Sustainability as Healing Work

In spite of vastly accumulating scientific understanding about the natural world and increasing material wealth, human life in these modern and postmodern centuries has experienced significant degrees of dehumanization, alienation, and anomy (Laing, 1967; Hillman, 1982; Jung, 2008). One of the most conspicuous signs of the stress and strain in our current civilization is the ever-increasing phenomenon of self-defeating and self-destructive behaviour. Prime examples are all forms of addiction. Alexander (2010) states that the lack or loss of social belonging and individual autonomy, all of which indicate decreased psychological integration, leads to a terrorizing sense of loss, alienation, emptiness, dislocation, and confusion. Individuals attempt to cope with or defend against this terrorizing sense by resorting to drugs and alcohol, and other forms of addictive patterns. All addictions can be seen as buffers against unbearable psychological pain. Alexander (2010) concludes: “To say that an addiction is ‘adaptive’ is not to imply that it is desirable, either for the person or for society, but only that, as a ‘lesser evil,’ it may buffer a person against the greater evil of unbearable dislocation” (p. 63).

In the same vein of understanding, many scholars specifically have commented that consumerism is a form of addiction (Kaza, 2005). Addiction moves in where there is a sense of lack, or emptiness. Lack is an existential phenomenon of discontent and a sense of something missing (Loy, 1996). Constantly driven by this gnawing sense of lack, humans search out one more thing that

will fill the existential emptiness. But this existential vacuum is not a material thing. This is the reason why the lacuna cannot be filled. The ‘lack of’ cannot be remedied by ‘more of.’

Consumerism as addiction is a signal that something has gone wrong. As such, what we need not do is to turn the signal into a problem and try to get rid of the signal. That would be like shooting the messenger who brings us the bad news that requires our urgent attention and immediate action. Our reading of the dominant cultural patterns of consumerism and other addictive phenomena in our modern and postmodern periods is that of attachment rupture at the level of the collective psyche (Jordan, 2009). Humanity’s attachment bonding to the larger matrix of our being, namely planet Earth (Nature), as well as to the human community, has been compromised. This is the legacy of the Industrial Revolution that we now see as the transitional period for humanity from the agricultural mode of living (Thompson, 1996/1998) based on the interdependence with the land and community to the industrial mode of production and consumption that sought to destroy such interdependency (Polanyi, 2001). As we know from research on human attachment (Ainsworth, 1978; Bowlby, 1988; Neufeld & Maté, 2005; Bretherton, 1992), compromised individual attachment history precipitates insecure bonding that tends to result in self and/or other destructive behaviour (Briere & Scott, 2008; Brady & Beck, 2012).

Contemporary research in neurobiology, neuropsychology, and psychotherapy have shown ways to address and heal attachment wounds (e.g., Hanson, 2009; Siegel, 2010). The basic idea behind healing the attachment wounds is creating relational environments in which afflicted individuals can experience intersubjectivity: that is, the experience of both being heard, seen, listened to, received, and being energetically “held.” Within such environments, opportunity to experience what has been profoundly lacking, leading to experiencing resonance and human warmth will be possible. Warm and nurturing relational experience in a secure, safe, and trust-building relationship begins to re-build the missing ontological security and soothe humans who are experiencing existential anxiety. This kind of work is the norm in psychotherapeutic relationships. However, we can also look to our own classroom relational experience as a place of promise. Below, we sketch a narrative vignette to illustrate such possibility.

A Healing Work Vignette: Classroom as an Intersubjective Field

I am sitting in a graduate seminar with twenty graduate students. The year is 2012, and the seminar is taking place at my university’s campus. My university has an international reputation as a solid academic institution, and attracts an increasing number of international students. Most of these students are doctoral students, with a few who are master’s students, ranging in ages between mid-twenties to mid-forties. At this point, the class has been meeting for five weeks. The total duration of the course is three months, and the class meets fourteen times in total. We are just over one third of the way through our time together.

The subject matter of the seminar is the ethical core of scholarly work. I have explained to the group, on many occasions, that in order for us to be congruent with the topic of the seminar, we will have to be working on being congruent within ourselves, in our personal expression, and within our classroom community development process. I have been emphasizing that for us not to just talk endlessly about theories and perpetuate the usual theory and practice gap, we need to put our best theories into practice, which means living the practice and transforming ourselves thereby.

In my faculty, I am known for initiating students' transformative inner work as part of the process of classroom community development. So, students coming in are not likely to be surprised by what they will encounter in the class, at least in a general way. Of course, the details of what emerges is always a surprise, and, despite all the pre-knowledge and explanations I give at the outset, some students are still surprised by the particular process that I initiate in the class. Let me describe what the process is like and illustrate how it goes. The process in question is one that I attend to in every class that I teach.

Everyone arrives on time, as I am known for starting on time with whomever is present. I am not punitive at all towards those who may come late. Things do happen in students' lives: everything inclusively between birth (of babies) and death (of loved ones). When someone arrives late, at the earliest appropriate moment I greet her and give her the opportunity to say something to join in the group. This absence and presence is acknowledged in a way that fits the student, the group, and the moment.

I say to the group, "Let's take about seven minutes for personal reflection time." The group was quite animated with talking amongst themselves, but now goes quiet. People shift around and find their space and comfort. I am aware of my breathing, my heartbeat, a feeling of heat and pulse throughout my body, and a felt sense of the presence of others in the room.

I check the clock: it is just about seven minutes. I say, "Okay, let's come back now." Slowly, I see eyes opening. Some seem to be still in their inner world, and others are starting to look around. The atmosphere of the group seems 'soft,' and palpably so to me. I sit quietly for a moment. We seem to be taking each other in. I am about to initiate the next step in a process that is now a familiar part of the group's culture and practice. I look around the class silently, and briefly taking in each person. My attention is drawn to Wei, who seems to be sending little 'flickers' to me. "Wei, would you like to start?" You, dear reader, may well be wondering, "Start! Start what?" We are beginning our time together, not with a lecture, not with curriculum content. Rather, we are starting with the contents of the lives of the classroom community citizens--our beingness, subjectively and intersubjectively. I will narrate here a small section of this process and then elaborate on the underlying principles that are at play.

Wei begins. She speaks in a very clear voice and with inflections that suggest that English is not her first language. She is very fluent with the language and articulate in expressions. "My state during meditation was unsettled. It is more settled than when we first started the class. I feel physically good, although a little tired. I am continuing to struggle with the process of the dissolution of my relationship." She hesitates at this point. Her emotions are unspoken but a flushing on her face is a signal. Tears appear. The group is attentive and silent. Her close classmate, James, speaks, "I have been carrying you with me on and off for some time now. I want to say here in the group, that I am with you in a fairly constant way, even when I am not with you physically." Wei looks up in James' direction. The group seems to be entirely present and focused on this interaction. Wei speaks, "I am aware of your support for me, and from our whole group." She again hesitates slightly, takes a breath, and a few more tears run down her cheeks. In her presence, Wei seems to have a magnetic radiance in her present state of vulnerability and authenticity.

I see evidence of the strong attentiveness of the entire group. Now Janice speaks: "Is there anything that we might offer that will be helpful to you in being here today?" Wei says, "Thank you, Janice, for your support and kind offer. What I have received so far from the group will do me well. Thank you." The moment seems to have some resolution.

As is our custom, Wei now looks around, and chooses the next person: "Rob!" Rob begins, "I feel very present within myself and with all of you. I had a tremendously great feeling of aliveness as I rode in on my bicycle today. I felt the pulse of the city, and I had the 'delusion' (laughter emerges from the group) that the city's heartbeats and mine were one. I am glad to be here, and I'm looking forward to our class today. I am really excited about the material we have been reading about and discussing." Glancing around, Rob chooses the next person: "Patricia!"

Patricia speaks, with humour in her tone of voice: "Well, I think I am a lightweight compared to the two of you. My meditation was full of thoughts about grocery lists, kids' activities, and upon reflection, I can say that my connection to my body went unnoticed. However, in just saying all this to you all, I feel more present. Thank you." She looks around and calls out gently: "Samantha!"

Everyone is given an opportunity to check in and sharing their 'here and now' experience, including me. I serve multiple roles during this time, including being a teacher, a group member, and a facilitator of the group process. The group's issues that day also include the expression of some hurt, anger, and conflict between two of the members, and its resolution and repair. The process experience that we are having is aimed towards building community and development of the group's culture. This process of development is subjective, intersubjective, and intrasubjective, and has ripple effects on our lives outside the group, for all members.

What is described above includes a process known as 'deep democracy' (Mindell, 2002). The important idea here is the inclusion of all the voices, especially the voices of hurt, insecure, anxious, distressed, in short, suffering others. As well, other voices that are marginalized by culture, language, sexual preference, and so on are acknowledged and heard through this process orientation. Intent on achievement and success, schooling environments tend to ignore, marginalize, if not exclude, the suffering that is everywhere within and without us. But suffering does not go away by being ignored and marginalized. It shows up elsewhere in more hurtful ways when unattended to and cared for. Thus, pedagogically what we need to do is to lean into our suffering, embrace it, and learn to sit with it or in the midst of it. And it is here that having a community of support, such as we saw in the above vignette, is of tremendous value.

To suffer alone is one of the hardest things to bear for humans. We are not meant to be solitary individuals (Cohen & Bai, 2008). We are social animals. The intent of the community process, as in the vignette, is to provide a relational matrix that supports and provides healing possibility for the participants. It also turns out that, by creating a learning community where the members are more known to each other in a personal way than is usual in a classroom (Cohen, 2004), students are more relaxed and focused, secure, and would be able to more readily assimilate curriculum material. The above vignette illustrated a mindful, caring pedagogy.

Sustainability and Self-Cultivation

Sustaining that with which we feel no affinity or relationship, or about which we have no consciousness, is most unlikely. Therefore, education for sustainability is at its core education for connection, relationship, and consciousness. Such education will show by experience that humans are a part of the whole, and that this whole is truly indivisible. The indivisibility is not just an idea,

but is something that educators and students alike need to and can experience directly. Learning this is an ongoing life-giving and life-sustaining process.

Many world wisdom traditions have voiced in different ways, reflecting diverse worldviews or cultures, the understanding of the world being an interconnected unity and humans being an integral part of such unity. Buddhist philosophy, for instance, has articulated the understanding of dynamic interconnectivity of the phenomenal world in the doctrine of co-dependent arising and interpenetration (Macy, 1991). This process of re-connecting with the indivisibility or nonduality of human beings would be a necessary outcome of shifting out of the individualistic ontology that largely characterizes the ethos of contemporary culture. The shift is to joining more closely within oneself, recognizing one's inter-being with all others and with the other-than-human realm. Accompanying this shift is a gradual regaining of the 'original' state of nonduality within oneself (known as the *bodhicitta*—enlightened heart-mind—in Buddhism), thus overcoming the separation and alienation that have been inscribed into us through socialization and enculturation (Bai et al., 2009).

A key piece of recovery of our nondual nature is the ongoing process of inner work (Cohen, 2013) and self-cultivation (Carter, 2008). Carter, a Canadian philosopher who studies Japanese culture, philosophy, and arts, describes how various Japanese arts are 'do (道, literally meaning, *way*),' that is, ways of self-cultivation. In this tradition, the purpose of the art is the cultivation of the artist (Davey, 2007). The perfecting of the artist and the art are not two separate processes: they are one. Such a process with an increasingly mutual and integrated focus creates a human being who is an exemplar of richly integrated humanity. This idea of self-cultivation as a supreme aim of education was central to the three classical Asian thought systems: Confucianism, Daoism, and Buddhism. These thought systems all postulate an original or aboriginal humanity that is in touch and in harmony with the cosmos, thereby being capable of acting with integrity and authenticity in promotion of flourishing for all beings. Recovery of this original humanity is the task of self-cultivation.

The challenge and difficulty of self-cultivation has to do with overcoming the conventional egoic states of consciousness that have been built into us from our earliest days of existence, and include socialization and enculturation that insidiously 'teach' us to be self-interested atomistic individuals who are engaged in a life oriented towards survival and 'winning.' Such teachings move human beings to lose sight and feel for their fundamental and irreducible interbeing with the world. What relentlessly drives this game is the raw sense--readily experienced in the form of fear, anxiety, and panic--that individual survival is at stake. We then fight, flee, or freeze: the three classic defense postures. Life becomes a permanent war zone. The battle for survival dominates. For those with personalities that work well, the problem is most challenging for the very reason that they are successful in the world. In other words, the personality structure that has worked for them also functions as a protective armouring against hurt while simultaneously functioning as a 'prison' that contains efforts to reach out into the world and to connect with other human beings.

The primary task of education that focuses on inner work and self-cultivation is unhooking our selves from unconsciousness and numbness. If we are to be free, we will need to free ourselves, as the lock that prevents us from being free is inside us and manifests there and in the intersubjective realms. Consequently, inner work (Cohen, 2013) that focuses on subjectivity and its interaction with intersubjectivity becomes central.

Inner work is to loosen the hold of the survival level by waking us up to who we are, individually and collectively, in our authenticity and integrity. This can be done with combined

contemplative practices and psychological work that addresses the prevailing egoic structures as presently constituted in the body-mind consciousness. Such work is a process-oriented approach that identifies 'frozen' states and structures, and facilitates the process of warming them up, 'cooking' them, and witnessing and facilitating their return to fluidity, flexibility, and flow. Anything less is likely to be at best, a Band-Aid, and at worst, successful at momentarily quieting the distress symptoms of anxiety and fear. This latter has the effect of driving the dis-ease deeper into the unconscious. Eventually, distress and dis-ease will re-emerge in a more sinister way, through distressing body symptoms, diseases, relational problems, and world problems such as environmental destruction, violence, and war (Metzner, 1999).

Central to the systemic changes we are addressing are changes within small human groups. An essential component of such change is the changes within what could be called the inner community: the inner worlds of the educator and students. This change involves inner work practices (Cohen, 2013). What follows here is an example of such work that illustrates a process orientation of movement from a binary towards nondual perspective.

A Vignette of Inner Work

The person whom you will meet here, Akiko, was born in Japan. She immigrated to Canada with her family when she was a young child. Her father worked for a multinational corporation in Japan, and took the opportunity to transfer here and to have his family live in North America. Akiko speaks flawless English as she has spoken it for most of her life. She is also fluent in her native tongue and is very aware of her cross-cultural influences. Akiko is a relatively new faculty at a major university, having completed her Ph.D. four years ago. She and I have been working together for 1 1/2 years. I work with her to facilitate her inner work. She came to see me when she realized that her knowledge of curriculum contents was not sufficient for dealings with students, many of whom came from foreign countries. The majority, however, are North American born students. Akiko began to see that what was going on in her classroom that affected their ability to participate in learning curriculum material and in dealing with various happenings in the classroom was a major factor in the environment. More importantly she began to realize that her own reactions in her inner world and in her position as classroom leader was compromised by her own reactivity. I will bring you into a small piece of her inner work that she shared with me.

Akiko: Okay. I am sitting quietly. I am paying attention to sensory experiences. I feel my legs on the cushion. I am adjusting my position to be as aligned as possible. I have a sense of a line from the top of my head dropping straight through my core and into the ground. I am aware of my breath. Ooh, I feel tension in my neck and shoulders. My head feels heavy. I don't feel so good. Ah, I have lost my awareness. Now it's back. My inner work coach constantly reminds me that practice is about awareness, not about getting it right! Hmmm, did I get that right?? I am amused! I am settling now; settling into my body. I still have thoughts. They seem to come and go.

I am ready to work now. I recall an incident in my class. I wonder if it even stood out at all for the students. Bob, a star halfback on the football team, when asked if he had any thoughts about a particular aspect of the week's assigned readings, responded: "Sorry, Professor, I was too busy this week learning the plays for Saturday's game. I could tell you about those plays." The class laughed. I laughed, too, but it was not a real laugh. I felt a

deep anger that this macho male was making light of our studies about social justice and education. I could feel the wound within me. I remembered some more of what I have been working on with my coach, namely: "we are in the most fortunate position of being paid to get feedback about who and what we are. This opens the door to immense growth personally and professionally." Okay, here I go-

I am hurt. I am deeply hurt. I am also angry. I am aware that my breath is very shallow. I take a deeper breath. I feel a little pain in my chest as I do this. I have a strange thought. "No wonder we attacked Pearl Harbour! These bullies need to be put in their place." I am shocked at my own simplistic, patronizing, and hostile thought. I do not want to have such a thought. It does not fit at all with my view of who I am. Memories of my dear grandfather suddenly arise. He was in the Japanese Army during WWII. He was no fan of what our country had done, but he also was no fan of the American soldiers that were part of the occupying forces. I have too many examples of his words about these soldiers and what they did embed in my deep memory to be able to forget them or even to be able have any objectivity about them. He was in many respects an endpoint of the Japanese Samurai tradition. Death on the battlefield was a honourable way to die. It was in the service of the daimyo, the shogun, and the emperor. I recognized how much I am an outcome of my culture. Bob IS the enemy. He deserves to be killed!

Suddenly, I feel myself as a warrior, a male warrior. I have a sword in my hand. My mind is perfectly calm. I am as clear as I could ever imagine. I see Bob. He is a warrior, also. He is a modern day warrior in a sports arena. I realize in a flash that Bob and I are not so different in our ways of being. He is overtly sanctioned to be a warrior. I am not. I am sanctioned to be a professor, a holder/dispenser of knowledge, and to be demure, a quiet Asian female. The relationship between Bob and me is set up to be adversarial. Of course, Bob does not know this, and up to this very moment, neither did I.

I realize that my relationship with Bob is based on the construction of my inner world; an inner world shaped by my self, my culture, my personal history, and my unconsciousness as an adult. My identity will change. The inner relationship with Bob will change. I already know, without knowing the details, that Bob is a symbol for me and serves as a trigger for my own pain--my pain of being what I am not, and what and who I am. I see that there is a huge growth potential for me. This is enough for now. There is much to reflect on and much more to do. I have the possibility of becoming more of who I truly am, of relating to Bob in a more open and transparent way, and of quietly modelling a greater authenticity for my students. I recognize that it's up to Bob to choose his priorities, and the implications fall to him. My responsibility is to present the opportunity to him; his is to choose. I know that this latter will have a benefit for their learning as I will be that much more present with them.

What is demonstrated in the above vignette is a profound example of inner work. Akiko has shown her ability to reflect on and work with her own inner world experience. Further, she has clearly done herself, her student, Bob, and all her students a service. Dynamics of all kinds are taking place beneath the awareness of those acting them out and of those being affected by them. At the least, becoming aware of and working with this material makes for a better learning environment and a better opportunity for learning. Beyond the classroom, the ripple effect potential is great. Students exposed to this type of practice and educators who are practitioners will certainly carry this with them in many areas of their lives and in their communities. More vigorous learning and better peace building would be an outcome.

Sustainability as a work that disrupts the collective psyche that is trapped in consumptive and addictive patterns and transforms the soul of our civilization is a task that goes beyond cleaning up and repairing the damaged environment, or even slowing down the rate of material consumption and production. The latter is, of course, necessary, but not sufficient. The externally oriented or focused ‘sustainability’ work of repairing and sustaining the environment needs to be closely coupled with the further maturation work we do in our *inner environment* of thinking, perceiving, feeling, willing, and acting. We need to do inner and outer work simultaneously as the inner and the outer are seamlessly intertwined (Bai et al., 2014).

Becoming Nature as Sustainability Work

The internalization of self-limiting and destructive patterns has been taking shape through mass mechanisms of all major formal institutions of modernity, in particular, schooling (Illich, 2000), as well as informal institutions of family, workforce, and increasingly, media and advertising industry. At the heart of this mass mechanism is materialistic individualism. This is a worldview that fundamentally sees the world as “a collection of things,” that is, as *stuffs* to accumulate and trash, not as “a communion of subjects” (Berry, 1982). Moreover, this worldview posits that human individuals are self-bound, singular and discrete beings whose main motivation is to survive as human individuals. The result of materialistic individualism is *objectification* of the world and everything contained in the world, including our selves.

Objectification leads to instrumentalism: denial of the intrinsic nature and worth of beings (Bai, 2001). We are enculturated and socialized to be disrespectful and destructive towards Nature as well as human others who are mostly seen as tools of production and consumption. Increasingly, human beings exist as rootless, and often nameless and soulless, workers (Rasmussen, 2000). Ironically, even the most affluent people are rootless in their jet-set lifestyle (Bauman, 1998). As personal material resources increase, the perceived need for protection grows, the ability to create the protective barriers is more available, and the separation from the world in general and others in particular is enhanced. Not surprisingly, alienation, isolation, and separateness grow.

There has been a mounting and spreading awareness amongst environmental educators that our priority has to be changing the internal landscape of our unsustainable selves (Bai, 2012; Bai, 2013; Bonnett, 2013; Gomes & Kanner, 1995; Metzner, 1999). As David Orr (2004) succinctly states, the devastation in Nature is a reflection of disorder in the human mind. For instance, we need to repeatedly remind ourselves that our fundamental interconnectedness with the world and Nature is not really broken or gone. It is not that Nature neglected, abandoned, or abused us. Nature is not behaving differently towards the modern and postmodern humanity than it was to our ancestor hundreds or thousands years ago. It is just that current humanity’s beliefs and perceptions are misaligned with reality. This statement is not meant to suggest some romantic image of a past that never was. We are suggesting that collectively humanity is not seeing clearly or accurately. This is why David Orr (2004) has declared: “the disordering of ecological systems and of the great biogeochemical cycles of the earth reflects a prior disorder in the thought, perception, imagination, intellectual priorities, and loyalties inherent in the industrial mind” (p. 2).

It is important to note and remind ourselves that the natural world is not something we need to “get close to” or “back to.” Nature has never left us, and we are never far from it. Nature *is always and already what is*. Therefore, even if we are in our homes, in front of the computer, we are *in* Nature and *of* Nature. Why does this reminder matter? Because we need to understand that if we want to facilitate the change for sustainability, then first and foremost we need to work towards identity

change: this is not change to who we are not. We have already succeeded far too well at this. We have demonstrated beyond any doubt our ability to wreak havoc on increasingly larger scales. The change we need is toward who we truly are. Committing to a process of inner work and self-cultivation that moves towards whole and authentic being affords a greater scope of adaption to the inner and outer environment and their seamless joining.

Nature mostly represents sheer ‘otherness’ for humans in both the popular imagination and learned discourse. From this view, humans are what Nature is not, and vice versa. Such a view is part of the previously mentioned objectivist and instrumentalist consciousness, which has humans see the world as otherness that exists separate from human beings, and that, inversely, has us see ourselves as individuals that are separate from the world. Sardello (in Hillman, 1982) writes about how this separation manifests as symptoms in humans: “The new symptoms are fragmentation, specialization, expertise, depression, inflation, loss of energy, jargons, and violence. Our buildings are anorexic, our businesses paranoid, our technology manic” (p. 75). These ‘symptoms’ are, we contend, aspects of an underdeveloped ‘immature,’ psyche that has yet to grow up and enter a new integrative stage of development wherein we see ourselves as part of Nature, or even further, we see ourselves as Nature and become Nature. Without the awareness that our essential psychological needs *at every stage of human development* are deeply rooted in the creative impulse of the natural world (Aizenstat, 1995; Abram, 1996), our view on human development will remain partial and unintegrated. Thus, sustainability discourse needs to include the sensibility that we can become *informed*, that is, intrinsically formed, by the psyche of Nature, that is, inner and outer Nature and their interconnection. At that deeper stage of human maturity, the inescapable, life-giving connection we share with the natural world can emerge as our fundamental existential awareness (Plotkin, 2008; Wilber 2000). Hence, our re-connection to Nature has its roots in our inner world.

Below, we have included another vignette, this time a series of journal entries that capture an attempt to “become Nature.”

Recovery of the Original Nonduality

(from the journals of Shahar Rabi)

I

Every tree grows toward the sun. If we put a barrier between the tree and the sun the tree will adapt and go around the barrier. Such is in education—See the psychological barrier (psychological inflexibility) and the student will know what to do, he/she will know how to grow toward God/life/truth. Not Man nor women will arrive at this truth/God but he will aspire to get as close as he can in his life. It is built in . . . This aspiration is what counts because it brings us back to a very deep truth about life—we know what to do when we let go of the barriers and just listen.

II

Thoughts can be healthy or poisonous just like plants and fruit in a forest. This does not mean they are not beautiful to watch or to notice when they appear in the mind and it does not make them ‘not natural’ or something that we need to get rid of. Like in Nature, we have thoughts that are part of our internal balanced ecology. They have a reason and purpose as part of the whole psychological ecology even if we do not understand that yet: Maybe like a poisonous fruit, our negative thoughts bring balance to our self as it brings

diversity to the forest. If we push it away or try to ‘kill’ this thought, we might make our psyche less diverse (flexible?) and thus less healthy.

III

Let’s take corn as an example of diversity: There are dozen of varieties of corn with a multitude of diverse colors, tastes, and adaptability to different climates (not to mention the aspect of beauty). Although corn is one family of grain, its diversity allows it to flourish. When we produce GMO corn, we loss diversity, and beauty, and risk famine. The same with the mind: If we say that the ways we understand the world should only be scientific, rational, etc., and the way of the markets could only be selfish then we lose adaptability, perspectives, and beauty. We create a “terminator seed” in the mind and in our culture. Without diversity, consciousness is weak. It is easier to be threatened: it is narrow. We should not listen to the voices that speak of efficiency in education, because these improvements can become “killer seeds” in the mind. These “improvements” can jeopardize inner abundance . . . The DSM is another example of the loss of diversity within. The DSM defines, adjusts, regulates, and to a large extent maps and owns what we think of the human condition. This is done in order to increase the ‘efficiency’ of psychiatry. However, the world soul is not something that needs efficiency, as Nature does not need to be patented and “improved.” Psychiatry, like big seed companies, wishes to create dependency on its seeds/pills. In this hierarchical model, the patient/farmer becomes dependent and enslaved to the diagnosis/seed in order to receive treatment.

IV

I am a social and cultural process and in that I am center-less. I am not as autonomous as I wish to believe but a fluid creation from moment to moment—changing within through psychological patterns I am not always aware of. Such is the case with the people I work with . . . What I see and what I work with is not only ‘them,’ but an organism that is made up by personal and collective history (and even much more then that). That is why I first have to make them (and myself) aware of this beautiful process/pattern. Not change it, but become aware of it. In this seeing, there is freedom and in that freedom the (spontaneous) individual is born... the point is that we do not need to be autonomies to be authentic. The unique self (spontaneous individual) is a by-product of such awareness that bring forth a one of a kind randomization process/pattern. This means that the non-dual moment of awareness is what brings uniqueness and freedom to those I work with. This unique self derives directly from awareness as it gives space for the multiplicity of the social and cultural process. As such, the unique self is what we are when we tap into the creative, free spirit of life itself and then embody a unique expression of that (life). It is the life that becomes an embodied reality through us. Thus, we do not own it. It does not belong to us. Each of us—as a result of our location in the environment (ecology) and unique perspective (masks, psychology and soul)—has something to offer that is deeply needed for our flourishing.

What this journal vignette expresses is a philosophy born out of a deepening awareness of a personal inner world and how it is a reflection of the outer world. It is, as well, a ‘seeing’ of the relationship between the current condition of Nature and the wounds of the human inner world. It is an articulation of a process of development that is also a philosophical and psychological statement of one person that is a representation of humanity’s torment and possibility.

Creativity, the erotic impulse, aggression, compassion, wisdom, time and space, and life and death, all of which are integral part of who we are, and are just a few examples of what is shared by Nature and human beings (Abram, 1996). Both the great outdoors and the emotional fabric of human life are part of Nature, and a full opening into both aspects of our selves is vital to becoming whole (Plotkin, 2008). If we are truly interested in sustainability, we need to continue to grow and mature in the direction of becoming whole and one with Nature and all its diversity. In other words, we need to embody within our psyche, the ecological diversity manifest in the outer world. We shall use the term, 'psycho-diversity' (Rabi, 2013) to denote this understanding of psychically embodying ecological diversity within. What does this all mean? We would say that psycho-diversity is the existence of a healthy diversity of imagery and perspectives in the conscious and the unconscious, as well as the ability of a culture and/or of individuals in a culture to access this imaginative space of richness that is our psychic reality in reciprocal relationship with its local surroundings. When we are interested in the *deep democracy of the soul*, which is the return to multiplicity and diversity within, between, and without, we discover that we are the ten thousand things within, or what Austin (1975) calls "an interior society" whose relations suggest "a community of internal agents" (in Beebe, 2002, p. 267). Thus psycho-diversity mirrors eco-diversity, which is a key factor in our collective and personal psychic strength.

As with eco-diversity, losing psycho-diversity is not only dangerous for our wellbeing and vitality, but also it is a challenge to our ability to sustain ourselves and to come up with creative solutions to our problems. Objectivist ontology and individualist ethics lead us to a psychological monoculture by continually suppressing what is considered, by the conventional societal norms and morality, undesirable and unacceptable. This latter practice is the origin of repressed human psyche.

Concluding Remarks

In this chapter we have attempted to exemplify the values of living in touch with our inner worlds, each other, and Nature. We wanted to do more than talk about theories of Being and environmental crisis. We have abstained from blaming. We have included narratives that invite you, the reader, to entertain possibilities of different reality within your own consciousness. We have attempted to describe the process of sustainability and its connection to authenticity. We communicated the feeling of that which is ephemeral and infuses all of existence in the relational field. We hope that the spark within you has been well fanned.

References

- Abram, D. (1996). *The spell of the sensuous: Perception and language in a more than human world*. New York: Vintage Books.
- Ainsworth, M. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: MDS Lawrence Erlbaum Associates.
- Aizenstat, S. (1995). Jungian psychology and the world unconscious. In T. Roszak, M. Gomes & A. Kanner (Eds.), *Ecopsychology: Restoring the earth, healing the mind* (pp. 92-100). San Francisco, CA: Sierra Club Books.

- Alexander, B. K. (2008). *The globalization of addiction: A study of poverty of the spirit*. London: Oxford University Press.
- Austin, N. (1975). *Archery at the dark of the moon: Poetic problems in Homer's Odyssey*. Berkeley: University of California Press.
- Bai, H. (2001). Challenge for education: Learning to value the world intrinsically. *Encounter*, 14(1), 4-16.
- Bai, H. (2012). Reclaiming our moral agency through healing: A call to moral, social, environmental activists. *Journal of Moral Education*, 41(3), 311-328.
- Bai, H. (2013). Peace with the Earth: Animism and contemplative ways. *Cultural Studies of Science Education*, 2(8), 1-13.
- Bai, H., Cohen, A., Culham, T., Park, S., Rabi, S., Scott, C., & Tait, S. (2014). A call for wisdom in higher education: Contemplative voices from the *Dao-Field*. In O. Gunnlaugson, E. Sarath, H. Bai, & C. Scott (Eds.), *Contemplative learning and inquiry across disciplines* (pp. 287-302). New York: State University of New York Press.
- Bai, H., Donald, B., & Scott, C. (2009). Contemplative pedagogy and revitalization of teacher education. *Alberta Journal of Educational Research*, 55(3), 319-334.
- Beebe, J. (2002). An archetypal model of the self in dialogue. *Theory & Psychology*, 12(2), 267-280.
- Bauman, Z. (1998). *Globalization: The human consequences*. New York: Columbia University Press.
- Berry, T. (1982). *The dream of the earth*. San Francisco: Sierra Club Books.
- Bonnett, M. (2013). Self, environment, and education: Normative arisings. In R. B. Stevenson, M. Brody, J. Dillon, & A. E. J. Wals (Eds.) *International handbook of research on environmental education* (pp. 87-92). New York: Routledge.
- Bowlby, J. (1988). *A secure base: Clinical applications of attachment theory*. London: Routledge.
- Brady, K., & Back, S. (2012). Childhood trauma, posttraumatic stress disorder, and alcohol dependence. *Alcohol Research: Current Reviews*, 34(4), 408-413.
- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, 28, 759-775.
- Briere, J., & Scott, C. (2008). *Principles of trauma therapy: A guide to symptoms, evaluation, and treatment*. Los Angeles, CA: Sage.
- Cohen, A. (2004). A process-oriented approach to learning process-oriented counselling skills in groups. *Canadian Journal of Counselling*, 38(3), 152-164.
- Cohen, A. (2013). *Becoming fully human within educational environments: Inner life, relationship, and learning*. Vancouver/Jamestown, BC/NY: Writeroom/Cambria. (Original work published 2009 as *Gateway to the Dao-Field*)
- Cohen, A., Bai, H., & Green L. (2008). An experiment in radical pedagogy: Enactment of deep democracy in a philosopher's cafe. *Radical Pedagogy*, 9(2). Retrieved from http://radicalpedagogy.icaap.org/content/issue9_2/Cohen_Bai_Green.html
- Cohen, A., & Bai, H. (2008). Suffering loves and needs company: Daoist and Zen perspectives on the counsellor as companion. *Canadian Journal of Counselling*, 42(1), 45-56.
- Davey, H. E. (2007). *The Japanese way of the artist: Three complete works on the classic tradition*. Berkeley, CA: Stone Bridge.
- Fromm, E. (1976). *To have or to be*. London: Bloomsbury Academic.
- Gillis, J. (2014, March 18). Scientists sound alarm on climate. *The New York Times*. Retrieved from <http://www.nytimes.com/2014/03/18/science/scientists-sound-alarm-on-climate.html>

- Gomes, M., & Kanner, A. D. (1995). The rape of the well-maidens: Feminist psychology and the environmental crisis. In Roszak, T., Gomes, M. E. & Kanner, A. D. (Eds.) *Ecopsychology: Restoring the earth, healing the mind* (pp.111-121). San Francisco: Sierra Club Books.
- Hahn, T. N. (1993). *Interbeing*. Berkeley, CA: Parallax.
- Hanson, R., & Mendius, R. (2009). *Buddha's brain: The practical neuroscience of happiness, love, and wisdom*. Oakland, CA: New Harbinger Publications.
- Hillman, J. (1982). *Anima mundi: The return of the soul to the world*. Dallas, TX: Spring Publications.
- Jordon, M., (2009). Nature and self – An ambivalent attachment?. *Ecopsychology*, 1(1), 26-31.
- Jung, G. C. (2002). *The undiscovered self*. Routledge: London.
- Laing, R. D. (1967). *The politics of experience and the bird of paradise*. Middlesex: Penguin Books.
- Illich, I. (2000). *Deschooling society*. London: Marion Boyars.
- Loy, D. (1996). *Lack and transcendence: Existentialism, Buddhism, and psychoanalysis*. Berkeley: Asian Humanities Press.
- Macy, J. (1991). *The dharma of natural systems: Mutual causality in Buddhism and general systems theory*. New York: State University of New York Press.
- Merchant, C. (2005). *Radical ecology: The search for a livable world*. New York: Routledge.
- Metzner, R. (1999). *Green psychology: Transforming our relationship to the earth*. Rochester, VT: Park Street Press.
- Mindell, A. (2002). *The deep democracy of open forums: Practical steps to conflict prevention and resolution for the family, workplace, and world*. Charlottesville, VA: Hampton Roads.
- Neufeld, G., & Maté, G. (2005). *Hold on to your kids: Why parents need to matter more than peers*. New York: Ballantine Books.
- Orr, D. (2004). *Earth in mind: On education, environment, and the human prospect*. Washington, DC: Island Press.
- Palmer, P. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*. New York: Jossey-Bass.
- Plotkin, B (2008). *Nature and the human soul: Cultivating wholeness and community in a fragmented world*. New World Library: Novato.
- Polanyi, K. (2001). *The great transformation: The political and economic origins of our time*. Boston: Beacon Press.
- Rabi, S (2013). *The soul of recovery*. Unpublished manuscript, Simon Fraser University.
- Rasmussen, D. (2000). Dissolving Inuit society through education and money. *INTERculture*, 139, 3-64.
- Sardello, R, J. (1985). Educating with soul: A phenomenological archetypal reflection on higher education. *Teachers College Record*, 86(3), 423-439
- Schellenbaum, P. (1988/1990). *The wound of the unloved: Releasing the life energy* (T. Nevill, Trans.). Dorset, GB: Element Books.
- Schneider, K. (2004). *Rediscovery of awe: Splendor, mystery, and the fluid center of life*. St. Paul, MN: Paragon House.
- Shepard, P. (1982). *Nature and madness*. San Francisco: Sierra Club Books.
- Siegel, D. J. (2010). *The mindful therapist: A clinician's guide to mindsight and neural integration*. New York: Norton & Company.
- Taylor, C. (1991). *Malaise of modernity*. Toronto: The House of Anansi Press.
- Thompson, W. I. (1996/1998). *Coming into being: Artifacts and texts in the evolution of consciousness*. New York: St. Martin's Press.
- Wilber, K. (2000). *Sex, ecology, spirituality*. Boston: Shambhala Publications.

Chapter 3

Food Literacy: Bridging the Gap between Food, Nutrition and Well-Being

SARAH COLATRUGLIO and JOYCE SLATER

This chapter argues that a new approach to food is needed in light of the poor nutritional health status of Canadians, and recent changes in food-related habits, environments and norms. Due to diminishing understanding around food and its uses, the concept of “food literacy” or being food literate is being explored as a new approach to food that has the potential to facilitate healthy food relationships. Food literacy extends beyond nutritional recommendations and cookery lessons, to fostering important and vital connections between food, people, health and the environment both theoretically and practically. This chapter will review current constructs of food literacy presented in the literature and explore the importance of educating for food literacy in order to rectify issues raised with respect to current food related concerns and ideologies. Finally, this chapter will identify why food literacy as a new approach to food should be examined within the larger context of emerging well-being frameworks. However, further work is still needed that examines how to best translate food literacy and well-being knowledge and skills through familial, cultural, educational and private sector institutions.

Procuring food and maintaining good health through diet has been one of humankind’s main pursuits, and has always had its challenges. However, despite significant technological advancements in food production and transportation methods and scientific progression in nutrition research, the ability of people to maintain health and well-being through food and nutrition has paradoxically become increasingly difficult. The relationship people have with food is becoming ever more disordered as obesity and diet-related chronic disease rates soar, and messages emphasizing diet and nutrition are numerous and conflicting from public health authorities promoting healthy eating and from food companies marketing their vast and diverse products for profit. Some may argue that as a society we have never been more food centered while at the same time we have never been so far removed from the food we eat, figuratively and literally. Consequently, these rapid developments have shaped our current and complex food environment which is intertwined with shifting societal issues. As a result, our multifaceted food system has become increasingly complicated to navigate, highlighting the critical need to examine ways to re-establish our relationship with food in order to achieve health and well-being. In light of these issues, the concept of food literacy has emerged in the literature and educational programs. Food literacy extends beyond nutritional recommendations and

cooking lessons, to fostering important and vital connections between food, people, health and the environment both theoretically and practically.

This chapter presents the rationale that a new approach to food is necessary due to: the poor nutritional health status of Canadians and changes in food-related habits, environments and norms. In light of these concerns it is argued that food literacy or being food literate can serve as this new approach to food and foster healthy food relationships. This chapter will review current constructs of food literacy presented in the literature and explore the importance of educating for food literacy in order to rectify issues raised with respect to population health trends, and current food related concerns and ideologies. Finally, this chapter will identify why food literacy as a new approach to food should be examined within the larger context of emerging frameworks of well-being.

Rationale for a New Approach to Food

The “Nutrition Transition”

Our food and food systems have changed dramatically over the last 70-80 years, most intensely in recent decades. More specifically, there has been a shift from fundamental, whole food ingredients to processed and ultra-processed, low nutrient and energy dense food commodities and sweetened beverages that are typically mass-produced and shelf-stable for long periods of time (Montiero, 2013). This shift has been coined the “nutrition transition” (Popkin, Adair, & Ng, 2012), and these changes have contributed substantially to the ways we eat and how food is viewed and recognized today. This surplus of convenience and ultra-processed foods are typically “branded” and heavily marketed (Moore & Rideout, 2007; Ustjanauskas, Harris, & Schwartz, 2013). They are also readily available at supermarkets, restaurants, vending machines and other retail venues (Glanz, Basil, Maibach, Goldberg, & Snyder, 1998) contributing to increased away-from-home food intake and eating outside traditional meal structures (Warde, 1999). Although the nutrition transition can be viewed as a sign of progress and efficiency, including reduced time spent in the kitchen, it also warrants greater scrutiny for its role in the health of people and the natural environment (Lang, 2001). Countries undergoing the “nutrition transition” have uniformly experienced concurrent growth in obesity and diet-related chronic disease (Popkin, 2001; Popkin & Gordon-Larsen, 2004; Popkin, Adair, & Ng, 2012; Popkin, 2002).

Population health status. Obesity and other diet related health issues are a major and growing public health concern globally, and Canada is no exception. A damning 2013 UNICEF report ranked Canada 27 out of 29 wealthy countries on a healthy weight index (UNICEF Office of Research, 2013). Recent statistics show that 67% of Canadian men and 54% of Canadian women are overweight or obese (Canadian Health Measures Survey, 2011). As well, close to one third of 5- to 17-year-old Canadians are classified as overweight (19.8%) or obese (11.7%) (Roberts, Shields, de Groh, Aziz, & Gilbert, 2012).

It is widely accepted that excess weight is a significant risk factor for type 2 diabetes, cardiovascular disease, hypertension, osteoarthritis, some cancers and gallbladder disease (The Conference Board of Canada, 2012). Diabetes is considered a worldwide epidemic and currently affects more than 9 million Canadians who have either diabetes or prediabetes (Canadian Diabetes Association, 2012). In the past, type 2 diabetes was only seen in adults; however the disease is

increasingly appearing in adolescents and children. Overweight and obesity is the major risk factor for type 2 diabetes, which accounts for 90% of all cases of diabetes (Canadian Diabetes Association, 2012). Also of concern are related functional limitations, disabilities and psycho-social problems, including: depression, social isolation and discrimination, low self-esteem, body-image dissatisfaction, and reduced quality of life (Hramiak, Leiter, Paul, & Ur, 2007; Puhl & Latner, 2007; Schwimmer, Burwinkle, & Varni, 2003; Wang & Veugelers, 2008).

Changing dietary habits. A growing body of evidence suggests that observed obesity and overweight trends are primarily due to increased energy consumption (Bleich, Cutler, Murray, & Adams, 2007; Slater et al., 2009; Swinburn, Jolley, Kremer, Salbe, & Ravussin, 2006) and modestly due to increased sedentary lifestyles. Slater and colleagues refer to this resultant energy imbalance as the ‘energy gap’ (Slater, 2009).

When examining the rates of obesity and diet-related disease crucial parallels can be drawn between what people are currently eating and how these dietary habits have changed in recent decades. Results from the 2004 Canadian Community Health Survey (CCHS) indicate several areas of concern within the average Canadian’s diet: 70% of children aged 4 to 8 and 50% of adults do not consume a minimum of five daily servings of fruit and vegetable (current recommendations are a minimum of seven servings); more than 37% of children aged 4 to 9 are not consuming enough milk products; people are consuming too much fat; and “other foods” (nutritionally-poor, calorie dense snacks, candies and condiments) account for almost one quarter of total calories consumed by Canadians (Garriguet, 2007).

Additionally, 14-18 year old boys obtain on average one quarter of their calories from sugar, half of which is “added” primarily from soft drinks (Langlois & Garriguet, 2011) and a study from British Columbia found that 91% of children and youth consume too much sodium (Mulder, Zibrik, & Innis, 2011). This is in part due to high consumption of convenience and fast food which accounts for up to one third of meals consumed by youth (French et al., 2002).

The twin trends of the nutrition transition, and population obesity and diet-related chronic diseases, have been accompanied by a decline in time spent planning for and preparing food, as well as the skills required to perform these activities. They have also diminished the importance of “food cultures” in favour of a homogeneous, branded, convenient food environment.

The “Culinary Transition”

Food skills. Lang and Caraher (2001) refer to the current state of food skills within our society as a “culinary transition”, which occurs when “cultures experience fundamental shifts in the pattern and kind of skills required to get food onto tables and down throats” (p. 2). Reasons they provide for this transition are: globalization; changes in production and processing methods; the growth of processed/pre-prepared food; and the increase in takeout meals. The prepared and shelf-stable nature of ultra-processed convenience and fast foods frequently releases consumers from the burden of preparation (in some cases requiring none at all). While heralded as time-saving commodities, the low-input and convenience aspect of these foods may be actually disfavoring the population on both nutritional and social fronts.

Some argue that these foods have actually caused a “deskilling” of citizens, meaning many people no longer possess the necessary skills to prepare food from whole food ingredients as they are no longer required to, thus furthering reliance on pre-prepared items (Caraher & Lang, 1999; Caraher, 2012; Jabs et al., 2007; Jaffe & Gertler, 2006; Lang & Caraher, 2001). Jaffe and Gertler

(2006) argue that “consumers do not have – and are systematically deprived of – the information, knowledge and analytical frameworks needed to make informed decisions that reflect their own ‘fully costed’ interests” (p. 143). In effect, even the concept of cooking has become obsolete, as more often a combination of processed foods assembled and heated together can constitute as a ‘home cooked meal’ (Engler-Stringer, 2010).

Scrinis (2007) attributes the poor state of food knowledge and skills to this process of deskilling which has resulted in “a decline in home-based food production...the shift from unprocessed whole foods and home-prepared meals to increasingly processed, prepared and convenience foods...an overall decline in the percentage of gross income spent on food...the loss of traditional and locally-distinct foods, cuisines and farming practices...and a decline of cooking and food preparation skills” (p. 121-122). According to Rützler (2003), the ability to prepare traditional meals without using recipes is significantly declining with age, where about 85-90% of forty-year-old women feel able to do so while in the case of those under forty, only 40-50% feel able. This is not to say women should be solely responsible for cooking, however it illustrates changes in social norms and decline in food preparation knowledge/skills, where more women are working outside the home and the deficit in domestic food work is not being picked up by other household members (Reynolds-Zayak, 2004; Woodruff & Kirby, 2013). This brings to light the importance of food and cooking education for men.

Jaffe and Gertler (2006) and Kornelson (2009) argue that intentional steps are needed to re-skill citizens as they become increasingly distanced (in time and space and experience) from the sites and processes of production. Selection of foods and particular products (i.e., informed shopping), food storage and preservation, and cooking and related activities of food preparation are all key gaps in food knowledge and skills (Jaffe & Gertler, 2006). Not only do these gaps negatively affect the cost of eating, nutrition, health and the environment but they also have unfavorable social impacts on food consumption and reduce the aesthetic and cultural enjoyment of food.

In order to start making positive changes within the culinary transition and counter the process of deskilling, Wilkins (2005) advocates for food citizenship, or “the practice of engaging in food-related behaviors that support, rather than threaten, the development of a democratic, socially and economically just, and environmentally sustainable food system” (p. 271).

Food skills and health. There are limited studies that have directly examined food preparation skills and health; however, existing studies indicate that increased diet quality is associated with greater frequency of cooking and using more complex preparation steps (Larson, Perry, Story, & Neumark-Sztainer, 2006). Early in-home food experiences seem to have a positive impact on food skills, as study subjects who enjoyed cooking in their twenties were significantly more likely to have been engaged in food preparation activities as adolescents and emerging adults (ages 19–23 years). They were also more likely to cook meals with vegetables if they had engaged in food preparation as an adolescent (though regular vegetable consumption was low for the entire group: 24% of males and 41% of females incorporated vegetables more than twice per week) (Laska, Larson, Neumark-Sztainer, & Story, 2011). Eating out more frequently is associated with obesity, and higher body fatness and eating more fast-food meals is linked to consuming more calories, fat, saturated fat, and sugary soft drinks and less fruits, vegetables, and milk (Larson, Perry, Story, & Neumark-Sztainer, 2006; Laska, Larson, Neumark-Sztainer, & Story, 2011).

The reliance on highly processed foods can have serious health consequences, especially for lower socio-economic groups as higher income people can afford “healthy” pre-prepared foods (Lang & Caraher, 2001). Studies show the rise in obesity and related chronic diseases can in part be

attributed to the combined effect of insufficient vegetable and fruit consumption, increased occurrence of meals away from home, poor food preparation skills, and increased portion sizes (Rafioura, Sargent, Anderson, & Evans, 2002; Lino, Gerrior, Basiotis, & Anand, 1998). While more studies are required, there is compelling evidence that fundamental food and nutrition knowledge and skills (food literacy) can have a protective influence on health and well-being.

Changing Social Norms: Food, Eating and Cooking

Convenience orientated. The above noted trends have synergistically and profoundly created contemporary norms around food and eating primarily characterized by convenience. Carl Honoré (2004) captures this in his book, “In Praise of Slowness: How a Worldwide Movement is Challenging the Cult of Speed”, where he states that speed has been the obsession of the modern world for the past century and that it governs every aspect of social organization and subsequently also regulates our meals. The shifts in our food environments described above are compounded by changes in societal values and norms, including our need for speed and convenience. Food corporations respond to, and reinforce these values and norms by offering more and more convenience and ultra-processed food products. Although there are movements beginning to challenge this ideology (“Slow Food Movement”, localism, organics, etc.), it still primarily governs how we engage with and consume food today.

Family meals. Shared meals were once the centre of family life, and the main vehicle for translating important cultural food knowledge. Today, however, parents and caregivers can no longer be expected or relied on solely to teach their children to prepare healthy meals as they may not have the necessary skills or knowledge due to a lack of opportunity to acquire these skills and/or impeding priorities. Ironically, parents say they want to spend less time “cooking” and more “family time”, therefore the two are not seen as complementary (Agriculture and Agri-Food Canada, 2010; Pronovost, 2007). Everyday work and chaotic family schedules provide less time for provision and preparation of meals, and limits the ability of children to visit grocery stores with parents or help with food preparation (Lichtenstein & Ludwig, 2010). These are missed opportunities for teaching and mentoring children about essential food skills, as well as key time that could be viewed as “family time”.

Additionally, more women are working outside the home, while still being primarily responsible for food related activities (Reynolds-Zayak, 2004). In one study, 87% of food planning or preparation was done by the mother or stepmother (Woodruff & Kirby, 2013). This is coupled with an overall de-valuing of “domestic foodwork”, affecting both the home and school environment (Smith & de Zwart, 2010).

Research on family meal frequency is ambiguous with respect to nutritional quality of shared meals, though some research points to a protective influence. Woodruff and Kirby (2013) found increased consumption of fruits and vegetables, whole grains, calcium-rich food, protein, and micronutrients from food and less consumption of fried food and sugar-sweetened beverages were associated with higher family meal frequency. They also found that participants with greater self-efficacy and more positive family meal attitudes and behaviors were more likely to have higher family dinner frequency. Morin and colleagues (2013) also highlight the importance of perceived self-efficacy related to meal management and food coping strategies among working parents. The decline in family meals is also concerning as frequency of recalled childhood family meals appear to

influence the frequency of current commensality in the eating habits of students (De Backer, 2013; Murcott, 1997).

School-based food and nutrition education. Schools have been highlighted as a potential vehicle of change in light of current health trends and societal changes; however concerns within the school system exist. There have been increased initiatives to change the school environment, such as introducing “school nutrition guidelines”, which focus on improving the nutritional quality of foods available to students through vending machines, cafeterias and fundraising (Healthy Child Manitoba, 2006). Although this attempt at changing school food environments is important, it does not address the deficit of key food skills amongst this population that would equip students to make healthy choices in the outside world and home (Lichtenstein & Ludwig, 2010).

Home Economics Food & Nutrition (HEFN) education in the school system is traditionally where students (primarily girls) gain knowledge and applied experience in cooking and related activities. Unfortunately, there has been a decline in home economics education in North America, and HEFN programming faces significant challenges. Some of this can be attributed to diminishing gender stereotypes, however there are other reasons. Food and nutrition education is often undervalued in the schools while “core” subjects, like math and science, take precedence (Lichtenstein & Ludwig, 2010; Slater, 2013). As well, there are significant challenges presented by the wider food and nutrition environments, which undermine HEFN education. These include the widespread availability of highly processed foods and high frequency of irregular eating away from home (Slater, 2013). Students are also entering HEFN classes with less food knowledge and fewer skills than in the past, presenting challenges for teachers. In one Canadian province, less than half of students take HEFN, though enrollment has increased over the last ten years and more males are enrolled (Slater, 2013). Additionally, there is a projected teacher shortage, as training programs close, eliciting concern over HEFN teacher competence (Smith & De Zwart, 2010).

Lichtenstein and Ludwig (2010) argue that while food and nutrition education must be re-introduced into schools, traditional, gender specific home economics education is no longer relevant in today’s food environment and needs to be changed to meet current demands. Fordyce-Voorham (2011) has identified “essential skills required for a skill-based healthful eating program” (p. 117), which includes: knowledge (experiential learning at supermarkets, awareness around environmental sustainability, understanding various cooking methods and kitchen equipment, exposure to enjoyable taste experiences, meal planning, and nutrition knowledge in the context of enjoying a wide variety of food); information (food literacy relating to food labels and proper use of kitchen equipment); skills (planning, shopping, and preparation); resources (energy, motivation, time, cooking equipment and transport). These aspects of the curriculum should be integrated with other subject areas to be truly effective.

Food and nutrition trends. Paradoxically, despite the somewhat dismal state of the population’s nutritional health and food skills there is unprecedented interest by the public in food and nutrition, including vitamins, minerals and supplements; weight loss regimens; organics and local foods; celebrity doctors promoting weight loss schemes; cookbooks; celebrity chefs; and “food TV” (Adema, 2000). Health and wellness is a major concern for consumers, especially as our population ages (Reynolds-Zayak, 2004). A “food as medicine” philosophy has also started to gain popularity and credibility (Adema, 2000). People are likely to proactively pursue food and beverages that they perceive will support physical health for themselves and family members, and there is increased demand for “functional foods”, “nutraceuticals”, “natural”, organic, and novel food products.

However, while Canadians exhibit high interest in the area of nutrition this has not been translated into actions and behaviours that promote individual and population health and wellness (Canadian Medical Association, 2013). People's desires conflict with perceived "time scarcity", and consumers feel overwhelmed by their lifestyle obligations, which are a primary driver for the desire for convenience, which often regulates and determines food choices (Agriculture and Agri-Food Canada, 2010; Slater, Sevenhuysen, Edginton, & O'neil, (2012). One study revealed that 53% of Canadians spend their lunch break in isolation reading, surfing the internet, or not stopping for lunch at all and if they do break for lunch, they do so for only 16-30 minutes (Conagra Foods, 2009). Current cookery culture is also paradoxical in that we now have multiple channels dedicated to food preparation, yet people spend less time cooking than ever before (O'Sullivan et al., 2008).

In response to these trends, educators and others are recognizing the importance of re-invigorating school-based food education as an important prevention/health promotion strategy for future generations. As evidenced above people lack food literacy, necessary food related knowledge, skills, attitudes and values, to live well within current food and social environments, as a result of "nutrition" and "culinary" transitions. In part, this has contributed to poor nutritional health and food relationships. Therefore, a new approach to food is required in order to educate people and create food literate and well populations.

The Future of Food

The 2005 Agriculture and Agri-Food Canada report "Canadian Food Trends to 2020: A Long Range Consumer Outlook", foreshadowed trends which, beneficial for food producers and marketers, signal an alarming future for the health and well-being of future generations. The report predicted that: "Consumers will become even more disconnected from food preparation. Shopping and eating habits will be sporadic; meal planning cycles will be shorter, snacking will replace courses, as well as whole meals, and food will become even more portable" (Agriculture and Agri-Food Canada, 2005, p. i). This report was produced nine years ago, and we can see that our current food trends are on par with these predictions.

Although the exact balance of what constitutes a sustainable diet from biological or an environmental perspective is still emerging, there is common agreement that if current food trends continue, it will be at the expense of both human population health and the environment (Nestle, 2013). Perhaps a healthy balance can be struck between consumer demand for health/wellness, convenience, pleasure and values to support future health (Reynolds-Zayak, 2004). Belasco (2006) argues that we have a "complex food culture that aspires to convenience and authenticity, efficiency and artisanship, mass distribution and class distinction"; a myriad of contradictions which will have to be considered when attempting to predict what the future holds regarding food, nutrition and wellness.

Food Literacy: A New Approach to Food

"Nutritionism"

The dominant response to the poor nutritional health of the population has been the rise of "nutrition science", a biological science "concerned with the interactions of food and nutrition with

physiologic, metabolic and now also genomic systems, and the effects of these interactions with health and disease” (Beauman et al., 2005, p. 783). Here, the primary focus is on the role of nutrients in disease prevention or control and traditional, culturally-relevant cuisines are rendered invisible. This understanding of food and diets based on their nutrient and biochemical composition has in turn driven much of the commodification of food and health (nutritional supplements, functional foods) (Smith, 2009). The nutrition industry (nutrition scientists, dietitians, public health authorities, purveyors of diet products and books) has reinforced this scientific paradigm by recommending that citizens consume a “nutritionally balanced” diet, by eating less of certain nutrients (saturated fats, sugar, salt) rather than less of the actual foods that contain high levels of these nutrients such as processed meat or sweets (candies, baked goods) (Scrinis, 2008). In turn, these types of dietary recommendations have created ideal conditions for the food industry to capitalize on, through strategic production and marketing of “nutritionally enhanced” processed foods.

This reductive focus on nutrients and decontextualized individual biologies has been scrutinized and referred to as “nutritionism” which “has come to dominate, to undermine, and to replace other ways of engaging with food and of contextualizing the relationship between food and the body” (Scrinis, 2008, p. 39). While this approach has produced a vast amount of knowledge and research, its inherently reductive focus on nutrients has promised individualistic solutions to complex public health nutrition problems, on which it has not delivered. It is increasingly being scrutinized by some critics as misguided and possibly detrimental to the health of humans and the natural environment (Pollan, 2007; Scrinis, 2008; Nestle 2000).

Pollan (2007) argues that “the reductive focus on nutrients and biomarkers (whether these be protein, the glycemic index or body mass index) removed from all other contexts and frameworks of understanding food and the body... provides scientific legitimacy for, and drives the development and marketing of, nutritionally-modified processed foods, functionally-marketed foods, fad weight-loss diets, and nutritionally-modified genetically-modified crops” (p. 97).

Marion Nestle explains the central contradiction between nutrition theory and practice:

On the one hand, our advice about the health benefits of diets based largely on food plants - fruits, vegetables, and grains - has not changed in more than 50 years and is consistently supported by ongoing research. On the other hand, people seem increasingly confused about what they are supposed to eat to stay healthy. (Nestle, 2000 as quoted in Scrinis, 2008, p. 39)

In order to reduce “nutrition confusion” it is imperative to re-emphasize the importance of whole foods and re-establish sensual, cultural and ecological connections to food (Lang, 2001; Pollan, 2007; Scrinis, 2008). Food literacy holds promise to re-establish lost knowledge, skills, attitudes and values that can restore our relationships with food.

Conceptualizing Food Literacy: A Review

Clearly there have been major changes to what and how we eat as outlined above and challenging paradoxes exist between citizen desires, health status and environmental impact. Although there is no clear way forward, researchers are looking to more fundamental ways of promoting engagement with food to regain health and well-being. These go beyond “health promotion” and “lifestyle education” to encompass holistic and sustainable food knowledge, including “traditional” food and cultural food pedagogies taught through theoretical, critical and

applied methods. This encompasses the importance of cultural knowledge, environmental stewardship, and family connectedness.

There is considerable evidence to support the notion that many people lack the necessary knowledge, skills, attitudes and values to make choices that facilitate an overall healthy relationship with food. The concept of “food literacy” has emerged as a possible framework and promising approach to re-define what people need to know and be able to do with respect to food for individuals, families and communities to be healthy and live well within our current food world and preserve it for future generations. However, food literacy is increasingly being used in policy and practice without a generalized meaning or understanding of what it is. Table 1 below illustrates current definitions of food literacy found in the literature.

<i>Author/Program</i>	<i>Definition</i>
Vidgen & Gallegos (2011, 2012)	A collection of inter-related knowledge, skills and behaviours required to plan, manage, select, prepare and eat foods to meet needs and determine food intake”, as well as, “the scaffolding that empowers individuals, households, communities or nations to protect diet quality through change and support dietary resilience over time” (Vidgen & Gallegos, 2012, p. vii).
European Food Literacy Project (Schnögl et al., 2006)	Food Literacy is defined as “the ability to organize one’s everyday nutrition in a self-determined, responsible and enjoyable way” (n.p.). The objective is to develop food literacy as a “personal core competence”.
Slater (2013)	Functional food literacy: basic communication of credible, evidence-based food and nutrition information, involving assessing, understanding and evaluating information; Interactive food literacy: development of personal skills regarding food and nutrition issues, involving decision making, goal setting and practices to enhance nutritional health and well-being; Critical food literacy: respecting different cultural, family and religious beliefs in respect to food and nutrition (including nutritional health), understanding the wider context of food production and nutritional health, and advocating for personal, family and community changes to enhance nutritional health.
Desjardins (2013)	A set of skills and attributes that help people sustain the daily preparation of healthy, tasty, affordable meals for themselves and their families. Food literacy builds resilience, because it includes food skills (techniques, knowledge and planning ability), the confidence to improvise and problem solve, and the ability to access and share information. Food literacy is made possible through external support with healthy food access and living conditions, broad learning opportunities, and positive socio-cultural environments.
Association of Local Public Health Agencies (2009)	The ability to cook healthy meals from scratch, grow food, read food labels correctly, as well as knowing where one’s food comes from.

East Carolina University: Food Literacy Program (http://www.ecu.edu/cs-dhs/dph/Community-Initiatives.cfm)	Focus is on food and nutritional well-being. Topics include: weight management, dietary supplements and information about diseases often associated with obesity.
Harvard University Dining Service: The Food Literacy Project (http://www.dining.harvard.edu/flp/index.html)	Aim is to cultivate an understanding of food from the ground up. The focus is on four areas of food and society: agriculture, nutrition, food preparation and community. The goal is to promote enduring knowledge, enabling consumers to make informed food choices.

Table 1. Food literacy definitions & programs.

The first four definitions above are more comprehensive in scope, and will be used to explore food literacy education as a means to address and ameliorate the issues raised in this chapter's first section (Rationale for a new approach to food).

Vidgen and Gallegos (2011, 2012) developed a conceptual framework that consisted of four descriptors/capabilities of a food literate person (Table 2). They purport that food literacy serves to improve nutritional outcomes due to its ability to make food intake more certain (predictable), more pleasurable, and provides more informed choice. The extent that this will improve diet quality is mediated by social determinants of health (i.e., social exclusion, poverty, social support, geography and transport).

Planning and Management	<ul style="list-style-type: none"> • Prioritizes money and time for food • Can access food through some source on a regular basis irrespective of changes in circumstances or environment by planning (formally and informally) their food intake • Makes feasible food decisions which balance food needs (eg nutrition, taste, hunger) with available resources (eg time, money, skills, equipment)
Selection	<ul style="list-style-type: none"> • Knows that food can be accessed through multiple sources and the advantages and disadvantages of these sources • Knows how to determine what is in a food product, where it came from, how to store it and use it • Can judge the quality of food
Eating	<ul style="list-style-type: none"> • Understands food has an impact on personal well-being • Demonstrates self-awareness of the need to personally balance food intake. This includes knowing foods to include for good health, foods to restrict for good health and appropriate portion size and frequency • Can join in and eat in a social way

Preparation	<ul style="list-style-type: none"> • Can make a good tasting meal from whatever food is available. This includes being able to prepare commonly available foods, efficiently use common pieces of kitchen equipment and having a sufficient repertoire of skills to adapt recipes (written or unwritten) to experiment with food and ingredients • Knows the basic principles of safe food hygiene and handling
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Table 2. Components of individual food literacy (Vidgen & Gallegos, 2011; 2012).

Each dimension of food literacy in this framework encompasses a wide spectrum of food related activities which can potentially rectify knowledge deficits and “deskilling” issues. For example: adequate management and prioritization of money and time around food is essential for moving away from “convenience” orientated food decisions, which can also facilitate less reliance on processed, nutrient-poor and energy-dense food options. This could improve overall diet quality and improve health outcomes. Their definition of food literacy, while still primarily focused on individual physical health outcomes, does not focus on nutrient acquisition/avoidance and extends to understanding where food comes from and the impact food has on personal well-being (i.e., social connectedness, food security, and ethical and sustainable food choice).

Schnögl and colleagues (2006) see food literacy as contributing toward the sustainable, democratic development of citizenship. Table 3 elaborates on their definition: “the ability to organize one’s everyday nutrition in a self-determined, responsible and enjoyable way”.

A person organizes their everyday nutrition in a self-determined way:	<ul style="list-style-type: none"> • Is aware of his/her nutritional behaviour and understands it in connection with his/her biography, • Knows about the social, cultural and historic influences on eating habits and understands their respective effects, • Shows sufficient knowledge of nutrition and food in order to be able to critically question statements given in the media and made by experts, • Knows his/her personal needs in nutrition and • Is able to organize nutrition in a way that has a good effect on him/her.
A person organizes their everyday nutrition in a responsible way:	<ul style="list-style-type: none"> • Understands the effect of nutrition on his/her health condition, the environment and society as a whole and understands the respective connections between them, • Knows about food production, processing, transport and disposal, • Is informed about the composition of food and can judge its quality, • Is able to select appropriate products within the framework of his/her personal budget, • Makes decisions as a consumer that are quality-oriented and effectively develop his/her style of living.

A person organizes their everyday nutrition in an enjoyable way:	<ul style="list-style-type: none"> • Can feel for himself/herself what is good and what provides personal pleasure, • Realizes that conscious perception using all the senses and a varied experience of taste is a condition of enjoyment, • Appreciates cooking and eating as an aspect enriching everyday life, • Regards dealing with food as an elementary part of human culture and • Is open to other culinary cultures.
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Table 3. European food literacy definition (Schnögl et al., 2006).

Their concept revolves around the notion that cultural, social, emotional, personal and practical factors must be at the centre of nutrition communication and education. Facilitating food literacy education based on these principles would address several concerns around changing values and norms around food, such as loss of food cultures and pervasive isolated eating practices. As well, by educating people to “critically question statements given by the media and made by experts” (p. 12), this will allow consumers more control over their food choices and minimize nutrition confusion. A key and distinguishing feature of their conceptualization of food literacy is their emphasis on the enjoyment or pleasures around cooking, eating and experiencing food as an aspect enriching everyday life. Schnögl et al. (2006) feel strongly that food literacy is much more than recommending nutritional guidelines (“nutritionism”); rather they seek to empower individuals and communities to make decisions in complex food environments, and provide essential basic competencies around food and nutrition.

Slater (2013) argues that in light of current obesity and diet-related chronic disease rates, complex foodscapes, citizen “de-skilling” and changing social norms, re-evaluation of educational practices in public school systems is required. This is underscored by concern that theoretical and applied food and nutrition related learning opportunities are under threat, particularly through the decline in home economics courses. In response, Slater has proposed a food literacy framework that identifies three aspects of food literacy:

Functional food literacy	Communication of credible, evidence-based food and nutrition information, involving assessing, understanding and evaluating information
Interactive food literacy	Development of personal skills regarding food and nutrition issues, involving decision making, goal setting and practices to enhance nutritional health and well-being
Critical food literacy	Respecting different cultural, family and spiritual beliefs in respect to food and nutrition (including nutritional health), understanding the wider context of food production and nutritional health, and advocating for personal, family and community changes to enhance nutritional health

Table 4. Aspects of food literacy (Slater, 2013).

This framework needs to be matured conceptually to examine and propose methods and tools for building food literacy capacity and translating food literacy to individuals.

Desjardins (2013) has conducted a study that examined food literacy from the perspective of disadvantaged young adults. In comparison to the other definitions presented in this chapter, this study explicitly discusses food literacy as food preparation skills, which are defined as:

Food skills that are necessary to provide regular, healthy meals for one’s household and/or one’s self comprise a combination of techniques (ability to use cooking implements and appliances, handle food ingredients); knowledge (nutrition for good health, interpreting food labels, following/understanding instructions, ingredients and recipes; food safety; awareness of food origins and characteristics, and growing foods if possible); and planning ability (organizing meals; food budgeting, shopping and storage). (Desjardins, 2013, p. 70)

Table 5 below describes the measurable outcomes of food literacy determined from results of this study.

Personal skills and attributes related to food preparation	External determinants	Potential outcomes (as expressed by young people themselves)
<ul style="list-style-type: none"> • Food skills (techniques, knowledge, planning) • Self-efficacy and confidence • Ability to improvise and problem-solve • Ability to find and use social & other supports 	<ul style="list-style-type: none"> • Socio-cultural environment • Learning environment • Food access, cooking facilities • Living conditions (income, employment, housing) 	<ul style="list-style-type: none"> • Preparation of healthier meals and greater likelihood of consuming a healthier diet • Feeling better, physically & mentally • Greater connectedness to others with respect to food and eating • Improved response to change • Feelings of satisfaction in preparing food for themselves and others • Attraction to culinary training and job opportunities (for some) • Improved household food security

Table 5. Measurable components of food literacy (Desjardins, 2013).

Both Desjardins (2013) and Vidgen and Gallegos (2012) examined food literacy from the perspective of disadvantaged young adults, a population that will benefit from enhanced food literacy. The authors of this review suggest that food literacy is also critical for the health and well-being of all members of society, regardless of their age and socio-economic position.

Food Literacy & Well-Being

The authors of this chapter argue that being food literate is a vital aspect to living well, beyond individual physical health. Just as food literacy is emerging as a promising way to re-establish our connection and relationship to food, new well-being frameworks are being developed to re-evaluate how to measure the quality of one's life. These emerging well-being frameworks are worth examining for their potential to include dimensions of food literacy.

Although the definitions of well-being vary, the Canadian Index of Wellbeing (CIW) (Canadian Index of Well-Being, 2012) currently defines it as:

The presence of the highest possible quality of life in its full breadth of expression focused on but not necessarily exclusive to: good living standards, robust health, a sustainable environment, vital communities, an educated populace, balanced time use, high levels of democratic participation, and access to and participation in leisure and culture. (n.p)

The CIW has created a comprehensive composite index of indicators to measure social progress and quality of life as opposed to the current system which uses Gross Domestic Product (GDP) as the measure of prosperity. These include living standards, community vitality, education, health, time use, environment, democratic engagement, and leisure and culture.

Each component of the CIW is interconnected with food literacy. For example, "time use", which measures the use of time, how people experience time, what controls its use, and how it affects well-being directly effects what people choose to eat. This is just one example of why a new approach to food based on food literacy should be seen within the larger context of new well-being frameworks.

Another organization, the New Economics Foundation (New Economics Foundation, 2013), aims to improve quality of life by promoting innovative solutions that challenge mainstream thinking on economic, environmental, and social issues. They seek to answer the question: what would politics look like if promoting people's well-being was one of government's main aims? NEF has created a "well-being manifesto" that urges the government to redefine policy to shape the culture and society in which we live to support well-being through eight key areas (Aked et al., 2009):

1. Measure what matters: produce a set of national well-being accounts;
2. Create a well-being economy: employment, meaningful work and environmental taxation;
3. Reclaim our time: improve work-life balance;
4. Create an education system that promotes flourishing;
5. Refocus the health system to promote complete health;
6. Invest in the very early years and parenting;

7. Discourage materialism and promote authentic advertising;
8. Strengthen civil society, social well-being and active citizenship.

Again, food literacy resonates with many aspects of this well-being framework. For example, creating an education system that promotes flourishing and a health system that promotes complete health would necessitate the development of food literate citizens. Food literacy education would strengthen the other pieces of this framework, for example: invest in the very early years and parenting; improve work-life balance; and refocus the health system to promote complete health. Additionally, not only does food literacy compliment the social environment reflected in this well-being definition, it extends to the natural environment. To be “well” society needs to exist within a healthy social and natural environment.

While food literacy is not explicitly embedded within the frameworks discussed, they provide an important heuristic device for thinking about the role of food literacy in well-being. And while empirical work is required to examine the linkages between food literacy and well-being more closely, the authors of this chapter argue that food literacy can be seen as an integral “thread” running through conceptualizations of well-being, profoundly influencing the quality of individual and community life.

Further Research

The literature reviewed in this chapter has advanced the wider understanding of food literacy as a concept, and for beginning to think about educating for food literacy and well-being. Research is required to further explore the scope and boundaries of food literacy and embed the components of food literacy into a holistic framework of “food literacy for well-being”. In addition, research is required to empirically measure the linkages and pathways between food literacy and well-being. Finally, further work is needed that examines how to best translate food literacy through family, cultural, educational and private sector institutions.

Conclusion

This chapter has reviewed the impetus for a new relationship to food in the context of poor health, growing concern over current food systems, and loss of foundational food knowledge, skills and culture. Food literacy, as an emerging concept, holds promise for fostering this relationship, but needs to be further examined, theoretically and empirically, including its relationship to “well-being”. Emerging concepts of well-being go beyond individual health behaviours to include citizenship engagement, work/life balance, and flourishing education. A recent report, “Health care in Canada – what makes us sick?” (Canadian Medical Association, 2013), identified nutrition and food security as one of four major threats to health and well-being in Canada, underscoring the importance of connecting food literacy and well-being. Food literacy for well-being is an important concept that can help researchers, practitioners, planners and educators create new ways of thinking and educating about food and nutrition. Food literacy can provide a foundation for creating policies and programs to prevent disease, promote complete health and flourishing, and sustain environments and cultures.

References

- Adema, P. (2000). Vicarious consumption: Food, television and the ambiguity of modernity. *Journal of American & Comparative Cultures*, 23(3), 113.
- Agriculture and Agri-Food Canada. (2005). *Canadian food trends to 2020: A long range consumer outlook*. Retrieved from http://stayactiveeathealthy.ca/files/Canadian_Food_Trends_2020_0.pdf
- Agriculture and Agri-Food Canada. (2010). *The Canadian consumer behavior, attitudes and perceptions toward food products*. Ottawa: Agriculture and Agri-Foods Canada. Retrieved from <http://www.ats-sea.agr.gc.ca/can/pdf/5505-eng.pdf>
- Aked, J., Marks, N., Cordon, C., & Thompson, S. (2009). *Five ways to well-being: A report presented to the Foresight Project on communicating the evidence base for improving people's well-being*. London: New Economics Foundation.
- Association of Local Public Health Agencies. (2009). *Integrating food literacy training into Ontario's school curriculum*. Retrieved from the Association of Local Public Health Agencies website: <http://www.alphaweb.org/>
- Beauman, C., Cannon, G., Elmadfa, I., Glasauer, P., Hoffmann, I., Keller, M., ... & Zerilli-Marimò, M. (2005). *The Giessen Declaration*. *Public Health Nutrition* 8(6A), 783–786.
- Bleich S, Cutler D, Murray C, Adams A. (2007). Why is the developed world obese? National Bureau of Economic Research, Working Paper 12954. Retrieved from: <http://www.nber.org/papers/w12954>
- Block, L. G., Grier, S. A., Childers, T. L., Davis, B., Ebert, J. E., Kumanyika, S., ... & van Ginkel Bieshaar, M. N. (2011). From nutrients to nurturance: A conceptual introduction to food well-being. *Journal of Public Policy & Marketing*, 30(1), 5-13.
- Caraher, M., & Lang, T. (1999). Can't cook, won't cook: A review of cooking skills and their relevance to health promotion. *International Journal of Health Promotion and Education*, 37, 89-99.
- Canadian Index of Well-Being*. (2012). Retrieved from <https://uwaterloo.ca/canadian-index-wellbeing/>
- Canadian Medical Association. (2013). *Health care in Canada: What makes us sick?*. Retrieved from Canadian Medical Association website: <http://www.cma.ca>
- Canadian Restaurant and Foodservices Association. (2010). *Canada's Restaurant Industry Putting jobs and economic growth on the menu*. Retrieved from the Canadian Restaurant and Foodservices Association website: http://www.crfa.ca/pdf/ipsos_report.pdf
- Caraher, M. (2012). *Cooking in crisis: Lessons from the UK*. Retrieved from <http://arrow.dit.ie/cgi/viewcontent.cgi?article=1006&context=dgs>
- Conagra Foods. (2009). *Healthy Choice*. Retrieved from <http://healthychoicecanada.ca/en/healthy-ideas/>.
- De Backer, C. (2013). Family meal traditions. Comparing reported childhood food habits to current food habits among university students. *Appetite*, 64-70.
- Desjardins, E. & Hailburton, K. (2013) *Making something out of nothing: Food literacy among youth, young pregnant women and young parents who are at risk for poor health*. Retrieved from the Ontario Society of Nutrition Professionals in Public Health website: <http://www.osnpnh.on.ca/resources/Food%20Literacy%20Study.LDCPOntario.Final.Dec2013.pdf>
- Engler-Stringer, R. (2010). Food, cooking skills, and health: A literature review. *Canadian Journal of Dietetic Practice and Research*, 71(3), 141-145.

- Fordyce-Voorham, S. (2011). Identification of essential food skills for skill-based healthful eating programs in secondary schools. *Journal of Nutrition Education and Behavior*, 43(2), 116-122.
- Garriguet, D. (2007). Canadians' eating. *Health Reports*, 18(2), 17.
- Glanz, K., Basil, M., Maibach, E., Goldberg, J., & Snyder, D. (1998). Why Americans eat what they do: Taste, nutrition, cost, convenience, and weight control concerns as influences on food consumption. *Journal of the American Dietetic Association*, 98(10), 1118-1126.
- Healthy Child Manitoba. (2006). *Manitoba school nutrition handbook*. Winnipeg, MB: Government of Manitoba.
- Honoré, C. (2004). In praise of slow: How a worldwide movement is challenging the cult of speed. Toronto: Vintage Canada.
- Hramiak, I., Leiter, L., Paul, T. L., & Ur, E. (2007). Assessment of obesity and its complications in adults. *Canadian Medical Association Journal*, 178, 36-39.
- Jabs, J., Devine, C. M., Bisogni, C. A., Farrell, T. J., Jastran, M., & Wethington, E. (2007). Trying to find the quickest way: Employed mothers' constructions of time for food. *Journal of Nutrition Education and Behavior*, 39(1), 18-25.
- Jaffe, J. A., & Gertler, M. (2006). Victual vicissitudes: Consumer deskilling and the (gendered) transformation of food systems. *Agriculture and Human Values*, 23(2), 143-162.
- Kornelson, S. (2009). *Is that the way the cookie crumbles?: Consumer deskilling in food systems and the journey toward food sovereignty*. Wilfred Laurier University. Retrieved from http://www.agbio.ca/Docs/Guelph2009SocialSciences/Kornelsen_S_2009.pdf
- Lang, T., & Caraher, M. (2001). Is there a culinary skills transition? data and debate from the UK about changes in cooking culture. *Journal of the HEIA*, 8(2), 2-14.
- Langlois, K., & Garriguet, D. (2011). Sugar consumption among Canadians of all ages. *Health Rep*, 22(3), 23-27.
- Larson, N. I., Perry, C. L., Story, M., & Neumark-Sztainer, D. (2006). Food preparation by young adults is associated with better diet quality. *Journal of the American Dietetic Association*, 106(12), 2001-2007.
- Laska, M. N., Larson, N. I., Neumark-Sztainer, D., & Story, M. (2011). Does involvement in food preparation track from adolescence to young adulthood and is it associated with better dietary quality?: Findings from a 10-year longitudinal study. *Public Health Nutrition*, 15(7), 1150-1158.
- Lichtenstein, A. H., & Ludwig, D. S. (2010). Bring back home economics education. *JAMA: The Journal of the American Medical Association*, 303(18), 1857-1858.
- Lino, M., Gerrior, S. A., Basiotis, P. P., & Anand, R. S. (1998). *Nutrition insights: Report card on the diet quality of children*. Washington, DC: United States Department of Agriculture, Center for Nutrition Policy and Promotion.
- Moore, E. (2007). The online marketing of food to children: Is it just fun and games? *Journal of Public Policy & Marketing*, 26(2), 202-220.
- Morin, P., Demers, K., Turcotte, S., & Mongeau, L. (2013). Association between perceived self-efficacy related to meal management and food coping strategies among working parents with preschool children. *Appetite*, 65, 43-50.
- Mulder, K. A., Zibrik, L., & Innis, S. M. (2011). High dietary sodium intake among young children in Vancouver, British Columbia. *Journal of the American College of Nutrition*, 30(1), 73-78.
- Murcott, A. (1997). Family meals—a thing of the past?. In P. Caplan (Ed.), *Food, health and identity* (pp. 32-49). London: Routledge.
- Nestle, M. (2000). *Food politics: How the food industry influences nutrition and health*. Berkeley, CA: University of California Press.

- Nestle, M. (2013). *Food politics: How the food industry influences nutrition and health* (Revised ed.). Berkeley, Calif.: University of California Press.
- O'Sullivan, G. (2008). History in the making: Older Canadian women's food-related practices. *Food and Foodways*, 16(1), 63-87.
- Pollan, M. (2007, January 28). Unhappy meals. *The New York Times*. Retrieved from <http://www.nytimes.com>
- Popkin, B. M. (2001). The nutrition transition and obesity in the developing world. *The Journal of Nutrition*, 131(3), 871S-873S.
- Popkin, B. M., Adair, L. S., & Ng, S. W. (2012). Global nutrition transition and the pandemic of obesity in developing countries. *Nutrition Reviews*, 70(1), 3-21.
- Popkin, B. M., & Gordon-Larsen, P. (2004). The nutrition transition: Worldwide obesity dynamics and their determinants. *International Journal of Obesity*, 28, S2-S9.
- Popkin, B. M. (2002). An overview on the nutrition transition and its health implications: The bellagio meeting. *Public Health Nutrition*, 5(1A), 93-103.
- Pronovost, G. (2007). *Le temps dans tous ses états temps de travail, temps de loisir et temps pour la famille à l'aube du XXIe siècle*. Montréal, Que.: Institut de recherche en politiques publiques.
- Public Health Agency of Canada. (2011). *Obesity in Canada: A joint report from the Public Health Agency of Canada and the Canadian Institute for Health Information*. Retrieved from <http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/oic-oac/index-eng.php>
- Puhl, R. M., & Latner, J. D. (2007). Stigma, obesity, and the health of the nation's children. *Psychological Bulletin*, 133(4), 557.
- Rafioura, C., Sargent, R., Anderson, E., & Evans, A. (2002). Dietary practices in South Carolina Adolescents and their parents. *American Journal of Health Behavior*, 26, 200-212.
- Roberts, K. C., Shields, M., de Groh, M., Aziz, A., & Gilbert, J. (2012). Overweight and obesity in children and adolescents: Results from the 2009 to 2011 Canadian health measures survey. *Health Rep*, 23(3), 37-41.
- Schwimmer, J. B., Burwinkle, T. M., & Varni, J. W. (2003). Health-related quality of life of severely obese children and adolescents. *JAMA: The Journal of the American Medical Association*, 289(14), 1813-1819.
- Scrinis, G. (2007). From techno-corporate food to alternative agri-food movements. *Local Global*, 4, 112-140.
- Scrinis, G. (2008). On the ideology of nutritionism. *Gastronomica: The Journal of Food and Culture*, 8(1), 39-48.
- Slater, J., Green, C. G., Sevenhuysen, G., Edginton, B., O'neil, J., & Heasman, M. (2009). The growing Canadian energy gap: more the can than the couch? *Public Health Nutrition*, 12(11), 2216-2224.
- Slater, J., Sevenhuysen, G., Edginton, B., & O'neil, J. (2012). 'Trying to make it all come together': Structuration and employed mothers' experience of family food provisioning in Canada. *Health Promotion International*, 27(3), 405-415.
- Slater, J. (2013). Is cooking dead? The state of Home Economics Food and Nutrition education in a Canadian province. *International Journal of Consumer Studies*, 37(6), 617-624.
- Smith, M. G. (2009). Food or nutrition Literacy?: What concept should guide home economics education. *International Journal of Home Economics*, 2(1), 48-64.
- Smith, G., & de Zwart, M. L. (2010). *Home economics: A contextual study of the subject and home economics teacher education*. Retrieved from the British Columbia Teachers Federation website: www.bctf.ca

- Schnögl, S., Zehetgruber, R., Danninger, S., Setzwein, M., Wenk, R., Freudenberg, M., Müller, C., & Groeneveld, M. (2006). *Savoury dishes for adult education and counselling*. Retrieved from www.food-literacy.org
- Swinburn, B. A., Jolley, D., Kremer, P. J., Salbe, A. D., & Ravussin, E. (2006). Estimating the effects of energy imbalance on changes in body weight in children. *The American Journal of Clinical Nutrition*, 83(4), 859-863.
- Ustjanauskas, A., Harris, J., & Schwartz, M. (2013). Food and beverage advertising on children's web sites. *Pediatric Obesity*. Advance online publication. doi: 10.1111/j.2047-6310.2013.00185.x
- Vidgen, H. A., & Gallegos, D. (2011). *What is food literacy and does it influence what we eat: A study of Australian food experts*. Brisbane, Queensland (AU): Queensland University of Technology. Retrieved from <http://eprints.qut.edu.au/45902/1/45902P.pdf>
- Vidgen H, & Gallegos D. (2012). *Defining food literacy, its components, development and relationship to food intake: A case study of young people and disadvantage*. Brisbane, Queensland: Queensland University of Technology.
- Wang, F., & Veugelers, P. J. (2008). Self-esteem and cognitive development in the era of the childhood obesity epidemic. *Obesity Reviews*, 9(6), 615-623.
- Warde, A. (1999). Convenience food: Space and timing. *British Food Journal*, 101(7), 518-527.
- Woodruff, S. J., & Kirby, A. R. (2013). The associations among family meal frequency, food preparation frequency, self-efficacy for cooking, and food preparation techniques in children and adolescents. *Journal of Nutrition Education and Behavior*, 45(4), 296-303.
- Zayak-Reynolds. (2004). *Understanding consumer trends can present new opportunities*. Retrieved from the Alberta Agriculture and Rural Development website: <http://www.agric.gov.ab.ca>

Chapter 4

Designing across the Curriculum for “Sustainable Well-Being”: A 21st Century Approach

SUSAN M. DRAKE

What role can educators play to address the urgent and “wicked problems” in the world today, with the ongoing destruction of the planet being the central issue? This chapter explores how to create an accountable and relevant curriculum. Using a backward design process, the question of what is most important for students to know, do and be is explored. It is suggested that for many disciplinary and interdisciplinary curricula “Sustainable Well-Being” can act as an umbrella big idea for the Know. The Do includes 21st Century Skills such as communication, collaborative problem solving, systems thinking, design thinking and creativity. The Be is acting as stewards for sustainable well-being on our planet and in our communities. Although this process is generic and can be used at all levels of education, this chapter offers a Grade 7 example. It is hoped that readers can connect these ideas to their own contexts.

Today’s students are inheriting a world that is full of what design thinkers identify as “wicked problems” (Rittel & Webber, 1973). Wicked problems are so complex, ill-structured, ambiguous and interconnected that they are probably not solvable. Education, poverty, nutrition and the environment are such problems. Humans are an intricate part of the wicked problem of the survival of the biosphere and/or humans as a species. We are creating our own demise, what Kolbert (2014) calls the sixth extinction, without fully understanding how we are doing it given the complex interconnections between humans and nature that include human actions. For example, in a wicked problem one can successfully address one aspect of the problem, yet, while doing so, ten more interconnected aspects emerge that also require solutions. In spite of this, Kolko (2012) suggests that addressing an issue at the local level can have a positive and far-reaching impact. But how are educators preparing students to explore such local issues and problems? Are we so focused on literacy and numeracy, admittedly extremely important life skills, that we are ignoring the looming sixth extinction? What if we taught students to be system thinkers – to think as design thinkers might think when confronting wicked problems?

Heidi Siwak, a grade 6 and 7 teacher in Ontario, is explicitly teaching students to address wicked problems through a causal modeling approach (<http://www.heidisiwak.com/>). Siwak has been participating with other teachers in workshops that focus on wicked problems through the *I-think initiative* at University of Toronto Rotman School of Management (<http://www.rotman>.

utoronto.ca/FacultyAndResearch/ResearchCentres/DesautelsCentre/Programs/I-Think.aspx). In the workshop's training sessions, teachers tackled the problem of gun violence. They began with a casual map and then focused in on mental health as one way to begin to solve part of the problem, rather than trying to simultaneously tackle all aspects of gun violence. Siwak (2013) believes that wicked problems are what students should be working with: "They are meaningful because they have application outside the classroom. They are challenging; they have infinite possibilities for creative solutions and are fun to play with and think about".

Students who take a causal modeling approach learn the difference between simple, complex and wicked problems. An example of a simple problem is, "How much will it cost to fill the tank if gas costs 1.33/litre and the tank is 2/3 empty?" There is only one correct answer. An example of a structurally complex problem is, "How do I get from my school to the Hamilton airport?" There are many possible solutions, but the problem is solvable. An example of a wicked problem is, "How do we solve traffic problems in the Greater Toronto Area?" This is a problem with many interconnected threads that is seemingly unsolvable.

Siwak (2013) points out that when teaching students, they "tend to begin at the point that conclusions are already drawn". To begin to address a wicked problem, Swank asks students to create a causal map where they consider many aspects of the problem. She then helps the students to focus on a particular aspect and to find a solution to that part of the problem. In her middle years classes, students have created causal maps on questions such as, "How does someone get to be a celebrity?", "How does a book become a best seller?", and "Why does homework not get done?" An example of the "Homework" causal map is presented in Figure 1.

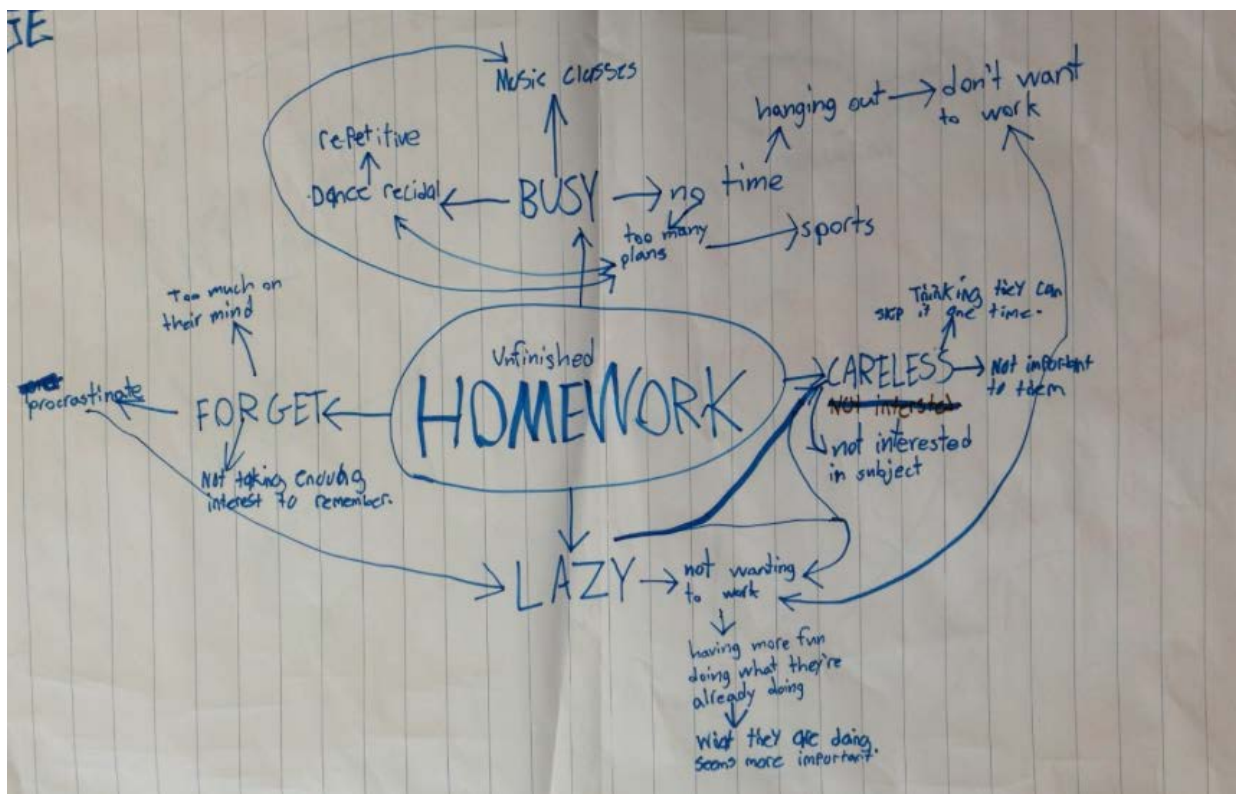


Figure 1. A casual map created by grade 7 students in Heidi Siwak's class.

How can teachers and teacher educators approach the flourishing of the planet’s biosystem as design thinkers? The survival of the biosphere as we know it is a wicked problem. Carving out chunks of that problem and exploring the interconnected parts is one way to begin. Exploring these aspects under the umbrella of “sustainable well-being” allows for a positive focus. Imagine, for example, students exploring the question, “What’s good for us and our oceans?” under the umbrella of Sustainable Well-Being. Students would create a causal map and then conduct research on questions such as those that follow. What does it mean when scientists say an ocean is healthy? How healthy are the oceans? How can we insure healthy oceans in the future? What is the connection between human health and the ocean’s health? How can we save ocean organisms? How can we sustain the populations of aquatic animals that we use as seafood? What kind of fish should we be eating and when? Are these fish high or low on the food chain? Are these fish purchased fresh or are they frozen? Are these fish harvested in the wild or farmed? How do we responsibly take from the ocean’s global wild capture leaving little waste? How do we change human preferences to go beyond ten species of fish? How do we honour cultural traditions around fish? How do we support fishermen and local waterfront communities? Each question is interconnected to a whole set of other questions. A conceptual focus of Sustainable Well-Being offers a lens by which the connections in this example can be made explicit (This scenario was inspired by an interview with Barton Seavor [Leiberman, 2013] in *Nutrition Action*). Moreover, Sustainable Well-Being reminds us of the larger wicked problem associated with sustaining the ecosystem services of the entire planet.

In this chapter, a backward design process is explored for curricula with a conceptual focus on sustainable well-being. This approach begins to address the questions of how best to prepare students to think in ways that examine and confront the biggest issues of our time – the “wicked problems.” As will be shown, this particular design process also insures that the curriculum is both relevant to students and accountable to local curriculum mandates.

Sustainable Well-Being as a Conceptual Focus

Sustainable well-being may be an excellent conceptual lens to use in the design of curriculum for the 21st Century, but what does sustainable well-being mean? This has become a universal concept or big idea that in defining requires unpacking what constitutes the good society as well as what constitutes environmental conservation or “protecting” the environment. The answers will differ according to the cultural context in which sustainability and sustainable well-being are explored. Moreover, the issues associated with sustainable well-being are replete with what many consider to be polarities or binary opposites. These include poor/rich, peace/war, rights/responsibilities, capitalism/distributed wealth, democracy/socialism, happiness/unhappiness, violence/non-violence and health/disease, cultural diversity. What’s more, any issue with a focus on sustainable well-being needs to be viewed through several interconnected theoretical lenses that have an impact on the problem and cannot be ignored in its solution.

Creating Causal Maps and/or Real World Webs

To deconstruct the meaning of sustainable well-being in the classroom and in the context of a specific dilemma, students can begin by creating a causal map such as those described above. Another more focused way to see the interconnections on the causal map is to create a Real World

Web (Figure 2). This graphic illustration helps students to understand the complexity of sustainable well-being and how all aspects, or human constructed and natural systems, are interconnected.



Figure 2. Real World Web (adapted from Drake, Bebbington, Laksman, Mackie, Maynes, & Wayne, 1992).

In my experience, students at any grade level can create this Real World Web (see Drake, Bebbington, Laksman, Mackie, Maynes, & Wayne, 1992). The issue under study is placed in the center of a web with sustainable well-being as the conceptual focus. Students can select from a wide variety of real world issues such as global warming, Aboriginal inequities, bullying, or identity theft and brainstorm what they know about the issue using each of the categories on the concept map. This type of discussion has been done as early as Kindergarten, where students five and six years in age were able to put information into each category (for younger students the name of the category may need to be changed to reflect their level of understanding, for example, economics becomes money). Having identified the relevant information for the categories, the final step is to have students draw lines between these categorized entries that they recognize as being connected. Inevitably the real world web is covered with linking lines, and students are able to see a visual representation of interconnection and interdependence. Throughout this brainstorming process, the focus continues to be well-being and how to both achieve and sustain it.

The Wicked Problem in Education

Educators are caught in a tension between accountability to stakeholders and personal relevance to each student. The traditional model of formal education is no longer working. Students across North America report being bored in school (Fullan, 2013; Willms & Friesen, 2012). There is a widespread call for educational reform to fit the 21st Century context (Action Canada, 2013; Barbar, Donnelly, & Rizva, 2013; C21Canada, 2012; Canadian Education Association, 2012; Robinson, 2010; Delors, 1999).

The traditional model of education is discipline-based. “Back to the basics” is fundamental, and the 3Rs of literacy and numeracy are considered the building blocks of success. The teacher as the expert transmits knowledge to students primarily through lecture. The students are considered to be blank slates with no prior knowledge, and they passively absorb the knowledge that the teacher transmits. There is little interaction between students and teacher in the learning process. Assessment is summative, takes place at the end of the learning period, and is largely pencil and paper tests that often are standardized in nature. Success is normative and measured against a bell curve. This ensures that most students receive average grades and only a small percentage do very well or very poorly. The purpose of the traditional approach has been to maintain the status quo, to reproduce society.

Today education is a global enterprise where technology offers new ways to connect with each other and, indeed, a new culture of learning (Thomas & Seeley-Brown, 2011). Fullan (2013) argues that educational transformation requires three interconnected components to capture student engagement: technology, pedagogy grounded in constructivist learning theory, and teachers as agents of change. Technology has brought in an era of potentially powerful new approaches to teach, learn and assess. Social networks have fundamentally changed how people interact with one another. The 21st Century requires a “deep pedagogy” grounded in constructivist learning principles. Students learn through interaction with the teacher and others and by connecting new learning to previous learning. They learn by doing and engaging in real world problem solving, project-based learning, and units focused on a “big” ideas or essential questions. As a result, assessment is competency-based and focused on performance demonstration. Assessment *for* learning (diagnostic and formative) and assessment *as* learning (goal-setting and metacognition) are features of every constructivist classroom (Earl & Katz, 2006). The teacher needs to be a change agent. No longer only a transmitter or a facilitator, the teacher needs also to be an activist (Hattie, 2012) who takes a catalytic role in helping the learner to be self-directed.

It is in this transformational vision of education that the urgent issues of human survival and sustaining Earth’s ecosystem services can be confronted. To do so, I urge that the conceptual focus of sustainable well-being become the overarching theoretical construct for *all* curriculum design.

Curriculum Backward Design

Curriculum planning is a part of educational accountability. Typically for Kindergarten through Grade 12 education there are curriculum guidelines that mandate what teachers must teach subject-by-subject and grade-by-grade. In university and colleges, the accountability movement is just beginning to make waves with requirements for defined outcomes/standards/competencies and aligned assessments (see, for example, Savage & Drake, 2013). Across North America and the world,

educational success is measured by large-scale testing. This is done at the provincial/state, national and international levels. The tests make a difference. The results can focus improvement strategies, ensure that appropriate remedial action is taken, and result in new curriculum documents. Unfortunately, results can be also misused as we see in the use of test results to determine real values (McAffery, 2010; Rushowy, 2014).

Backward design (Wiggins & McTighe, 2005) is currently a preferred method to plan K to 12 curriculum across Canada and internationally. The process has assessment at its centre and presumably leads to teachers teaching the mandated curriculum and the students learning what the province/state deems most important to know. Such planning can be used for all curricula and is an excellent way to plan for inquiry or project-based learning that is known to ensure deep learning for students. It can be used for both disciplinary and interdisciplinary curriculum design as well as for one lesson, a unit or yearlong planning. Here, backward design will be used for inquiry learning and/or project-based learning that culminates in a rich performance assessment task.

Backward design has three basic steps as shown in Figure 3.

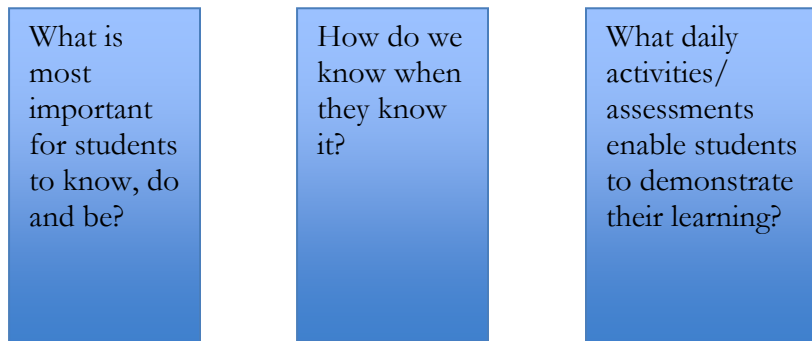


Figure 3. Backward design.

Why use backward design? The simple answer is that a curriculum can address both accountability concerns and also be relevant to a particular set of students at a particular location, as will be shown. Please note that the description of the process presented here is teacher-directed, but in many instances students are involved in co-creating the curriculum through the entire backward design process (see, Drake, 2012; Weil, 2009).

Designers from K to 12 are guided by curriculum outcomes (expectations, competencies) that are mandated by provincial or state ministries of education. It is the provincial outcomes that are the most important thing for students to learn. Although there are some differences across the Canadian provinces there are many similarities such as:

- Outcomes reflect similar big ideas and interdisciplinary skills
- Outcomes reflect an interest in 21st century learning
- Teachers have the freedom to choose how to teach to these outcomes, thus, allowing for teacher creativity and an increased chance of a cognitively engaging

curriculum geared toward the students in the classroom. (Drake, Reid, & Kolohon, 2014).

- Student voice is valued when students are co-creators of the curriculum design.

The process outlined asks what we want students to *know*, *do* and *be* (KDB). The KDB is aligned with the seminal UNESCO report from Jacques Delors (1996) on the four pillars of school: learning to know, learning to do, learning to be and learning to live together. Including the *be* makes the design process different from Wiggins and McTighe's (2005) as character education and citizenship education are important components that answer questions such as: How do we want students to *be* in the world? What values do we wish them to display? A sample of this type of planning can be seen in Drake and Reid's monograph posted on the Ontario Ministry of Education website (2010).

Exploring Backward Design in Detail

Step 1: What Is the Most Important Thing for Students to Know, Do and Be?

In this step the designer first uses a large-angle lens to see the big picture of curriculum mandates. The big picture may include a unifying framework across K to 12 for all subject areas and/or the philosophy for a subject area K to 12. The big picture will be found in the front matter of curriculum documents. Once a big picture is identified, the designer uses a zoom lens to scan and cluster the specific outcomes at grade level into meaningful categories that align with the big picture. At the end of this step, designers can identify what is most important to *know*, to *do*, and *be* (KDB). With this information derived from the documents, they can create a template to guide their curriculum design.

As well, this step includes creating essential questions that will frame the inquiry. These questions emerge from the KDB.

Know. The Know includes big ideas (interdisciplinary concepts) and enduring understandings (what you want students to remember years later) that emerge from prescribed curriculum outcomes. The curricula from Kindergarten through Grade 12 are spiraling in nature. Thus, the same big ideas are taught with more complexity and sophistication over time. Reading the front sections of curriculum documents will usually reveal the key big ideas and enduring understandings that the government wants taught. Examples of big ideas that are currently in provincial documents are change, continuity, systems, structures, government, patterns and migration.

Sustainability is currently a big idea threaded through both science and social sciences curriculum documents K to 12. Well-being can be found in physical education and health curricula and can be extrapolated to many other subject areas. The double-barreled concept of sustainable well-being can address almost every aspect of life and, arguably, is appropriate as the conceptual focus or big idea of any inquiry. It is difficult to think of any issue that does not concern the well-being of both the planet and the sentient life existing on it. It is not a far stretch to see sustainable well-being as a macro-concept that can encompass all curriculum big ideas mandated in the provincial documents.

An essential question emerges from the big idea and leads to an inquiry-based approach. When sustainable well-being acts as the conceptual focus, the big ideas should lead to the big questions around the sustainable issues of violence, poverty, injustice, human rights, environmental degradations and the like. Sample essential questions might be:

- What is sustainability?
- What is well-being?
- What is sustainable well-being?
- How is sustainable well-being achieved?
- What is the relationship between personal happiness and sustainable well-being?
- What is the responsibility of government in ensuring sustainable well-being?
- How can we balance the needs for jobs (a strong economy) and the need for environmental sustainability?
- Can developing nations experience affluence at the level of developed nations?
- How does inequitable income affect sustainable well-being?
- How do the arts contribute to sustainable well-being?
- What is the relationship between violence and sustainable well-being?
- What is the relationship of freedom to sustainable well-being?

Do. Although contested by some as being too influenced by corporations and economic agendas, there is more and more agreement that students need to learn the 21st Century skills. Indeed, to address the wicked problems of our times students will need different skills than they have learned in the traditional model of education (Siwak, 2013). Design thinking and systems thinking are just two examples of new ways of thinking for learning in the 21st Century. International and national organizations have pursued this topic with interest. The Organization for Economic Cooperation and Development (OECD) conducted a survey on 21st Century skills with participants in seventeen countries. The paper reporting on the survey results presented a three-dimensional framework: information, communication, and ethics and social impact (Ananiadou & Clara, 2009). C21Canada and its American counterpart Partnership for the 21st Century have provided in-depth descriptions at what 21st Century skills look like in practice. Most recently there has been some international work on how to measure these skills (see, for example, Kang, Heo, Jo, Shin, & Seo, 2010). Kang and colleagues have identified three areas for 21st Century learners that require indicators to measure performance: cognitive (know and do), affective (be), and sociocultural (be). The cognitive domain includes information management, knowledge construction, knowledge utilization, and problem-solving abilities. Self-identity, self-value, self-directedness, and self-accountability factors are in the affective domain. The sociocultural domain includes social membership, socialization, social receptivity, and social fulfillment factors.

In education, the 21st Century skills broadly speaking include the 6 C's identified by Fullan (2013):

- Communication,
- Critical thinking,
- Creative thinking,
- Collaborative problem-solving,

- Citizenship, and
- Character education

These 21st Century skills are found in subject specific curriculum documents, although they often are not identified as such and require interpretation. Communication, for example, involves reading, writing, speaking and listening as well as research, media literacy and critical literacy. Communication is found in the curricula of every subject area, not just English and English Language Arts. It's every teacher's responsibility to teach students how to communicate what they have learned, be it through the humanities, fine and performing arts, mathematics or science.

When asked how these skills are taught, most countries report teaching them not as separate subjects but rather integrating them across the curriculum. For example, in Ireland, the primary curriculum provides for the teaching of these skills across subjects. It particularly stresses the importance of developing generic skills and abilities that help the child to transfer learning to other curriculum areas, to future learning situations and to his or her life experience. (Ananiadou & Clara, 2009, p.13)

Be. This particular approach to backward design asks that teachers explicitly address the *be* (Drake, 2012, Drake, Reid, & Kolohon, 2014). The *be* connects two of the goals of Delors' UNESCO report – learning to be and learning to live together. The OECD report (Ananiadou & Clara, 2009) identifies ethical and social impacts as significant areas of the 21st Century framework. Social responsibility means acting in positive ways toward society and the environment. Social impact refers to the personal, social and environmental impact of one's actions.

In most curriculum documents there is a strong recognition that educators need to address the whole person, not just the content or skills of a subject area. Mental health and the socio-emotional development of students is a new thrust. Some of this is officially addressed in character development with accompanying curriculum documents. Character development is usually infused across the curriculum (as environment is often infused across the curriculum).

The *be* involves the social aspect of the whole person. Students are not just individuals, but are part of a community where they have rights and responsibilities. Across Canada teachers teach for social justice and students participate in events such as Me to We (Drake, Reid, & Kolohon, 2014). The "Me to We" programs stress that if we want the world to change than we must *be* the change. Thus, the *be* is an extremely important part of successful sustainable well-being. Students need to act from a point of personal conviction and not because an adult has told them to do so.

Holistic approaches deal with the inner life of students. The stresses on young people are enormous, and mindfulness is finding its way into classrooms as a proven way to nurture student well-being (Shoerberlein, 2009; Smalley & Winston, 2010). When students are more mindful, they are open to the present without judgement, allowing them to see the world more clearly and to presumably address issues linked to the wicked problems of our times more effectively. Miller (2010) recommends teaching inner work skills such as meditation in all its forms as a way of approaching mindfulness. Students may practice formal meditation such as focusing on their own breathing or engage in more informal practices such as concentrated awareness of nature and the world around them.

The *be* involves behaving in ways that demonstrate a deep understanding of sustainable well-being. A student may design a good solution for dealing with pollution, for example, but litter in the school halls. The littering behavior could be characterized as the *be*; the student may have learned the

know and the *do* in a curriculum unit but did not follow through as an environmental steward. How do we help such students to change their behaviours in order to live together and to live sustainably on the Earth? I suggest that understanding that the *know/do* and *be* are deeply interconnected and to teach and learn this way is a beginning.

Know/Do/Be. Students don't just learn content or skills. The *know*, *do*, and *be* are interwoven. Take the 21st Century skill of effective digital communication. The student needs to demonstrate practical IT skills (*do*), knowledge of language (*know*), and appropriate attitudes towards those with whom he or she is communicating (*be*) (Rychen & Salganik, 2003). There is also an expectation that students, as users of IT, learn/know the effects on health, mind, emotion, and spirit as well as the effect of the manufacture of IT products and the disposal of IT products on ecosystem services and human health (McMillan, personal communication, January 18, 2014). Another wicked problem!

In the big picture context, the well-being of students is recognized as a foundation for learning. Tina Jones a secondary principal from Ontario describes the improvement plan of her school board. The center of the plan is the global citizen. This global citizen acquires the 21st Century skills across subject areas from K to 12. The *know* is the content mandated by the provincial Ministry of Education. What is interesting is that this vision does not stop with what should the learner be able to know and do. In Tina's board, knowing your students is a starting place. The school is a safe and welcoming environment. Relationships between students and teachers are carefully nurtured in an inclusive environment where teachers use the best instructional practices to suit each learner's needs. The big idea of well-being emerged from semantic challenges with the term mental health. Although educators meant mental health as well-being in the positive, resilience-building sense for all students and teachers, those outside the school system often misinterpreted the term mental health to mean there was something wrong with a child. Well-being offered a positive solution to guide policy and practice.

To deeply understand sustainable well-being involves the *know*, the *do* and the *be*. Deep knowing involves the head, hands and heart. Students who are taught with an appreciation or even reverence for the interconnectedness of the world and their place in it are more likely to act in ways that honour sustainable well-being and consequently ensure that such a world is a real possibility.

Step 2: How Do We Know When Students Have Learned the KDB?

The assessment of the learning of the KDB ensures accountability. Although this summative assessment can be measured in many ways, including responses to test questions, in project-based learning students demonstrate what is most important to learn in a rich performance task. Students learn at the beginning of a learning experience what the expectations are and how they will demonstrate their achievement. They are also given the assessment tools that will measure their performance, such as specific rubrics. Often students co-create the assessment tools or learning goals and success criteria with their teachers.

Step 3: How Do We Prepare Students for Demonstrating the KDB?

What happens in the daily instructional activities/assessments? The designer plans for challenging, but interesting, instructional activities to provide students with the skills and knowledge needed to demonstrate their learning in the final task. These activities are carefully aligned with the KDB (outcomes) and the rich performance assessment task. Assessment for learning is embedded in

the daily activities carried out by the students. For example, ongoing feedback without grades, co-construction of the rubrics and critiquing exemplars of similar student work help to make the expectations transparent.

Sample Curriculum Unit with Sustainable Well-Being as its Focus

What follows is an example of a project-based learning unit that education teacher candidates created using backward design. This is an adaption of the work done by Ceilidh Rae, Morgan Roy, Erica Poor, Natasha Davey and Teal Narraway. This grade 7 unit integrated science and technology, social studies, arts, physical education and language arts outcomes from curriculum documents. The outcomes were derived from curriculum documents in Ontario.

Step 1: What Is Most Important for Students to Know, Do and Be?

The know.

- *Conceptual Focus:* Sustainable well-being in communities
- *Big Ideas:* Change and continuity, structures and systems, culture and diversity
- *Enduring understandings:* Active citizens can identify problems and collaboratively find solutions with society structures and community systems to ensure sustainable well-being for the planet and living beings
- *Essential questions:*
 1. How can we recreate a community to facilitate sustainable well-being for individuals, society and the planet?
 2. How do individuals act as “activist” citizens within their community?

The do. *21st Century Skills:* Design thinking, systems thinking, collaborative problem-solving.

The be. Students are systems thinkers and collaborative problem solvers who live in ways that sustain the environment and well-being of a community.

Step 2: Culminating Rich Performance Assessment Task

The existing structures and systems in many of Canada’s communities may not account for the reality of cultural diversity and complex challenges of sustainability and, thus, pose potential problems and issues for community members. The International Community Planners for Sustainable Well Being (ICPSWB) has asked your group of experts to use your critical skills, and come up with creative solutions to overcome these barriers. Your group of four experts will identify an issue or problem in our community, and research and analyze a variety of sources – including sources online – to deepen your understanding of the issue/problem from a variety of perspectives. You will present to the ICPSWB possible creative solutions to create a community that is environmentally friendly, efficient and socially welcoming and accepting of diversity.

You will be required to complete *two* major group components.

- (a) *Create a model (identifying structural changes/improvements).*
 Using a 3D physical model of your community, your group will illustrate the changes you would make to: a) structures (for example workplaces, tools, and everyday objects to make it more ergonomic/efficient), b) improve environmental issues (such as using an alternate form of energy) and decrease negative practices, and c) community resources that provide support for mental health concerns. Individually, group members will complete a journal log that records their group’s planning, construction, testing, modifications, and reasons for changes made to their communities.
- (b) *Present a multimodal presentation in a “cultural afternoon” to identify the changes/improvements to the community.*
 Your group will depict the changes you made to the systems and structures in your community to increase sustainable well-being through the use of a multimodal presentation that incorporates images, artwork, music and text. This presentation will give other students an idea of what the culture within your community would look like. It should include examples of the changes your group could make to increase diversity through social media (for example teaching dances of different cultures, playing physical games and music that illustrates different perspectives, etc.), and an illustration of how your community’s conflict resolution strategies differ from those used in past communities. Your group will then host a “cultural afternoon” where you will present your multimodal presentation to an audience. Your group will run your own station by giving demonstrations of games, songs, and the like depicted in your multimodal presentation. Individually, each group member will impersonate (through role play) the historical figure they chose to base their biographical sketch on and show how this person has contributed to the development of their community through active citizenship.

The rubrics for this rich performance assessment task are in the Appendix.

Step 3: Creating Daily Activities/Assessments

In this step the education teacher candidate designers considered how to best address the unit in order to promote design thinking. They wanted their students to understand the complexity of the topic that they had selected. They also wanted to do a diagnostic assessment to determine what students already understood about community. First they had students brainstorm with a real world web as in Figure 2. They built on this by having students discuss a second web that revolved around a series of interconnected questions (Figure 4 below).



Figure 4. Web of interconnected questions.

The following probes emerged from the second web:

- What is a community?
(Who is a part of a community? Where are communities? How are communities different around the world? How do they function with the diversity of heritages represented by community members? What are the existing social institutions that address social problems in the community?)
- What do people need and want in their community in order to live a fulfilling life?
(What services does everyone need? What environmental conditions make for a happier community [e.g., green spaces, trees etc.]? What are some important aesthetic things people need in a community?)
- How can a community use and sustain environmentally friendly practices?
(What is water pollution and how does it affect communities? What products can be recycled and how do recycling plants benefit a community? What are renewable energy resources? What is the economic benefit to incorporating renewable sources in our homes?)
- How can your community provide fair access?
(Have the physical structures in your community been changed to allow fair access to all through ramps, elevators...? What are some examples of fair access to all that you

saw around your community? What about anything that was unfair? –How can structures insure equity in the community?)

- To what extent and in what ways has the community's history been preserved? (Are there commemorative plaques/ signs/markers describing historical people and places in your community? Have historical structures in your community been refurbished or torn down? Have any been left in their original state? Is there a difference between how structures were built 50 years ago compared to now? How can a building be adapted or changed to ensure it is safe for individuals, but continue to provide the history of the past?)
- Why is the community set up the way that it is given obvious socio-economic differences (for example, different housing or neighbourhoods)? (Can you identify social structures within your community? Are class structures easily identified with the quality of living, housing etc.? What are some examples that stand out? How does financial literacy come into play regarding the way a structure is designed? What if one society is wealthier than another? Can there be similar structures in each community?)
- What does being a global citizen look like in real life? (If you were a Global Citizen in your community, what would you do? Plant trees? Pick up garbage? Other activities? Does being a global citizen mean being an activist? Does everyone have the capability to be a global citizen/activist within his or her community? Can only one person be a hero/activist? Once a global citizen/activist is established within a community, what can they do to create other global citizen/activist within the community? Thinking about a historical figure, would they represent a good global citizen/activist in your community? Why or Why not?)

At this point the designers know what the students bring to the curriculum unit. They could then create relevant and engaging instructional activities and embedded assessments that would enable students to complete the rich performance assessment task. This detailed chart insures accountability. Note that the activity and its assessment are described (even if the assessment is only observation). The outcomes are identified. Most importantly the connection of the activity/assessment to the KDB and the culminating rich performances task are identified. This last column is most important and assures curriculum alignment. A small portion of the chart is offered as an example in Table 1.

What are renewable energy resources? What are the economic implications of using renewable resources for the community?			
Instructional activity	Outcomes	Assessment	Alignment with KDB and culminating task
Students engage in research on different renewable energy resources and the benefits to the environment. Students compare utility residential	Communicate feelings, thoughts, and abstract ideas through drama works, using audio, visual, and/or	Task <ul style="list-style-type: none"> • group discussion and research 	K: Renewable energy sources, economic benefits to sustainable energy use

<p>rates in the community for those who use renewable energy and those who do not. Using role-play, students act as environmental experts for different renewable sources and determine the pros and cons for their renewable resource. On their provided worksheet they will have their knowledge about renewable sources from research and discussion. They will hand in their worksheets to be assessed.</p>	<p>technological aids to heighten the dramatic experience.</p> <p>Explain how the elements and principles of design are used in their own and others' art work to communicate meaning or understanding</p> <p>Analyze the costs and benefits of selected strategies for protecting the environment.</p>	<p>Tool</p> <ul style="list-style-type: none"> • anecdotal records <p>Task</p> <ul style="list-style-type: none"> • worksheet for renewable resources <p>Tool</p> <ul style="list-style-type: none"> • checkbric 	<p>D: Research, demonstrate, present</p> <p>B: Creative, Critical, global citizen</p>
<p>Students will create a diorama of a home using renewable energy sources and will have a small legend to describe the economic effects of using the sources. Students will be asked to only use recycled materials to construct their individual dioramas.</p>	<p>Assess the environmental and economic impacts of using conventional (e.g., fossil fuel, nuclear) and alternative forms of energy (e.g., geothermal, solar, wind, wave, bio-fuel)</p>	<p>Task</p> <ul style="list-style-type: none"> • diorama <p>Tool</p> <ul style="list-style-type: none"> • peer assessment through a checkbric and feedback section 	<p>Viewing environmental issues through an economic lens prepares students for the culminating assessment and promotes a focus on social, environmental and economic impacts within the community. The model for the final assessment will develop design and creativity skills needed in the culminating model.</p>

Table 1. A partial daily instructional activities/assessment chart.

Conclusion

Our planet and our species are in crisis. Education is a big part of the conundrum of how humans should best live on the planet. While educators try to resolve the tension between educational accountability and student engagement, the real accountability must be to our planet. What can educators do to play a positive role?

If we use sustainable well-being as an umbrella concept for curriculum planning, students can learn that this is an urgent and personally relevant issue. They will also learn how to think in ways

that help to address complex wicked problems; the degradation of the biosphere being the wickedest problem of all. They will also learn to be environmental stewards.

The good news is that using sustainable well-being as the overarching focus fits within the provincial curriculum guidelines and, therefore, meets accountability requirements. Developing 21st Century skills such as systems thinking, design thinking and collaborative problem solving aligns with provincial goals across the curriculum K-12. And, even a superficial read of the documents will indicate that all provinces are interested in developing environmental stewards as good citizens.

How to insure student engagement? Begin at the local level as suggested by Kolko (2012). In every province teachers have the freedom to create lessons that are relevant to students at a local level as long as the overall outcomes are met. For example, to return to the introduction and the study of the oceans, the example begins with questions. Students can follow with research on the questions that they identify as most personally meaningful, or teachers can explicitly teach the difference among simple, complex and wicked problems, as does Heidi Siwak, and create causal or real world webs to begin explorations. Perhaps with planning as described in this chapter, we may have a local, regional, provincial or national focus such as planned for The School for Examining Essential Questions of Sustainability <http://www.seeqs.org>.

So what is stopping us? To make sustainable well-being the focus will require intentionality on the part of educators. It will also require a deep understanding of the many interconnected and interdependent aspects of wicked problems. It is not a problem that can be addressed in one subject such as science, but needs an interdisciplinary focus at every level of education. It requires educators to teach the 21st Century skills necessary to address the problems of the 21st century. It requires educators to understand the interdependence among the *know*, *do* and *be* and to teach and act as if our lives depended on sustainable well-being. And, it requires our students to understand their responsibility in sustaining well-being for the planet and all the beings who share it.

References

- ACT21S (n.d.) *Assessment & teaching of 21st century skills*. Retrieved from <http://atc21s.org/>
- Action Canada. (2013, Feb.) *Future Tense. Adapting Canadian education systems for the 21st Century, An Action Canada Task research report*. Retrieved from http://www.actioncanada.ca/en/wp-content/uploads/2013/02/TF2-Report_Future-Tense_EN.pdf?utm_source=Bulletin+and+Updates&utm_campaign=50e508d6a6-Bulletin_February_2013_25_2013&utm_medium=email.
- Ananiadou, K., & Claro, M. (2009). 21st century skills and competences for new millennium learners in OECD countries. *OECD Education Working Papers*, No. 41, OECD. doi: 10.1787/218525261154
- Barbar, M., Donnelly, K., & Rizvi, S. (2012, Aug). *Oceans of innovation*. London, U.K.: Institute for Public Policy Research (IPRR) Retrieved from <http://www.ippr.org/publication/55/9543/oceans-of-innovation-the-atlantic-the-pacific-global-leadership-and-the-future-of-education>
- C21 Canada (2012). *Shifting minds: A public 21st century vision for public education for Canada*. Retrieved from <http://www.c21canada.org/wp-content/uploads/2012/10/Summit-design-English-version-Sept.-26.pdf>

- Canadian Education Association. (2012, July). *Teaching the way we aspire to teach: Now and in the future*. Toronto, ON: CEA & CTF. Retrieved from <http://www.cea-ace.ca/sites/cea-ace.ca/files/cea-2012-aspirations.pdf>
- Delors, J. (1999). *Learning: The treasure within*. Report to UNESCO of the International Commission on Education for the Twenty-first Century. UNESCO Publishing. Retrieved from <http://www.unesdoc.unesco.org/images/0010/001095/109590eo.pdf>
- Drake, S. M., Reid, J. L., & Kolohon, W. (2014). *Interweaving curriculum and classroom assessment: Engaging the 21st-century learner*. Toronto, ON: Oxford University Press.
- Drake, S. M., & Reid, J. L. (2010). Integrated curriculum: Increasing relevance while maintaining accountability. *What works? Research into Practice*. Retrieved from <http://www.edu.gov.on.ca/>
- Drake, S., Bebbington, J., Laksman, S., Mackie, P., Maynes, N., & Wayne, L. (1992). *Developing an integrated curriculum using the story model*. Toronto, ON: OISE Press.
- Earl L., & Katz, S. (2006). *Rethinking classroom assessment with purpose in mind: assessment for learning, assessment as learning, assessment of learning*. Western and Northern Canadian Protocol for Collaboration in Education. Retrieved from <http://www.wncp.ca>.
- Fullan, M. (2013). *Stratosphere: Integrating technology, pedagogy, and change knowledge*. Toronto, ON: Pearson.
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. London: Routledge.
- Kang, M., Heo, H., Jo, I., Shin, J., & Seo, J. (2010). Developing an educational performance indicator for new millennium learners. *Journal of Research on Technology in Education*, 43(2), 157-170.
- Kolbert, E. (2014). *The sixth extinction: An unnatural history*. New York, NY: Henry Holt & Co.
- Kolko, J. (2012). *Wicked problems worth solving: A handbook and call to action*. Austin, TX: AC4D.
- Leiberman, B. (2013, July/August). SOS: Save our seafood: What's good for us and our oceans? *Nutrition Action Healthletter*, 3-4.
- McAffrey, V. (2010, March). Large-scale assessment: A challenge for teachers around the world. *Voice*, 14-17
- Miller, J. (2010). *Whole child education*. Toronto. University of Toronto Press.
- Rittel, H. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4, 155-169.
- Robinson, K. (2010). *Changing education paradigms* [video]. Retrieved from http://www.ted.com/talks/lang/en/ken_robinson_changing_education_paradigms.html
- Rushowy, K. (2010, March 22). Neighbourhood school rankings drive demand, house prices. Buyers rely on Fraser Institute reports when house hunting. *Toronto Star*, IN4
- Rychen, D. S., & Hersch, S. L. (Eds.) (2003). *Key competencies for a successful life and a well-functioning society*. Cambridge, MA: Hogrefe & Huber.
- Savage, M., & Drake, S. M. (2012, April). *Achieving accountability through backward design curriculum design*. Presentation for Ontario Council of Teachers, Toronto.
- Shoerberlein, D., & Sheth, S. (2009). *Mindful teaching and teaching mindfulness: A guide for anyone who teaches anything*. Boston: Wisdom.
- Siwak, H. (2013, March 17). *Causal modeling: A different approach to problem-solving*. *21st Century Classroom: The amaryllis*. Retrieved from <http://www.beidisiwak.com/2013/03/causal-modelling-different-approach-to.html>
- Smalley, S. L., & Winston, D. (2010). *Fully present: The science, art and practice of teaching mindfulness*. Philadelphia: DeCapo.
- Thomas, D., & Seeley-Brown, J. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change*. CreateSpace Independent Publishing Platform.

Weil, Z, (2007). *Most good, least harm: A simple principle for a better world and a meaningful life*. New York, NY: Atria Books/Beyond Words.

Wiggins, G., & McTighe, J (2005) *Understanding by design* (2nd ed.). Alexandria, VA: ASCD.

Willms, J. D., & Friesen, S. (2012). *The relationship between instructional challenge and student engagement: What did you do in school today?* Retrieved from the Canadian Education Association website: <http://www.cea-ace.ca/sites/cea-ace.ca/files/cea-2012-wdydist-report-2.pdf>

Appendix

Solving Problems in Communities: Group Rubric.

Criteria	Level 4	Level 3	Level 2	Level 1
	The Student:			
Use of planning skills to identify problems seen in the students' community such as social institutions influences, environmental issues, and diversity problems.	Uses planning skills to identify problems with a high degree of effectiveness.	Uses planning skills to identify problems with considerable effectiveness.	Uses planning skills to identify problems with some effectiveness.	Uses planning skills to identify problems with limited effectiveness.
Use of critical/ and creative thinking processes to make decisions and solve problems found within communities in order to determine steps for making improvements.	Uses critical/creative thinking processes to make decisions, solve problems and determine steps with a high degree of effectiveness.	Uses critical/creative thinking processes to make decisions, solve problems and determine steps with considerable effectiveness.	Uses critical/creative thinking processes to make decisions, solve problems and determine steps with some effectiveness.	Uses critical/creative thinking processes to make decisions, solve problems and determine steps with limited effectiveness.
Knowledge of how communities function, issues and solutions found in society structures and systems, and active citizenship.	Demonstrates thorough understanding of content related to communities and active citizenship.	Demonstrates a considerable amount of understanding of content related to communities and active citizenship.	Demonstrates some understanding of content related to communities and active citizenship.	Demonstrates limited understanding of content related to communities and active citizenship.

Making connections to the ways that active citizens can make changes within communities.	Makes connections between active citizenship and community changes with a high degree of effectiveness.	Makes connections between active citizenship and community changes with considerable effectiveness.	Makes connections between active citizenship and community changes with some effectiveness.	Makes connections between active citizenship and community changes with limited effectiveness.
Expression and organization of problems and solutions to improve communities through oral, visual and written forms.	Expresses and organizes the chosen problems and solutions through various forms with a high degree of effectiveness.	Expresses and organizes the chosen problems and solutions through various forms with considerable effectiveness.	Expresses and organizes the chosen problems and solutions through various forms with some effectiveness.	Expresses and organizes the chosen problems and solutions through various forms with limited effectiveness.
Transfer of the knowledge of their own community in order to make improvements to the “new” community being created.	Transfers and applies knowledge about their own community to new contexts with a high degree of effectiveness.	Transfers and applies knowledge about their own community to new contexts with considerable effectiveness.	Transfers and applies knowledge about their own community to new contexts with some effectiveness.	Transfers and applies knowledge about their own community to new contexts with limited effectiveness.

Individual Rubric for Historical Role Play

Criteria	Level 4	Level 3	Level 2	Level 1
Role	Expresses the points-of-view, contributions and active citizenship in character with a high degree of effectiveness.	Expresses the points-of-view, contributions and active citizenship in character with considerable effectiveness.	Expresses the points-of-view, contributions and active citizenship in character with some effectiveness.	Expresses the points-of-view, contributions and active citizenship in character with limited effectiveness.
Oral Presentation	The use of appropriate style, voice and tone lead to a high degree of effectiveness in communicating their ideas.	The use of appropriate style, voice and tone lead to considerable effectiveness in communicating their ideas.	The use of appropriate style, voice and tone lead to some effectiveness in communicating their ideas.	The use of appropriate style, voice and tone lead to limited effectiveness in communicating their ideas.

Individual Rubric for Journal Log

Criteria	Level 4	Level 3	Level 2	Level 1
Journal Content	Journal demonstrates thorough knowledge of the planning, construction, testing, modifications, and reasons for modifications. Journal includes a thorough reflection about the strategies used and the results.	Journal demonstrates considerable knowledge of the planning, construction, testing, modifications, and reasons for modifications. Journal includes a considerable amount of reflection about the strategies used and the results.	Journal demonstrates some knowledge of the planning, construction, testing, modifications, and reasons for modifications. Journal includes some reflection about the strategies used and the results.	Journal demonstrates limited knowledge of the planning, construction, testing, modifications, and reasons for modifications. Journal includes limited reflection about the strategies used and the results.
Grammar and Spelling	Writer demonstrates proper use of grammar and spelling with a high degree of effectiveness.	Writer demonstrates proper use of grammar and spelling with considerable effectiveness.	Writer demonstrates proper use of grammar and spelling with some effectiveness.	Writer demonstrates proper use of grammar and spelling with limited effectiveness.

Chapter 5

Making Sense of Western Approaches to Well-Being for an Educational Context

THOMAS FALKENBERG

The well-being of students has always been a concern in school education. However, such concern seems often more implicit than explicit, seems grounded in a more narrow rather than a more comprehensive and holistic conceptualization, and is generally not seen as the overarching goal of school education. Undertaking the task of making a more comprehensive and explicitly articulated concept of well-being the overarching goal of school education would be greatly supported by a conceptual analysis of the notion of well-being. This chapter provides such an analysis. It presents an inquiry into the notion of well-being by systematically analyzing approaches to this notion in different Western academic disciplines. The inquiry takes as its starting point three core aspects of the notion of well-being: where well-being is “located”, who decides on who is well, and the individual-versus-social aspect of well-being. These three aspects will serve as the framework for the conceptual analysis.

The starting point for the inquiry presented in this chapter is a concern for the role of a notion of well-being for school education. While the main part of the chapter will not deal directly with this concern, it is this concern that motivates the inquiry. Accordingly, I start with a brief outlook on the connection between a notion of well-being and school education before addressing the inquiry itself.

The notion of well-being has been playing a central role in school education in Canada – although not always under the term of “well-being”. For instance, the School Act of British Columbia (*School Act*, 1996) sees “the goal of a democratic society to ensure that all its members receive an education that enables them to become literate, personally fulfilled and publicly useful” (Section 1), where the goal of personal fulfillment can be understood as being concerned with (one component of) citizens’ well-being. Well-being is also a major concern in school education in the larger policy context as well as in the context of the day-to-day activities in schools. Policies to address bullying and school safety are driven by a concern for the well-being of students. When teachers give students “another chance” or they meet on their own time with students over lunch to tutor them, the teachers are driven by a concern for students’ well-being. However, judging by my observations of and experience with the Canadian school system, there are three shortcomings of this current role of well-being in the school system – relative to what I would like to see the role to be. First, the idea of well-being generally seems to play only an implicit rather than an explicit role as a focus in school education; as in the case of protection from bullying, well-being is often seen as

linked to external conditions for learning rather than the focus of learning. Second, educating for well-being is not considered the overarching goal of school education; rather the focus is primarily on the learning of traditional academic subject content and skills (see the declaration Council of Ministers of Education Canada, 2008). Third, the notion of well-being is often too narrow compared to what is needed and suggested through the relevant literature.

There are educational theorists who propose well-being as the overarching and explicit focus of school education (e.g., Hostetler, 2011; Noddings, 2003; White, 2011); however, those educational theorists generally write from a philosophical perspective only and do not (sufficiently) draw on the whole range of disciplines that contribute to a more holistic conceptualization of human well-being. The inquiry in this chapter is to complement the work of those scholars, to give the concern for well-being a central and explicit role in school education by providing a conceptual analysis of the notion of well-being that draws on a range of disciplinary scholarship that is focused on well-being. Educational school success should be measured by the degree to which learners experience and are prepared for well-being in schools. The concept of well-being used to measure and assess such success needs to be developed in light of the scholarly work in a range of disciplines that deal with well-being. This chapter aims at providing a systematic analysis of approaches to well-being in different Western academic disciplines in order to help make sense of the range of approaches to well-being for the purpose of developing an assessment tool for well-being in schools and for education for well-being more generally.

Framing the Inquiry

Philosophers (e.g., Bai, 2006) and philosophically oriented psychologists (e.g., Martin, Sugarman, & Thompson, 2003) have been using the term “human agency” to capture a specifically human quality that the philosopher Frankfurt (1988) has called “second-order desires”: to desire to desire something to be the case or not to be the case.

It is my view that one essential difference between persons and other creatures is to be found in the structure of a person’s will. . . . Besides wanting and choosing and being moved *to do* this or that, [humans] may also want to have (or not to have) certain desires and motives. They are capable of wanting to be different, in their preferences and purposes, from what they are. (Frankfurt, 1988, p. 12)

The following is an example of such a second order desire: I want to be a person that is concerned with the needs of other people. A person that is concerned for the needs of other people desires addressing the needs of other people; to want to be such a person means to desire to desire addressing the needs of other people.

Human agency – understood as humans’ capacity to have second-order desires and be guided by those in decision making and action – provides one approach toward the notion of (human) well-being, an approach that I choose to follow here. Equipped with agency, humans face the challenge of having to decide what first order desires to have, or in other words, they have to decide how they want to live their lives. The notion of “human well-being” becomes relevant in the sense that it is the generic notion of what humans generally aim for when exerting their agency: to live well, to live a good life, to live happily, and so on. In other words, *the concept of well-being is to capture what humans aim for when they exert their agency to live their lives one way rather than another.* This concept of well-being has the

quality of “prospectivity” (Sumner, 1996, p. 133) or future directedness (Hostetler, 2011, p. 50). This identifies one central reason for the importance of the concept of well-being: What we conceptualize it to mean can and should direct our decisions and actions at the individual, socio-cultural, and socio-political level.¹

If we understand “well-being” in the general sense outlined in the previous paragraph, the idea of well-being has been addressed in Western scholarship under a range of terms: “well-being” (e.g., Griffin, 1986; Haworth & Hart, 2007; Kahneman, Diener, & Schwarz, 1999b), “happiness” (e.g., Almeder, 2000; Nettle, 2005), “flourishing” (e.g., Seligman, 2011), “welfare” (e.g., Sumner, 1996), “the good life” (e.g., Feldman, 2004), and a few others. Sometimes some of these terms have been used interchangeably, which is particularly the case for “happiness” and “well-being” (e.g., Mathews & Izquierdo, 2009), while in other cases a clear distinction is drawn between those two (e.g., Sumner, 1996). For the purpose of this chapter, I will use the term “well-being” as the generic term for this class of terms.

Different fields of study from the Western canon of academic disciplines have been dealing with the notion of well-being: philosophy (e.g., Griffin, 1986; Sumner, 1996), psychology (e.g., Kahneman, Diener, & Schwarz, 1999b; Seligman, 2002, 2011), economy (e.g., Layard, 2005; Stiglitz, Sen, & Fitoussi, 2010), and, to a lesser extent, sociology (e.g., Veenhoven, 2008), and anthropology (e.g., Mathews & Izquierdo, 2009). The two Western academic disciplines in which well-being – under various names – has been studied quite extensively are philosophy with its ancient Greek tradition of engaging with the idea of the good life, and psychology, particularly since the emergence of positive psychology (Seligman & Csikszentmihalyi, 2000).

While I would claim that the conceptualization of well-being, as the notion that captures what humans aim for when they exert their agency to live their lives, identifies the big idea of all those different approaches to well-being, the specific perspectives taken on well-being across different fields of study and even within the same field of study vary quite a bit. How can we make sense of a notion of well-being for educational purposes in light of such a range of perspectives? To respond to this question is the main task of the inquiry in this chapter.

This inquiry takes as its starting point three core aspects of the notion of well-being, which, will need to be considered in any conceptualization of well-being. As the inquiry will show, different approaches to well-being have different responses to these different core aspects. Framing the inquiry in this way will allow me to make sense of the different approaches to well-being in different fields of study by understanding the perspective that each approach takes with respect to those aspects. The three core aspects used in this inquiry are: (1) the “location” of well-being in being human; (2) who decides on whether someone lives well and whose ideas of well-being are employed; and (3) how individual well-being relates to communal well-being. The following sections will clarify each of these aspects further and outline how different approaches respond to the questions inherent in those aspects.

Aspect 1: Where Is Well-Being “Located”?

As human beings we engage in and with the world. In the literature on human well-being different capacities relevant for such engagement have been identified as being important or central

¹ The field of study that traditionally deals with such prospectivity and future directedness of our thinking is (philosophical) ethics (e.g., Appiah, 2008, p. 37; Aristotle, trans. 1976).

to our living well. We are able to feel emotions, feel sensory pleasures and pain, enjoy activities, have desires and needs, are satisfied or not with our lives, have ideas about how we prefer to or should live. In the literature on well-being all these capacities – plus socially constructed rights as human beings – have been identified as linked to the core of what well-being means – which I would like to call the “location” of well-being. This section deals with the question where the different Western approaches to well-being have “located” well-being in humans.

Locating Well-Being in Feelings

According to neuroscientists like Damasio (1994, p. 145) and LeDoux (1996, p. 329), feelings are conscious subjective experiences of emotions, where emotions are certain types of changes in body state. For instance, the basic emotion of distress is (in certain cases) linked to the secretion of tears of a certain biochemical composition (see, Evans, 2001, p. 5). *Feeling distressed* is the conscious subjective experience of this change in body state, e.g., the experience of shedding tears. Feelings are, thus, mental states of the person who has the subjective experience that is the feeling.

A number of philosophers and psychologists have located human well-being in feelings. Commonly, such authors characterize such well-being in terms of *pleasure and pain* (e.g., Feldman, 2002a; Kahneman, 1999). However, the term “pleasure(s)” is problematic, since the term has been used with quite different meanings, and it is sometimes not clear how the term fits within a feeling-emotion framework. Jonathan Bentham, the father of Western utilitarianism, “thought of pleasure, for instance, as embracing not merely bodily pleasures but all forms of gratifications, enjoyment, satisfaction, fulfillment, and the like” (Sumner, 1996, p. 88). Similarly, a modern version of classical hedonism, Hedonic Psychology (Kahneman, Diener, & Schwarz, 1999b), sees itself as “the study of what makes experiences and life pleasant or unpleasant. It is concerned with feelings of pleasure and pain, of interest and boredom, of joy and sorrow, and of satisfaction and dissatisfaction” (Kahneman, Diener, & Schwarz, 1999a, p. ix). Because of this ambiguity, some scholars have suggested narrowing the notion of pleasure to “sensory pleasures” and to keep those distinct from what some have called “pleasures of the mind” (e.g., Almeder, 2000, p. 155; Kubovy, 1999; Sumner, 1996, section 4.1).

Using LeDoux’s (1996, p. 164) understanding of the pathway from emotional stimulus to emotional response, the following exemplifying picture emerges for the notion of “sensory pleasure”. Being caressed by one’s partner functions as an external emotional stimulus. Information about this stimulus is passed on to the sensory thalamus and from there to the sensory cortex to the amygdala, which then initiates the emotional response, i.e. a certain type of bodily change of state, for instance an increase of the heart rate and the forming of goose-bumps. One then has the conscious subjective experience of those bodily changes; this experience is the mental state that is one’s feeling. We have learned to classify such mental states (feelings) that are experiences of such bodily changes as pleasurable – we are feeling sensory pleasure.

It is in such feelings of sensory pleasure that some scholars locate at least one aspect of human well-being. For instance, in some of the psychological and philosophical literature on happiness, the feeling of sensory pleasure is seen as the basis for at least one aspect of human well-being (e.g., Nettle, 2005, p. 18; Nozick, 1989, p. 108). In any version of hedonism, feelings of sensory pleasure play a central role in conceptualizing human well-being, be it classical hedonism (see the discussion in Sumner, 1996, section 4.1) or modern-day Hedonic Psychology (see Kahneman, Diener, & Schwarz, 1999b). However, while the ancient Greek philosopher Aristippus of Cyrene, the father of the Cyrenaic form of hedonism, is said to have been a proponent of a concept of well-being that is

purely based on sensory pleasure (Almeder, 2000, pp. 154-155), I am not aware of any modern-day conceptualization of well-being that is *solely* based on the feeling of sensory pleasure. This might be so because of at least two core concerns with locating well-being *only* in the feeling of sensory pleasure. First, feeling sensory pleasure is not always our first choice; in some cases we might actually prefer a state of sensory pain over a state of sensory pleasure. Griffin (1986, p. 8), for instance, references Sigmund Freud's decision at the time he was terminally ill to rather be in sensory pain but mentally alert than to be drugged but not be able to think clearly. Second, we clearly find other mental states than feelings of sensory pleasure pleasurable. The next section deals with those other types of mental states in which human well-being has also been located.

Locating Well-Being in Attitudes toward Experiences

The concept of well-being presented in the previous section locates well-being in our having pleasurable *feelings* and, thus, we desire those experiences because of their *felt* qualities. Scholars, however, have pointed to the fact that we also often desire experiences not primarily for their felt qualities, but rather because of our *attitude* toward those experiences. Nozick (1989), writing on the notion of happiness, gives the following example, illustrating this distinction:

A person who wants to write a poem needn't want (primarily) the felt qualities of writing, or the felt qualities of being known to have written the poem. He may want, primarily, *to write* such a poem – for example, because he thinks *it* is valuable, or the activity of doing so is, with no specific focus upon any felt qualities. (p. 104)

The concept linked to the positive attitude toward particular experiences, like the experience of writing a poem, is often denoted in the literature by the term “enjoyment” – with the term “suffering” used for negative attitudes (e.g., Nozick, 1989, p. 104; Sumner, 1996, p. 108).² In those terms we can say that we can enjoy the experience of certain types of pleasures, but it is our attitude toward those pleasures, not the feeling of those pleasures, that is our enjoyment and, thus, our well-being.

The attitude approach to well-being can reconstruct the view that our feeling of sensory pleasures at least contributes to our well-being, namely by suggesting that what contributes to our being well is our *attitudes toward* our feeling of sensory pleasures rather than our feeling of those pleasures. This point is made in the discussion about the meaning of pleasure and pain in classical Western utilitarian approaches to human well-being, in which utilitarians like Bentham and Mill have talked about pleasure and pain but linked those terms to a very diverse range of experiences of which sensory pleasures were only one type (e.g., Sumner, 1996, section 4.1; Feldman, 2004, chapter 4; Griffin, 1986, p. 8). The suggestion is that we look at the attitudes toward those experiences rather than at the experiences themselves.

The philosopher Feldman (2002a, 2004) is a modern-day proponent of, as he calls it, attitudinal hedonism, according to which the experience of attitudinal pleasures is at the core of “the good life”.³ Attitudinal pleasure is enjoyment in the sense just explicated, and “we know we have them

² Feldman (2004, chapter 4) has the same notion in mind, though uses the term *pleasure* to link his Attitudinal Hedonism to the hedonistic tradition.

³ For a critique of Feldman's attitudinal hedonism, see Sumner (1998) and DePaul (2002); see Feldman (2002b) for a rejoinder.

[attitudinal pleasures] not by sensation, but in the same way . . . we know when we believe something, or hope for it, or fear that it might happen” (Feldman, 2004, p. 56).⁴ Hedonic Psychology, characterized somewhat above, is an approach to well-being that includes not just bodily pleasures but also “mental pleasures”, which Kubovy (1999) defines as “collections [sequences] of [basic] emotions” (p. 137). While such a definition of mental pleasures is technically different from, for instance, attitudinal pleasures, both reconstruct within their respective conceptual framework the Epicurean notion of pleasures of the mind as distinct from the pleasures of the body (e.g., Almeder, 2000, pp. 155-156).

Locating Well-Being in Desire and Need Fulfillment

Feelings and enjoyment are both *mental states* in the sense that instantiations of either type of mental states are “introspectively distinguishable experiences” (Sumner, 1996, p. 91). In other words, it is not any quality in the subject-external world that is part of the nature of well-being – even if it might be such quality that gives rise to the feeling that is the subject-internal mental state. Approaches that conceptualize well-being in our feelings or attitudes toward particular state-of-affairs or in both are what some have called mental state theories of well-being (see, Griffin, 1986, section I.1; Sumner, 1996; p. 82).⁵ Desires and needs approaches to well-being, on the other hand, are both state-of-the-world approaches because they define well-being as the satisfaction of someone’s desires and needs, respectively, and such satisfaction will depend on a particular state-of-the-world to be the case, namely that state that would satisfy the person’s desire or need. Because desires and needs are human capacities that are closely linked, I will address them in the same section. However, desires and needs, are not the same:

While ‘desire’ is, ‘need’ is not an intentional verb; I can only need a thing if I need anything identical with it. So, while ‘desire’ is, ‘need’ is not tied to a subject’s perception of the object; if I need a thing because it will cure my headache, it really will cure it. Desires have to do with how a subject of experience looks out on the world; needs have to do with whether one thing is in fact a necessary condition of another. Needs do not even have to be attached to subjects of experience. (Griffin, 1986, p. 41)

Two types of desire accounts are distinguished (e.g., Griffin, 1986, pp. 10-15; Sumner, 1998, chapter 5): actual desire accounts and informed desire accounts. Actual desire accounts locate well-being in the fulfillment of people’s “actual desires”, as they express them verbally or behaviourally. Informed desire accounts, on the other hand, consider that “notoriously, we mistake our own interests” (Griffin, 1986, p. 10), so that it would be inappropriate to equate one’s well-being with the fulfillment of one’s actual desires. Informed desire accounts equate well-being with the fulfillment of one’s *informed* desires, which is “the fulfillment of desires that persons would have if they appreciated the true nature of their objects [that is the objects of one’s desire]” (Griffin, 1986, p. 12).

⁴ I am ignoring the technical details of Feldman’s notion of attitudinal pleasure as it is relevant to his view of the good life, which would bring out some of the differences between Sumner’s (1996) notion of enjoyment and Feldman’s notion of attitudinal pleasure.

⁵ The distinction of what counts as states of the mind and what as states of the world is not clear-cut, as Sumner (1996, pp. 110-111) suggests, when he proposes to consider enjoyment as not being purely a mental state since what we enjoy is a certain state of affairs (state of the world).

Needs accounts conceptualize well-being in the fulfillment of needs. Maslow (1954), for instance, considered the hierarchically relating needs as the foundation for human motivation for living one's life one way rather than another. Max-Neef (1991) established a non-hierarchical list of human needs which transcend time and place⁶: subsistence, protection, affection, understanding, participation, idleness, creation, identity, and freedom. Within any culture and time, these needs manifest themselves in form of what Max-Neef calls "needs satisfiers", which are the ways through which people at that time in that particular culture seek to address the satisfaction of the respective generic human need. For instance, an insurance system is a cultural and temporal satisfier of people's needs for protection. Two features of Max-Neef's needs approach are of particular interest when considering his approach as the basis for a needs approach to well-being. First, the satisfaction of all nine generic needs are relevant to well-being, and the non-satisfaction of any one of them leads to being in "poverty", which diminishes a person's well-being:

The proposed perspective allows for a reinterpretation of the concept of poverty. The traditional concept of poverty is limited and restricted, since it refers exclusively to the predicaments of people who may be classified below a certain income threshold. This concept is strictly economic. It is suggested here that we should speak not of poverty but of poverties. In fact, any fundamental human need that is not adequately satisfied reveals a human poverty. (Max-Neef, 1991, p. 18)

Second, the needs are interrelated in the way that the culturally-based use of particular needs satisfiers intended to address a generic need can lead to poverty in regards to another need. For instance, Max-Neef (1991, p. 33) suggests that censorship, which in particular cultural contexts are intended by the authorities to address people's need for protection, leaves people impoverished with regards to their needs for understanding, participation, creation, identity, and freedom.

Locating Well-Being in Life Satisfaction

Locating well-being in our feelings (experiences of emotions) and our enjoyment (attitudes toward certain experiences) means to locate our well-being in *episodic* experiences or our attitudes toward episodic experiences, all of those experiences being relatively short in duration. These approaches to well-being are foundationally focused on the question of how well someone is doing at a given moment while having those episodic experiences. Other approaches to well-being are more general in terms of time and types of experiences and are focused on the question how one *is (currently) satisfied with one's life overall*. In this approach to well-being, the focus shifts away from episodic experiences toward a "global assessment of all aspects of a person's life" (Diener, 1984, p. 544).

An approach to human well-being that considers people's own *global* assessment of how their lives are going is generally called a *subjective well-being* approach, which has been developed and promoted particularly by Diener and his collaborators (see Diener, 2009a, 2009b, 2009c). Probably due to providing for a simple way of measuring well-being (happiness), subjective well-being approaches have been widely used to assess human well-being intra-nationally and particularly internationally (e.g., Diener & Suh, 1999). Subjective well-being is the conceptual base for a wide range of

⁶ "With the sole exception of the need of subsistence, that is, to remain alive, no hierarchies exist within the system" (Max-Neef, 1991, p. 17).

studies linking inquiries into different aspects of quality of life, like consumerism (Kasser, 2002), economic notions like income, unemployment and inflation (Frey, 2008; Layard, 2005), and inequality (Wilkinson & Pickett, 2009).

In the philosophical literature such global subjective life satisfaction as the basis for the notion of human well-being has been discussed under the term of *welfare*. For Sumner (1996), for instance, “welfare . . . consists in authentic happiness, the happiness of an informed and autonomous subject” (p. 172; I will discuss the qualifiers “informed” and “autonomous” below), where “being happy . . . means having a certain kind of positive attitude toward [one’s] life, which in its fullest form has both a cognitive and an affective component” (p. 145).

Locating Well-Being in Rights and Capabilities

All of the approaches discussed so far have in common that they locate well-being solely in the individual herself – in her feelings, her attitudes, her desires and needs, and her judgment of how satisfied she is with her life overall. The approaches presented in this and the next section do not (only) locate well-being in the individual but rather (also) in *conditions* for an individual to live her life well. The approaches discussed in this section identify conditions that provide a kind of supportive and facilitating context within which then each individual can live her life well. The difference among those approaches lies in the level to which the rights – which shape the context for living well – are understood as entitlements and are linked to needed capacities in the individual herself.

The approaches discussed in this section locate well-being in rights that humans have; as the foundation for an approach to well-being. Human rights specify conditions that are to allow each individual to live her life as she considers it worth living. It is through having enforced and through enforceable rights that each person has a chance to live well. Rights approaches to well-being however range widely, depending on the types of rights considered, and, consequently, how “chance to live well” is understood. At one end of the spectrum are libertarian approaches to rights-based well-being. For libertarians there is more or less one fundamental right, and that is the right to liberty or freedom *from* interference with living the life one finds worth living – limited only to the degree that such freedom does not interfere with someone else’s freedom (see, Nozick, 1974, for philosophical arguments for the libertarian position; see Sandel, 2009, chapter 3, for a critical view on the libertarian position). Well-being is here equated with living in freedom *from*, for instance, interference by the state in one’s affairs, assuming that one does not use that freedom to interfere with someone else’s freedom.

On the other end of the spectrum of rights-based well-being approaches are capabilities approaches to well-being. Human capabilities (Nussbaum, 2011; Sen, 2009, part III) are “a set of (usually interrelated) opportunities to choose and to act” and such opportunities are provided through what we are able to do and to be (Nussbaum, 2011, p. 20). Such opportunities are available to us when two things come together: our inner ability to be and act in certain ways *and* the potential to enact these abilities freely within the political, socio-cultural, and environmental context we are living in. Nussbaum (2011) calls the former the *internal capabilities* of a person, which are “traits and abilities, developed, in most cases, in interaction with the social, economic, familial, and political environment” (p. 21). The internal capabilities together with the political, socio-cultural, and economic freedoms and opportunities to choose (or not) to enact those capabilities in concrete situations is what Nussbaum (2011, pp. 20-21) calls *combined capabilities*. What is central to the capabilities approach to well-being is the idea that there is a *developmental* aspect to our capability to live our life as we choose to: in order to have the combined capabilities available that provide us with

the potential to live our life as we choose to, the powers we have as humans need to be developed, and such needed development is not solely in a person's own hands.

For instance, Nussbaum (2011, pp. 33-34) identifies a list of particular "Central Capabilities", each derived from a notion of human dignity: "The Capabilities Approach, in my version, focuses on the protection of areas of freedom so central that their removal makes a life not worthy of human dignity" (Nussbaum, 2011, p. 31). For illustrative purposes, here are two of the ten Central Capabilities identified by Nussbaum:

2. *Bodily health*. Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.
 3. *Bodily integrity*. Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
- (Nussbaum, 2011, p. 33; emphasis in original)

As outlined above, the capability of bodily health requires the development of certain powers – for instance, the power to recognize and choose healthy food – without which the possibility to enact the capability of bodily health is not possible. However, as a case of a human rights approach to well-being, Nussbaum's capabilities approach *does not require* the enactment of that capability as an indication of living well; living well is characterized by people having those central capabilities and the ability to choose freely to enact them as they see fit. The group of approaches to well-being discussed in the next section, on the other hand, will link well-being to the actual enactment of a particular ideal of what it means to live well.

Locating Well-Being in Living toward an Ideal

For Aristotle happiness (*eudaimonia*) is "a first principle, since everything else that any of us do, we do for its sake; and we hold that the first principle and cause of what is good is precious and divine" (Aristotle, trans. 1976, p. 87). As MacIntyre (1998) points out, the notion *eudaimonia* "includes both the notion of behaving well and the notion of faring well" (p. 59). For Aristotle happiness is a quality of someone's life as assessed at the end of that person's life and not a quality of a person's state. Somewhat simplified, Aristotle suggests that a happy life is a life that someone has lived being virtuous (Aristotle, trans. 1976, p. 76).

Aristotle's approach to well-being is a type of approach called perfectionism according to which "the level of well-being for any person is in direct proportion to how near that person's life gets to this ideal [of human life]" (Griffin, 1986, p. 56). Perfectionist approaches to well-being are also called teleological approaches (e.g., Sumner, 1996, chapter 3.4), where *teleo* is the Greek word for *complete*. What is central to perfectionist approaches to well-being is the "what is good for its own sake for a person [the ideal] is fixed independently of her attitudes and opinion toward it" (Arneson, 2000, p. 38). This makes these approaches quite distinct from the first four types of approaches to well-being, which locate well-being in the individual's feelings, attitudes or judgments about how her life is going overall. But perfectionism approaches are also distinct from the rights and capabilities approaches in the sense that the former approaches articulate a quite specific way of living as *the* way of living well, while the latter type of approaches articulate contextual conditions (rights or capabilities) that allow for someone to live well in the way she considers appropriate for herself *having the rights provided or the capabilities developed*.

Multi-Locational Approaches to Well-Being

There are a number of approaches to well-being which draw on two or more of the different types of approaches discussed in the previous sections to locate human well-being. I will call those approaches multi-locational approaches to well-being. A prototypical multi-locational approach to well-being is the approach taken by the Commission on the Measurement of Economic Performance and Social Progress and Rapporteurs (Stiglitz, Sen, & Fitoussi, 2010), a Commission set up by then French president Nicolas Sarkozy. The Commission draws on three different conceptual approaches to assessing the quality of life (Stiglitz et al., 2010, chapter 2): the subjective well-being approach, the capabilities approach, and the welfare economics approach. The latter approach to well-being is described as being similar to the capabilities approach by giving “prominence to people’s objective conditions and the opportunities available to them, while differing [from the capabilities approach] in how these features are valued and ranged” (Stiglitz et al., 2010, p. 67). Stiglitz et al. do not elaborate on the economics approach further, but the “objective measures” used in the study (for instance, life expectancy at birth, school enrolment, participation in the political process) suggest that this approach locates well-being in human rights, like the right to life (birth rate), the right to education, and so on, even though Stiglitz et al. (2010) do not frame these measures in those terms.

There are a number of approaches in psychology that also qualify as multi-locational approaches to well-being. One such example is Ryff’s work on psychological well-being (e.g., Ryff & Singer, 2000). Another example is Seligman’s (2011) latest perspective on positive psychology according to which it is flourishing or well-being that is the topic of positive psychology – rather than authentic happiness (Seligman, 2002). For Seligman there are five “elements of well-being”: positive emotion (pleasant feelings), engagement (being in flow), meaning (belonging to and serving something bigger than oneself), accomplishment (achieving something one finds worth achieving), and positive relationships (Seligman, 2011, pp. 16-20). The positive emotion component locates well-being in feelings. The engagement component locates well-being in attitudes toward experiences. The meaning and accomplishment components, which each have an “objective” aspect to them (Seligman, 2011, p. 25), might be understood as locating well-being in an ideal, where that ideal might partially be established by the individual herself. The positive relationship component might be more difficult to relate to just one of the locations identified above. Having positive relationships to other people can be an aspect of well-being as it is understood in at least the feelings approach to well-being, in the needs approach, in the life satisfaction approach, or the capabilities approach. Seligman’s list of elements of well-being is an example of what is called in philosophy an objective list account of well-being (e.g., Parfit, 1987), and Griffin (1986, p. 67-68; 2000) provides one such account that has elements listed similar to the ones Seligman has.

Aspect 2: Whose Concept? Whose Judgment?

In the academic philosophical tradition of writing about well-being (often under different terms) a distinction is made between subjective and objective theories of well-being (e.g., Griffin, 1986; Sumner, 1996), although there has been some doubt expressed of the value of such distinction (e.g., Griffin, 1986, p. 33).⁷ The distinction is generally made as follows: “By ‘subjective’, I mean an

⁷ For an argument for the salience of the subjective-objective distinction for theories of well-being, see Sumner (1996, chapter 2).

account that makes well-being depend upon an individual’s own desires, and by ‘objective’ one that makes well-being independent of desires” (Griffin, 1986, p. 32).⁸ This definition of subjective approaches to well-being leaves it open who is actually judging an individual’s state of well-being, while in psychological approaches to well-being, subjective well-being is generally understood as well-being as judged from the individual’s own perspective (e.g., Diener, 1984). While the philosophical approach to the subjective-objective definition is focused on the concept of well-being (a person’s desire is to be considered or not), the subjective versus non-subjective distinction in psychological approaches to well-being is more focused on who judges how well someone is.

In order to use the distinction between subjective and objective approaches to well-being to help understand the substance in the differences between different approaches to well-being, I will draw on the ideas behind both the philosophical and psychological perspectives on the subjective-objective distinction. I suggest to distinguish between subjective and objective approaches along *two dimensions* (see Figure 1). The first dimension is about who decides how well an individual is. The further to the left an approach is with respect to this dimension, the more this approach relies on the individual’s judgement on her own well-being; the further to the right an approach is, the less the individual’s judgment is considered. The second dimension is about whose concept of well-being is considered when assessing an individual’s well-being. The further below an approach is with respect to this dimension, the more it is the individual’s understanding of what well-being is that is considered; the further up an approach is, the less the individual’s view on what well-being is considered when assessing that individual’s well-being.

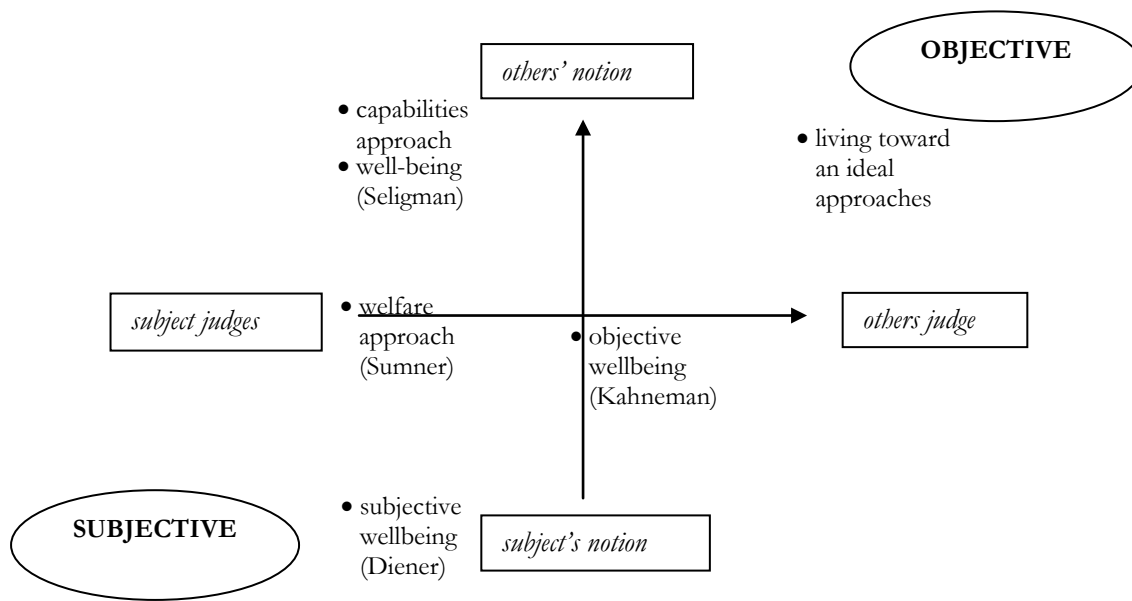


Figure 1. The subjective-objective dimensions of well-being approaches.

⁸ See also Sumner (1996, p. 38).

As Figure 1 shows, the two dimensions provide four quadrants in which an approach to well-being can be located. This makes an approach more subjective with respect to both dimensions the further it is in the bottom left quadrant, and more objective, the further it is in the top right quadrant. The two-dimension conceptualization of the subjective-objective distinction allows for a more differentiated understanding of approaches to well-being. For instance, the capabilities approach is more subjective with respect to the question who judges on an individual's well-being, while it is more objective with respect to the source of the concept used for such judgment.

Two points need to be raised in light of the subjective-objective dimensions of well-being approaches. The first concerns the “Whose notion?” dimension, represented by the vertical axis in Figure 1. There is no “pure” subjective understanding of well-being, because our conceptualization of what it means for us to be well is at least in part *enculturated*, a point that I will elaborate further upon in the next section.

The second point concerns the “Who judges?” dimension, represented by the horizontal axis in Figure 1. Kahneman (1999, 2011 part V) distinguishes between “the experiencing self” and “the remembering self” when it comes to judging the quality of one's experiencing an event. In a number of ingenious experiments, he and his collaborators have demonstrated how our judgment of one and the same event often varies quite a bit depending on whether we judge the event at the moment of experiencing or in retrospect (e.g., Kahneman, 1999). Life satisfaction approaches to well-being, then, draw exclusively on the remembering self for judging well-being. On the other hand, Kahneman (1999) has developed a notion of “objective well-being”, for which he draws on a sequence of instant judgments by a person of the quality of an experience over the time of an event. This sequence of “good/bad” judgments are then used by an “objective outsider” to calculate an overall “objective” judgment about the person's well-being during the event. However, conceptually such “objective” well-being is still grounded in a sequence of *subjective* judgments, which is the reason why Kahneman's objective well-being approach is placed around the central point of the horizontal axis in Figure 1.

Kahneman's work, however, should not suggest that it is only our experiencing self that can “really” establish our well-being. Csikszentmihalyi (1990, 1997) has studied and analysed experiences in which people were completely absorbed in an activity to the degree that they lost track of time while engaged in the activity. He has used the term “flow” to describe such states of the mind, and “being in flow” – sometimes called “engagement” – is one aspect of the conceptualization of well-being in a number of approaches (e.g., Seligman, 2011). As Csikszentmihalyi found, people who are in a state of flow do not experience anything that they would describe as pleasurable; their mind is so focused on the task(s) at hand, that there is not any cognitive capacity left for the mind to experience (consciously) a feeling of pleasure or well-being. Quite to the contrary, an athlete who is in flow while engaging in her sport, for instance, might actually feel pain while she is running, swimming, or the like. It is when she *looks back* to her having been engaged in the task that she feels a deep sense of well-being. In the case of well-being derived from flow experiences, it is the experience of the remembering self at the time of remembering that is experienced as pleasurable, satisfying, or a state of well-being.

Aspect 3: Individual versus Social Perspectives on Well-Being

Three discourses in the literature on well-being give rise to including a “social perspective” on well-being, which is a perspective included in some but not all approaches to well-being. What this means, will become clear from the following discussion.

The first discourse in the literature on well-being relevant here concerns the question how universal or culture-transcendent a concept of well-being and the way it is measured can be. In the well-being literature different answers have been given to this question. At one end of the spectrum of responses to the question are those which propose that well-being can be conceptualized in a descriptive rather than prescriptive way and can be universal and neutral with respect to different cultures. Such a position, for instance, has been taken by Seligman (2002, p. 303), one of the founders of positive psychology (Seligman & Csikszentmihalyi, 2000).

At the other end of the spectrum are those who argue for the view that all theories, and particularly those heavily value-laden theories of well-being, are culturally embedded and, thus, cannot be culturally neutral or universal. For instance, Christopher and his collaborators (Christopher, 1999; Christopher & Hickinbottom, 2008; Christopher, Richardson, & Slife, 2008) have made a strong case for the cultural embeddedness of notions like well-being against the idea of a trans-cultural understanding of well-being as it is proposed in positive psychology. They particularly point to the “disguised ideology of individualism” that generally frames Western approaches to well-being (Christopher, 1999, p. 142).⁹ Historical studies, like McMahon’s (2006) study of the different understandings of *happiness* throughout Western history, and cross-cultural studies (e.g., the relevant work referenced in Christopher, 1999) strongly suggest that Christopher’s position is more appropriate than Seligman’s. In such case, we better heed Christopher’s (1999) warning:

Understandings of psychological well-being necessarily rely upon moral visions that are culturally embedded and frequently culture specific. If we forget this point and believe that we are discovering universal and ahistorical psychological truths rather than reinterpreting and extending our society’s or community’s moral visions, then we run the high risk of casting non-Western people, ethnic minorities, and women as inherently less psychologically healthy. (p. 149)

Linked to but different from this first discourse is *the second discourse*, which arose around the question, how people whose well-being is assessed actually understand what well-being is. Such a question is of particular importance to more subjective theories of well-being, in which it is the person herself who judges how well her life or aspects thereof go for her and who uses her own understanding of what “well-being” means. The desire accounts of well-being by Griffin (1986) and Sumner (1996) illustrate the importance of the question. In both approaches it is a person’s judgment about the fulfillment of her desires (Griffin) and the level of happiness with her life overall (Sumner), respectively, that is central in establishing her well-being. Both, however, recognize, that people can be mistaken in their assessment of how relevant the respective desire is for their well-being (Griffin, 1986, p. 12), and that people sometimes err in their judgment about how well their life is going (Sumner, 1996, pp. 158-171). In order to account for these concerns, Griffin stipulates that the desire

⁹ For examples of Eastern perspectives on well-being see the contributions in Kosaka (2006) and Mathews and Izquierdo (2009), and for examples of Indigenous perspectives, see Adelson (2009) and Hart (2002, chapter 3).

has to be *informed* desire, and Sumner requires a person's judgment about how her life goes to be *informed and autonomous*. Most of the cases that Griffin and Sumner reference as examples for a desire or happiness to be *uninformed* draw substantially on the social state of affairs of the culture individuals are embedded in. For instance, someone might be mistaken about her well-being derived from the fulfillment of her desire for being rich, because she actually desires people's respect and erroneously assumes that having money would get her people's respect (Griffin, 1986, p. 12). That people did not have respect for someone based on the person's financial wealth is a socio-cultural phenomenon. Thus, informed desires accounts of well-being require a social perspective that links a person's well-being to the socio-cultural context in which the person is embedded. The same applies to other subjective approaches to well-being, since they all will need to deal with the issue of uninformed and non-autonomous judgments by the person whose well-being is in question.

The third discourse deals with a more fundamental question than the previous two. While the previous discourses took as their starting point concern for *individual* well-being, this third discourse raises the question whether there is something like "societal well-being" *next to* individual well-being. Prilleltensky and Prilleltensky (2007), for instance, write about well-being of organizations and communities. They see organizations and communities as *sites of well-being* as they see individual persons as another site of well-being. They suggest an interconnection between those different sites of well-being. With reference to relevant literature, Prilleltensky and Prilleltensky (2007) argue that and show in what way the well-being of families, organizations, communities, and so on impact the well-being of individual persons. It is generally social determinants / indicators research that establishes such relationships between the well-being of individual persons and the well-being of those other sites of well-being (e.g., Kimweli & Stilwell, 2002). The discussion of the literature in this chapter so far gave only consideration to approaches to individual well-being.

The third aspect of such well-being explored in this section suggests that concern for individual well-being will have to give consideration to ideas of the well-being of other entities, like families, communities, etc. and to the question how individual well-being relates to the well-being of those other entities. Two points might illustrate the importance of such a question. First, individual well-being can be understood in a way that there can be tensions between these different sites of well-being and the well-being of individual persons. What might contribute to the well-being of one person or a particular group of persons, might impact negatively on the communal well-being. On the other hand, one might be able to conceptualize individual well-being in such a way that, for instance, communal well-being is an integral component of the former. Second, the concern for the well-being of a particular site of well-being – for instance the well-being of a state's economy ("economic well-being") – might originally be justified by its importance for the well-being of individual persons, like the citizens of the state. However, at some point in time the primary focus of concern might shift away from the well-being of individual persons to the other site of well-being. The concern for "economic well-being" in Western societies, for instance, is generally justified for its impact on the well-being of all citizens. However, some economists (e.g., Jackson, 2009; Schumacher, 1973) have argued that the concern for the economy in the West is now decoupled from the (original) concern for the well-being of its citizens.

Conclusion

This chapter provides a systematic analysis of approaches to well-being in different Western academic disciplines. The conceptual understanding of the notion of well-being that is to result from this analysis is to serve as the basis for a systematic approach to assessing well-being in schools and for education for well-being more generally. The analysis suggests that the notion of well-being is interdisciplinary and complex. It is interdisciplinary in the sense that different academic disciplines have valuable contributions to make to our understanding of the notion. It is complex in terms of at least the three aspects discussed here: where to “locate” well-being; identifying who decides on people’s well-being using whose idea of well-being; and the tensions and interaction between enculturated individual and social perspectives on well-being. Concretizing the idea of well-being to assess educational contexts will need to give consideration to the interdisciplinarity and complexity of the notion of well-being. Because of the interdisciplinarity, any such concretization will need to be holistic, giving due consideration to the different perspectives provided in the different approaches to well-being with respect to the three aspects used in the analysis. Because of the complexity of the notion of well-being, any concretization of the notion of well-being will have to (a) include judgment calls on which of the “locales” of well-being to give preference over which others, (b) consider power issues concerning those decisions and concerning decisions on who decides on students’ well-being and their adequate preparation for living well in the future, and (c) deal adequately with the cultural embeddedness of any perspective on well-being.

The interdisciplinary and complex nature of the notion of well-being can make the task of conceptualizing well-being in an explicit way as an overarching goal for school education seem daunting; however, because of the importance of the task, we need to engage in this endeavour. The analysis presented in this chapter is to help such an endeavour start out with a more comprehensive and deeper understanding of the notion of well-being.

References

- Adelson, N. (2009). The shifting landscape of Cree well-being. In G. Mathews & C. Izquierdo (Eds.), *Pursuits of happiness: Well-being in anthropological perspectives* (pp. 109-123). New York: Berghahn Books.
- Almeder, R. (2000). *Human happiness and morality: A brief introduction to ethics*. Amherst, NY: Prometheus Books.
- Appiah, K. A. (2008). *Experiments in ethics*. Cambridge, MA: Harvard University Press.
- Aristotle (1976). *The ethics of Aristotle: The Nicomachean ethics*. (J.A.K. Thomson, Trans.; rev. ed.). London: Penguin.
- Arneson, R. J. (2000). Perfectionism and politics. *Ethics*, 111(1), 37-63.
- Bai, H. (2006). Philosophy for education: Towards human agency. *Paidēsis*, 15(1), 7-19.
- Christopher, J. C. (1999). Situating psychological well-being: Exploring the cultural roots of its theory and research. *Journal of Counseling & Development*, 77, 141-152.
- Christopher, J. C., & Hickenbottom, S. (2008). Positive psychology, ethnocentrism, and the disguised ideology of individualism. *Theory & Psychology*, 18(5), 563-589.
- Christopher, J. C., Richardson, F. C., & Slife, B. D. (2008). Thinking through positive psychology. *Theory & Psychology*, 18(5), 555-561.

- Council of Ministers of Education Canada (2008). *Learn Canada 2020*. Retrieved from <http://www.cmec.ca/Publications/Lists/Publications/Attachments/187/CMEC-2020-DECLARATION.en.pdf>
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Perennial.
- Csikszentmihalyi, M. (1997). *Finding flow: The psychology of engagement with everyday life*. New York: Basic Books.
- Damasio, A. R. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Putnam.
- DePaul, M. R. (2002). A half dozen puzzles regarding intrinsic attitudinal hedonism. *Philosophy and Phenomenological Research*, 65(3), 629-635.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542-575.
- Diener, E. (Ed.). (2009a). *The science of well-being: The collected works of Ed Diener*. Dordrecht, The Netherlands: Springer.
- Diener, E. (Ed.). (2009b). *Culture and well-being: The collected works of Ed Diener*. Dordrecht, The Netherlands: Springer.
- Diener, E. (Ed.). (2009c). *Assessing well-being: The collected works of Ed Diener*. Dordrecht, The Netherlands: Springer.
- Diener, E., & Suh, E. M. (1999). National differences in subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 435-450). New York: Russell Sage Foundation.
- Evans, D. (2001). *Emotions: A very short introduction*. Oxford: Oxford University Press.
- Feldman, F. (2002a). The good life: A defense of attitudinal hedonism. *Philosophy and Phenomenological Research*, 65(3), 604-628.
- Feldman, F. (2002b). Comments on two of DePaul's puzzles. *Philosophy and Phenomenological Research*, 65(3), 636-639.
- Feldman, F. (2004). *Pleasure and the good life: Concerning the nature, varieties, and plausibility of hedonism*. Oxford: Clarendon Press.
- Frankfurt, H. G. (1988). Freedom of the will and the concept of a person. In Harry G. Frankfurt, *The importance of what we care about: Philosophical essays* (pp. 11-25). Cambridge: Cambridge University Press. (Original published 1971)
- Frey, B. S. (2008). *Happiness: A revolution in economics*. Cambridge, MA: MIT Press.
- Griffin, J. (1986). *Well-being: Its meaning, measurement and moral importance*. Oxford: Clarendon Press.
- Griffin, J. (2000). *Replies*. In R. Crisp and B. Hooker (Eds.), *Well-being and morality: Essays in honour of James Griffin* (pp. 281-313). Oxford: Clarendon Press.
- Hart, M. A. (2002). *Seeking mino-pimatisiwin: An Aboriginal approach to helping*. Halifax, NS: Fernwood Publishing.
- Hassan, R., Scholes, R., & Ash, N. (Eds.). (2005). *Ecosystems and human well-being: Current state and trends, volume 1*. Washington, DC: Island Press.
- Haworth, J. & Hart, G. (2007). Introduction. In J. Haworth & G. Hart (Eds.), *Well-being: Individual, community and social perspectives* (pp. 1-26). Houndsmills, GB: Palgrave Macmillan.
- Hostetler, K. D. (2011). *Seducing souls: Education and the experience of human well-being*. New York: Continuum.
- Jackson, T. (2009). *Prosperity without growth: Economics for a finite planet*. London: Earthscan.
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3-25). New York: Russell Sage Foundation.
- Kahneman, D. (2011). *Thinking, fast and slow*. Doubleday Canada.

- Kahneman, D., Diener, E., & Schwarz, N. (1999a). Preface. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. ix-xii). New York: Russell Sage Foundation.
- Kahneman, D., Diener, E., & Schwarz, N. (Eds.). (1999b). *Well-being: The foundations of hedonic psychology*. New York: Russell Sage Foundation.
- Kasser, T. (2002). *The high price of materialism*. Cambridge, MA: MIT Press.
- Kimweli, D. M. S., & Stilwell, W. E. (2002). Community subjective well-being, personality traits and quality of life therapy. *Social Indicators Research*, 60, 193-225.
- Kosaka, K. (Ed.). (2006). *A sociology of happiness: Japanese perspectives*. Rosanna, Australia: Trans Pacific Press.
- Kubovy, M. (1999). On the pleasures of the mind. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 134-154). New York: Russell Sage Foundation.
- Layard, R. (2005). *Happiness: Lessons from a new science*. London: Penguin Books.
- LeDoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Touchstone.
- MacIntyre, A. (1998). *A short history of ethics: A history of moral philosophy from the Homeric age to the twentieth century*. Notre Dame, IN: University of Notre Dame Press.
- Martin, J., Sugarman, J., & Thompson, J. (2003). *Psychology and the question of agency*. Albany, NY: State University of New York Press.
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper and Row.
- Mathews, G., & Izquierdo, C. (Eds.). (2009). *Pursuits of happiness: Well-being in anthropological perspectives*. New York: Berghahn Books.
- Max-Neef, M. A. (1991). *Human scale development: Conceptions, applications and further reflections*. New York: The Apex Press.
- McMahon, D. M. (2006). *Happiness: A history*. New York: Grove Press.
- Nettle, D. (2005). *Happiness: The science behind your smile*. Oxford: Oxford University Press.
- Noddings, N. (2003). *Happiness and education*. Cambridge, UK: Cambridge University Press.
- Nozick, R. (1974). *Anarchy, state, and utopia*. New York: Basic Books.
- Nozick, R. (1989). *The examined life: Philosophical meditations*. New York: Touchstone.
- Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*. Cambridge, MA: Harvard University Press.
- Parfit, D. (1987). *Reasons and persons*. Oxford: Oxford University Press.
- Prilleltensky, I., & Prilleltensky, O. (2007). Webs of well-being: The interdependence of personal, relational, organizational and communal well-being. In J. Haworth & G. Hart (Eds.), *Well-being: Individual, community and social perspectives* (pp. 61-78). Houndsmills, GB: Palgrave Macmillan.
- Ryff, C. D., & Singer, B. (2000). Interpersonal flourishing: A positive health agenda for the new millennium. *Personality and Social Psychology Review*, 4(1), 30-44.
- Sandel, M. J. (2009). *Justice: What's the right thing to do*. New York: Farrar, Straus and Giroux.
- School Act, Revised Statutes of British Columbia, 1996. <http://www.bced.gov.bc.ca/legislation/schoollaw>
- Schuhmacher, E. F. (1973). *Small is beautiful: A study of economics as if people mattered*. London: Blond and Briggs.
- Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.

- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Free Press.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychology*, 55(1), 5-14.
- Sen, A. (2009). *The idea of justice*. Cambridge, MA: Harvard University Press.
- Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2010). *Mismeasuring our lives: Why GDP doesn't add up*. New York: The New Press.
- Sumner, L. W. (1996). *Welfare, happiness, and ethics*. Oxford: Oxford University Press .
- Sumner, L. W. (1998). [Review of the book *Utilitarianism, hedonism, and desert: Essays in moral philosophy* by F. Feldman]. *Ethics*, 109(1), 176-179.
- Veenhoven, R. (2008). Sociological theories of subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 44-61). New York: The Guilford Press.
- White, J. (2011). *Exploring well-being in schools: A guide to making children's lives more fulfilling*. London: Routledge.
- Wilkinson, R., & Pickett, K. (2009). *The spirit level: Why more equal societies almost always do better*. New York: Penguin Books.

Chapter 6

Solar-Powered Learning: Educating for an Ecological Literacy

MATT HENDERSON

In 2013, three teachers at a school in Winnipeg decided to create a learning experience for their Grade 9 students whereby they could answer the following question: What are alternative forms of energy and are they viable in Manitoba? Choosing a multidisciplinary approach and incorporating systems thinking through Social Studies, Science, and English Language Arts, students used a variety of skills and media to tackle this driving question. The process sought to create and foster an ecologically literate learning community and educators who were better able to talk about how and why we learn.

In his book *Living in the End Times*, Slavoj Žižek (2011) identifies a major gap in our understanding of the pressing environmental crisis and our motivation to react to it: “The gap...is that between knowledge and belief: we *know* the (ecological) catastrophe is possible, probable even, yet we do not *believe* it will really happen” (Žižek, 2011, p. 328). Similarly, James Hansen, formerly of NASA, indicated in September 2012 that, “We have a planetary emergency. There's a huge gap between what is understood by the scientific community and what is known by the public... unfortunately, the gap is not being closed” (Andrade, 2012). Along with these revelations by both Žižek and Hansen is a real and impending ecological crisis. Rockström and his colleagues (Rockström, et al., 2009) have identified nine planetary boundaries (<http://ted.com/>) whereby humans can exist; we have surpassed three of them – notably, climate change, ocean acidification, and nitrogen balance. In 2013, the IPCC suggested that humans were in fact responsible for climate change, and that the outcomes of this change cannot be determined (IPCC, 2013).

The identification of the ecological crisis at hand and the revelation by both Žižek and Hansen that we are unable to either recognize this crisis and/or take action when we do become aware, poses a serious challenge to all species on Earth. The challenge presented demands that we identify a capacity to not only understand the science behind the destruction to the biosphere, but also demands that we generate the capacity, both individually and collectively, to identify the appropriate steps for solving this ecological crisis and take action.

How then do we bridge this gap? How do we gain this understanding and then make the leap to action? Education, presumably, would seem to be a logical platform for this type of societal transformation. By creating and fostering ecologically literate learning communities through educative experiences and through an emphasis on systems thinking, learners are better able to equip

themselves with the knowledge, skills, and intelligences required to take positive steps to protect the ecosystem services on which we depend.

Theory & Application

Two colleagues, who I consider to be master teachers, and I had one of those ideas; the kind that starts at lunch or coffee and leads to something relatively profound. We wanted to create an experience for our Grade 9 students that would foster the emotional, sociological, and psychological skills (Goleman, Bennet, & Barlow, 2012) required for the development of an ecological literacy. In the preplanning phase, it was also thought of as a multidimensional learning process whereby members of a learning community could see a dilemma or problem from a variety of perspectives and use a variety of skills and tools to develop solutions. We hoped that it would help embed a greater understanding of the content and also allow the teachers to assess the learning in a manner that would help us to truly evaluate the transformation of the learner and provide meaningful feedback through deep conversations. Thus, we took into account the five dimensions of emotionally and socially engaged ecological literacy as put forward by Goleman, Bennett, and Barlow (2012): developing empathy for others, embracing sustainability as a common practice, making the invisible visible, anticipating unintended consequences, and understanding how nature sustains life (p. 10). Throughout the learning experience, we used these dimensions as criteria for each learning activity that we designed. If what we were doing did not correspond to these outcomes, we had to adjust our strategies.

In addition, we viewed ecological literacy in the way Orr (1992) and Hardin (1968) have articulated it. Orr views ecological literacy as an understanding of the laws of thermodynamics and the connection of all systems coupled with a thorough embeddedness in the ecology itself of the learners. Learners must be aware, specifically looking at the first law of thermodynamics, that the total amount of energy in the universe is constant, and that if we use energy, there are consequences to this consumption. For example, there are externalities by way of emissions that have a cost. As well, those who are eco-literate have empathy for all living creatures and understand the limits of human activity when it comes to resource exploitation. At the same time as this project began to come together, Manitoba Hydro released ads suggesting that Manitoba needs to produce more hydroelectric energy (Winnipeg Free Press, 2013). Presumably an eco-literate citizen might ask, “what then?” as Hardin has articulated. The ability to probe beyond one system into a network of systems and processes identifies an awareness of the connectedness of all species and systems on the planet. After we build more dams, will we eventually need more energy? What happens to the ecosystem when we flood massive tracts of land? From these principle understandings, we were set to create an experience that would allow learners in a specific learning community to gain the knowledge related to the ecological crisis identified by Hansen, the IPCC, and Rockstrom, and also to gain the skills and intelligences required to take the necessary action to overcome this challenge. These experiences were embedded in the conceptualization of Orr and others related to the concepts of ecological literacy, systems thinking, and experience.

Orr (1992) offers ecological literacy, firstly as a method, or pedagogy, and secondly as content and pathway, or curriculum. In terms of pedagogy, ecological literacy requires a shift from industrial and scientific methods established early in the history of curriculum development by those who helped establish the scientific method of designing and developing curriculum. Franklin Bobbitt and

Ralph Tyler, at the beginning of the 20th century, contributed to this scientific approach to curriculum design by suggesting that “educators learn to use the scientific techniques of production developed by industry” (Schiro, 2013, p. 57) and that “education that prepares for life is one that prepares . . . for these specific activities” (Bobbitt, 1918/2013, p. 42). As such, formal education was redesigned based on market and industrial principles and was considered a means for producing relatively educated workers with specific skills. Proponents of curricula based on ecological literacy and systems thinking, however, would counter this factory-based model and suggest that education is not merely about ticking off outcomes and preparing factory workers, but that it is a movement for true problem solving and social action. Boehnert (2012) suggests:

Thus a way of seeing and knowing that recognises ecological embeddedness is necessary if we are to learn how to effectively see and respond to environmental and social challenges. This shift in awareness, the development of ‘ecological literacy’, is a foundational premise for redesigning society’s infrastructure to provide ways of living within the carrying capacity of the earth (p. 34).

Furthermore, ecological literacy is described by Hardin as the ability to ask “What then?” (as cited in Orr, 1992, p. 85). Although somewhat vague, the skills, abilities, and methodologies for being able to ask such a question in relation to human behaviour on the planet are based in other literacies and our ability to think critically about dilemmas. For example, a learner’s ability to ask “What then?” following an awareness of the pollution and biodegradation of Lake Winnipeg would require the use of a variety of skills, disciplines, and an understanding of how to integrate a variety of literacies. In terms of pedagogy, some scholars have argued that “Education for sustainability or ecological literacy means to teach ecology in depth, in a systemic and multidisciplinary manner” (Duaibibi, 2006, p. 66). Orr would not argue with this understanding of ecoliteracy, but takes it even further with notions of experience and place. Moreover, an ecological literacy is an answer to the problem of formal education and to the banking model described by Freire (1970) as the banking model tends to perpetuate the status quo of the industrial elite (as cited in Orr, 2004, p. 26). Orr’s pedagogy rests heavily on the question he poses: “How do we teach them to love land and community when our society values such things far less than it does individualism and consumption?” (Orr, 2004, p. 26). All institutions, according to Orr, ignore the liberal and neoliberal¹ forces, both political and economic in nature, which affect how and why we teach and learn. Based on this reaction, the foundations for Orr’s pedagogy are as such:

- All education is environmental education.
- Environmental issues are complex and cannot be understood through a single discipline or department.
- For inhabitants, education occurs in part as a dialogue with a place and has the characteristics of good conversation.

¹ For this paper’s purposes, Martinez and Garcia’s (n.d.) definition of neoliberalism as an economic liberalism will be used. This includes notions of deregulation, privatization, free markets, and the cutting of social services. This new economic liberalism surfaced at the beginning of the 1980s and ushered an unprecedented time of economic instability in modern history. Orr echoes this understanding by suggesting that “Governments everywhere have been slow to move, and ours, in thrall to extremist market ideology, have been autistic on virtually all issues having to do with the habitability of the planet” (2004, p. 33).

- The way education occurs is as important as its content.
- Experience in the natural world is both an essential part of understanding the environment and conducive to good thinking.
- Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems.

As my two colleagues and I became further aware of the evolution of curriculum development during the past one hundred years, and as we reflected on our own practice, we were ready to begin to start designing experiences and activities for our Grade 9 community of learners.

The Learning Experience

A few months prior to speaking with my colleagues, I acquired an innovation grant from my school. These grants are given to teachers who are attempting to provide new and innovative learning experiences for learners. The purpose for this specific grant application was to place solar panels on the roof just above the classroom in order to provide students with a hands-on experience of generating energy from a renewable source. It was one of those ideas inspired by a ski or a late night snack: A “what if?” moment. At the time, I didn't know anything about solar energy and the viability of it in Manitoba where energy is cheap because of the abundance of hydro electricity generated from the energy of water falling through the control gates of dams located in the north of the province.

I passed on the solar panel project to one of my Grade 12 students who was interested in doing research on sustainable forms of energy for his Praxis/Take Action Project in a Global Issues course. I had already begun to think of the big questions related to alternative energy and the world's addiction to energy and happened to listen to a radio broadcast on the CBC from Cape Breton Island about a couple living off the grid. It inspired me. I wondered if it would be possible to teach off the grid?

I knew I couldn't develop effective learning experiences alone, so it was at this time that I solicited the help of the two master teachers I respect dearly. One teaches science, mostly physics, the other teaches English Language Arts, and they are two of the most committed teachers I have ever met. The ELA teacher and I had been collaborating since the beginning of the school year in September as we were teaching the same group of students for English and social studies. When I approached her about doing a holistic, multidisciplinary study of energy, we immediately knew that the science teacher had to be involved, given his enthusiasm and the fact that he also taught the same students.

We began to lay out a course and to develop learning activities. We planned that in January the science teacher would begin teaching the students about the scientific concepts of solar energy and electricity. These students would help my Grade 12 student to install the solar panels and batteries and to navigate the technical logistics (battery size, mount for the panels, avenue for the power cords to enter the building, and the like) and the political realities (drilling holes into a school wall takes a bit of delicate diplomacy). They would then be able to see what could be powered in my classroom using a limited solar energy system. The science teacher would have the students create their own generators in order to gain an understanding of the science related to how electricity is produced. They would also be able to identify the differences in energy production/generation from a variety of

sources and methods (e.g., solar versus wind versus magnets versus combustion).

The ELA teacher planned to begin reading William Golding's novel *Lord of the Flies* with the students and to have the students investigate humanity's relationship with Earth's biosphere. She would then take the students through the process of writing a research paper in order for the students to start looking at alternative energy, energy policy, and current energy debates. The students would gain research skills, an understanding of APA formatting, and a knowledge of issues related to energy production and consumption. Moreover, the students would be writing as a bureaucrat within the federal government.

With regards to the Grade 9 Social Studies program in Manitoba, *Canada in the Contemporary World* (<http://www.edu.gov.mb.ca/>), I wanted to connect students with prevalent concepts within our current understanding of economics, while at the same time having them discover how energy policies are created and how current governments in Canada are approaching natural resource management. With these objectives in mind, the students and I went through three different, but connected experiences. The first dealt with the principles behind current economic policies in Canada, the second dealt with the political processes by which economic and environmental policies are debated and implemented, and the third saw us venture out into the community and educate others about what we had learned. Throughout the process, the Grade 12 student in my Global Issues class mentioned above went through the process of acquiring solar power equipment for the class in order to test the viability of an alternative energy source.

First, I wanted the students to look at the meaning of economics and to begin to deconstruct some of the "truths" associated with contemporary economic practice. This meant that we needed to look at foundations of economics, including its definitions, the economic problem (i.e., scarcity), notions related to scarcity, the circular flow model, and the idea of unlimited economic growth.

As a beginning activity, we examined an advertisement from the federal government related to its Economic Action Plan. The ad might suggest that Canada is blessed with unlimited natural resources and that the exploitation of these is the backbone of our economy. We examined this economic model based on the definition of economics – the study of the distribution of resources. We then looked at the economic problem of scarcity; that there are limited resources and unlimited needs and desires. The students began to question how Canada's economy was to sustain itself if it was based on finite resources. Ah! They had asked Hartin's "What then" question. At this point, the Grade 9 learning community began to deconstruct some of the concepts we take for granted. We watched the film *Story of Stuff* to gain a better understanding of the limits of neoliberal economic models. The students' concerns about linear resource extraction were confirmed. We then began to deconstruct the concept of Gross National Product and weighed this against Gross Domestic Happiness. The students looked at Denmark as an example of a country where people consume less (Rubin, 2012) and, yet, are the happiest people on Earth (Helliwell, Layard, & Sachs, 2012). They were now informed and ready to create their own solutions and models for resource distributions and protection.

As a starting point, it was necessary to deconstruct the circular flow model. With guidance, they noted that the circular flow model does not take externalities into account, or the cost of the degradation of the biosphere. The circular flow model is a diagram that, amongst other things, identifies the paths of resources from resource markets to product markets. The predominant issue with this model is that there is no accounting for the idea of energy conservation; the idea that there are externalities associated with human activity and energy consumption. Students began to design their own models that would get us as close to a stable-state economy as possible. From there, the students were able to articulate their concerns in a public realm via our blog (<http://hendersonsjr>).

blogspot.ca/) and offered solutions based on the beliefs and principles of the political party they represented in our class Parliament (see below).

As a final assessment piece and a discussion note, I posted two sets of ads produced by Manitoba Hydro that were placed in the Winnipeg Free Press in April and May of 2013. I posted these ads on the “Critical Thinking Board” located outside of my classroom and asked students to comment on what the ads suggested. It was powerful to see how this Grade 9 learning community reacted negatively to the relationship between unlimited growth and prosperity. They had figured out that resources are finite, and that happiness is not related to consumption. As such, they were beginning to demonstrate an ecological literacy.

We redesigned our classroom environment as a micro version of the House of Commons. Each member of the class was assigned to a party where they would act as a Member of Parliament. We divided the seats in a proportional manner so as to mirror the power dynamic with the current House. Using this model, learners had to work together in order to offer national energy and natural resources policies based on the ideologies of each party. This required extensive research into the political parties themselves and the motivations for developing particular policies related to natural resources and energy. Part way through the process, we adjusted the experience by way of making a majority house into a minority house. Parties were forced to work together, and the Green Party ended up holding the balance of power. Through this process, the students were able to understand why it is that governments often make decisions that are antithetical to the flourishing of ecosystem services.

In order to answer the question as to whether or not alternative forms of energy were viable in Manitoba, the Grade 9 students needed to start funneling their knowledge towards a common purpose, that of developing solutions for and a plan for sustainable and equitable energy use and distribution. As luck would have it, this community of science, ELA and social studies learners was asked to present at the Inkster School Conference on Education for Sustainable Development. The facilitators of the conference, intended for students in K-6, asked the students to present on alternative forms of energy and the implications of current resource exploitation. As such, my colleagues and I divided the class into two groups and began designing presentations that would not only inform the audience about how we use resources in this country to create energy, but would also give audience members a hands-on experience as to the viability of alternative forms of energy. Both groups decided that for the former part of the lesson, that they would use the form of a story. Through storytelling, the groups were able to lead diverse students through the various forms of energy and then lead them to the planned experience. This experience was based on designing solar ovens (<http://www.re-energy.ca>) in an attempt to show audience members the power of renewable energy sources, such as the sun. Following the presentations, conference participants were helped to build solar ovens that were then tested out of doors.

Meanwhile, throughout this process, our learning community of Grade 9 students was also participating in Flat Classroom’s Eracism project. Eracism seeks to bring together students from all over the world through a series of debates on a topic created by youth. As the students began their exploration into economics, sustainability, and resource/energy exploitation, they became involved in a debate where the resolution to be debated was the proposition *Global management of natural resources will cause conflict between cultures*. Through various roles and debates, learners were able to research and perform critical thinking regarding the notion of scarcity and human behaviour. Students researched current examples of contemporary conflicts and were able to make predictions of future conflicts based on energy, water, and food. Through this process, students were able to see how their lives were intricately interwoven with lives throughout the world.

Discussion and Reflection

By the end of the year, the students, two teachers and myself had explored various forms of energy, the viability of alternative forms of energy in Manitoba, and current economic models applied in Canada. We also managed to power my classroom through solar energy, as our Grade 12 student completed his Praxis/Take Action Project. Through his project, we were able to power the LCD projector, an FM transmitter, and charge a number of phones and computers at the same time (the panel produces about 14 volts, depending on the time of year). The panel was placed on the roof of the school, and we ran the power cords through the classroom window, into an inverter and then into a marine battery. We enclosed the inverter to ensure safety. The student built a mount for the panel that would permanently face south, despite talk of creating a mount that could swivel and follow the sun. This plan was abandoned due to our limited access to the roof itself (the School was not eager to have students on the roof). We realized that the reliability of this energy was tenuous at times, and that the materials used in both the batteries and the panel itself contained some externalized costs. We also realized, at the current seven cents per kilowatt hour (Manitoba Hydro, 2013) that our society was not motivated to use alternative forms of energy. In fact, based on the abundance of hydroelectricity, its inexpensive rate, and the public's ignorance towards that actual environmental degradation associated with hydroelectricity (Environment Canada, 2010), the provincial government (CBC, 2013) and Manitoba Hydro are pushing for greater exploitation of hydroelectricity opportunities.

Through the experiences we were confident that we would move closer to fostering an ecological literacy in our students, despite facing challenges. We reflected on this and assessed change toward ecological literacy using Orr's foundational requisites:

- *All education is environmental education:* All three teachers realize that life on the planet is in peril, and that it is our responsibility as educators within a community to foster the skills, virtues, and knowledge needed to affect transformation. By transformation, we speak of changed attitudes and behaviours of the learner that would indicate how he or she is related to all systems within the biosphere. When the learner speaks, is there a literacy present that suggests this understanding? This new literacy was most evident when we observed our students speaking to the younger students at the Inkster School conference. To be able to hear students discussing concepts such as systems, sustainability, and well-being might suggest that there has been transformation, but this was one our challenges, as we still struggle with assessing this change.
- *Environmental issues are complex and cannot be understood through a single discipline or department:* The experiences we created for the students, although still embedded in the realities of contemporary educational practices, demanded that students use a variety of bodies of knowledge and skills in order to create new ideas and solutions. One of the challenges that we did meet was the schedule of a typical school. The three educators² each saw the students for 50 minute periods and rarely were we able to team teach given the constraints of the timetable. This certainly limited our ability to completely immerse ourselves into a

² The science teacher taught about the foundations of electricity, the ELA teacher had students conduct research on alternative forms of energy, and in Social Studies, students created national energy policies and create presentations for a conference on viable alternative energy sources.

transdisciplinary environment, but we were able to observe, through the debates, conferences, and writing of the students an ability to use the variety of literacies and skills to answer large questions like the one posed on the Global Youth Debates. Currently, the school is adjusting the timetable to allow for more team teaching and multidisciplinary approaches in the near future.

- *For inhabitants, education occurs in part as a dialogue with a place and has the characteristics of good conversation:* The pedagogy employed by all three teachers was based on a collective dialogue, specifically about the ecosystem we share with other Manitobans. How can we survive? How can we consume less? How can we create sustainable communities? Not only did we speak about our own experience at our school, in Winnipeg, in Manitoba, and throughout the world, but we were able to speak with experts in the field, with students at different institutions around the city, and with students throughout the world. Learners were also able to enter into a dialogue through literature, through mainstream advertising, and through government policy. The opportunity for this dialogue seemed to be essential for sense-making.
- *The way education occurs is as important as its content:* Our goal from the start was to present students with real dilemmas that are important to them. We asked students to engage with peers, with the public, and to think beyond the educational tradition they had become accustomed. Students were asked to blog, to present to other youth, to role-play, to read literature, to build generators, and ultimately to offer a new vision for Manitoba. While many students did thrive in this environment, one challenge that we faced was the fact that some learners simply were not accustomed to this type of learning and needed a tremendous amount of scaffolding. My inability, specifically, to properly differentiate for a number of students was perhaps the greatest challenge to overcome. I suspect that if we were able to have three teachers in the room at once, then this might have helped with overcoming this gap. The way education occurred was most likely exciting and empowering for some, but I suspect confusing and alienating for others.
- *Experience in the natural world is both an essential part of understanding the environment, and conducive to good thinking:* Many of the classes took place in two outdoor classrooms in an attempt to connect students with their local ecosystem. We also invited the City of Winnipeg forester to come in and teach us about the plants and trees that were both natural and intrusive. Our hope was that students began to see themselves as part of the ecosystem. This, however, is an ongoing challenge for my practice, given climate realities and our tendency as educators to stay inside where technology exists. As a team of teachers, we are certainly interested in the notion of forest schools and similar designs.
- *Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems:* By the end of the experience we created for and with the learners, participants were able to create new models for living well and were able to cut through the ideologically-based jargon which promotes individualism, consumption, and willful blindness. Whether the creation of models moves towards action and competence in the natural world is something that might have to be assessed over a longer period of time and was certainly out of the scope of this particular experience. The learners were better able to speak of Winnipeg's ecosystems, the implications of hydro production and other forms of energy, and articulated how we do eventually pay for externalities.

Through it all, it was hoped that the Grade 9 learning community gained the emotional, psychological, and ecological skills to not only experience transformation within themselves, but to ignite it in their communities. Whether this happened for each learner and educator cannot be determined at this point, but the experience moved us all towards understanding how we create these experiences and helped us to think, as educators, about our purpose. The challenge remains to create comparable experiences for new groups of students and to sustain and further the knowledge we created with the present group. We are also challenged in determining how we assess transformation and determining whether or not what is gained within these learning communities truly leads to action and social change. I personally look forward to these challenges.

References

- Andrade, M. (2012). 'Planetary emergency' due to Arctic melt, expert warns. *AFP*. Retrieved from <http://phys.org/>
- Bobbitt, F. (2013). *The curriculum*. London: Forgotten Books. (Original work published 1918)
- Boehnert, J. (2012). Visualising ecological literacy. *Architectural Design*, 82(4), 34-37.
- CBC (2013). *Manitoba could be out of power by 2022, says energy minister*. Retrieved from <http://www.cbc.ca/news/>
- Duaibili, M. (2006). Ecological literacy: What are we talking about? *Convergence*, 39(4), 65-68.
- Environment Canada. (2010). *Hydroelectricity*. Retrieved from <http://www.ec.gc.ca/>
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: The Seabury Press.
- Goleman, D, Narlow, Z., & Bennett, L. (2012). *Eco literate: How educators are cultivating emotional, social, and ecological intelligence*. San Francisco: Jossey-Bass.
- Hardin, G. (1968). 'Tragedy of the commons'. *Science*, 13. Retrieved from <http://dicoff.org/page95.htm>
- Helliwell, J., Layard, R., & Sachs, J. (Eds). (2012). *The world happiness report*. Retrieved from <http://www.earth.columbia.edu/>
- Intergovernmental Panel on Climate Change. (2013). *Climate Change 2013: The Physical Science Basis*. Retrieved from <https://www.ipcc.ch>
- Manitoba Hydro. (2013). *Current electricity rates*. Retrieved from <http://www.hydro.mb.ca/>
- Martinez, M., & Garcia, A. (n.d.). *What is neoliberalism?* Retrieved from <http://www.corpwatch.org/article.php?id=376>
- Orr, D. (1992). *Ecological literacy: Education and the transition to a postmodern world*. Albany, NY: State University of New York Press.
- Orr, D. (2004). *Earth in mind: On education, environment, and the human prospect*. Washington, DC: Island Press.
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F.S., Lambin, E.F. ... Foley, J.A. (2009). A safe operating space for humanity. *Nature*, 461, 472-475.
- Rubin, J. (2012). *The end of growth*. Toronto: Random House.
- Schiro, M. (2013). *Curriculum theory: Conflicting visions and enduring concerns* (2nd ed.). London: Sage.
- Tyler, R. (1949). *Basic principles of curriculum and instruction*. Chicago: The University of Chicago Press.
- Winnipeg Free Press. (April 5, 2013). *Manitoba Hydro Advertisements*.
- Zizek, S. (2011). *Living in the end times*. New York: Verso.

Chapter 7

The New Story, Transformative Learning and Socio-Ecological Flourishing: Education at Crucial Juncture in Planetary History

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This chapter discusses select implications of an integral worldview for the educational project at our key moment in planetary history. It starts by demonstrating how the present socio-ecological crisis is a major challenge for humanity and the rest of the Earth community. It then moves to explain an important perspective on education and the narratives that drive our cultures: that of Thomas Berry on the new story. Next, it traces Berry's influence, through Edmund O'Sullivan, to transformative praxis' advocacy for social justice, ecological health and substantive peace. This chapter takes this normative triad as a measure of sustainable well-being, employing it to inform an initial discussion of how teaching of the natural sciences, law, social sciences and humanities might foster socio-ecological flourishing. Recombining these areas into the educational project proper, it ends with a brief discussion of the urgent contextual need for a deep interdisciplinarity at this time of socio-ecological crisis.

Introduction: A Moral Problem for Educators and the Planet

The planetary community is currently at a crucial junction in its history. We are experiencing a moral problem on a scale we have never witnessed before. A single species, *homo sapiens*, is responsible for both the marginalization of members of its own species and putting the rest of the Earth community in peril. This malaise grows in large part from a system of domination, which itself is precipitated by a lack of integral worldview. In contrast, an integral worldview emphasizes the interconnectivity of all things, according moral worth to persons, animals and the other elements of the natural world. As a result, such a worldview mitigates against the wonton destruction and marginalization of people and other members of the Earth community. An integral worldview can be buttressed with a belief in the spirituality of all things, which makes careless destruction a sacrilege. Without such safeguards on human moral life we have arrived at a point of “socio-ecological crisis” (Eaton, 2013, p. 109). This profound and multi-layered crisis threatens to remove the underpinnings for the creative functioning of life on this planet. To present an analogy, the socio-ecological crisis is a chronic illness, which affects all people, animals and plants. Education can provide good medicine at this historical moment through the promotion of socio-ecological flourishing. Indeed, an integral

pedagogical response is particularly necessary at this juncture, because as David Orr (1994) notes, educators and people with what are considered the finest credentials have in no small way contributed to engineering the present Earth crisis.

This chapter will trace, with broad-brush strokes, a task for the educational project at a time when sustainable well-being is sorely needed. It will map a key foundation for transformative learning practice in the work of self-described “geologist” (i.e., Earth thinker), Thomas Berry. In particular, the focus will be on Berry’s reflections on the new story and the educational project (Berry, 1988, 1996b, 1999, 2006, 2009a, 2009b; Berry & Clarke, 1991). It will then explore the branch of transformative learning theory growing from the work of Edmund O’Sullivan (1999, 2005), Professor Emeritus at the Ontario Institute for Studies in Education (OISE). I have chosen the above-described path as I had the privilege of having Dr. O’Sullivan as my instructor at OISE. As a result of this experience, I can confirm the influence of Berry in both the former’s research program and on a profound personal level. Moreover, I can testify that the authenticity with which Dr. O’Sullivan peruses the normative agenda of transformative learning as described below is both authentic and inspiring. The penultimate section serves to move toward grounding the more theoretical portions of this chapter by tracing some lines upon which teachers working in the natural sciences, law, social sciences and humanities can pursue transformative learning. I end with a brief discussion of the need for a deep interdisciplinarity at this time in planetary history.

Thomas Berry, the New Story and the Educational Project

Thomas Berry’s shading of the integral worldview offers an important underpinning for transformative learning praxis. Hence, his thought is worth unfolding in depth here as a foundation for what follows in this chapter. From Berry’s “cosmological-historical” (2009, p. 24) perspective, the story of progress, as it emerged in the aftermath of Bacon and Fontenelle’s work, sustained us for a long time (Berry, 1988). O’Sullivan (1999) associates progress in this sense with “a type of manifest destiny” which he sees as representative of a “technozoic vision”, when (as per Ronald Reagan’s old General Electric commercials) progress becomes a product. As part of this vision, the past is seen not as a source of knowledge but rather as an enemy of the future. This problematic orientation has a long genealogy. Just as the somewhat dualistic appropriation of Augustine of Hippo’s story as presented in *The City of God* (Berry, 1999a) provided a source of hope in the aftermath of the fall of ancient Rome, through similar dynamics, the myth of progress gave humanity both a role in the emerging modern world and a sense of meaning. However, the story of progress has now been found to be faulty in its larger social dimension (Berry, 1988) precisely because of the type of unsustainability it supports. Simultaneously, accepting this myth of progress involves a certain alienation from the natural world. Further, the myth of progress’s “technocentric” (O’Sullivan, 1999, p. 48) view of the future runs counter to the idea that the past can act as a vital source of inspiration for positive social change.

In the West, we are modeling a way of living and many of us are consuming on a level that, if adopted by the whole world’s human population, would almost certainly result in the destruction of the very biosphere that supports all life. Any change in this regard will require a painful re-imagining of the very ways Western society has come to express itself:

That our Western civilization should be the principal cause of such extensive damage to the planet is so difficult a truth for us to absorb that our society in general is presently in

a state of shock and denial, of disbelief that such can possibly be the real situation. We are unable to move from a conviction that as humans we are the crown and glory of the Earth community to a realization that we are the most destructive and the most dangerous component of that community. Such denial is the first attitude of persons grasped by any form of addiction. Our western addiction to commercial-industrial progress as our basic referent for reality and value is becoming an all-pervasive attitude throughout the various peoples and cultures of the Earth. (Swimme & Berry, 1992, p. 254)

Berry's response to this malaise of denial is what he terms the "new story" (Berry, 2009b, p.135).

In Berry's (1988) assessment, a new story emerges out of the crisis of dysfunction witnessed in the failure of the commercial-industrial worldview, which is manufacturing a "WasteWorld" (Berry, 2006, p. 29). Moreover, this new story is already entering into our consciousness. Indeed, it has to find a footing as humanity heads towards a population of eight billion people. This emerging historical vision involves the realization of a positive commitment to a forward-moving course for history, whereby "a period of mutually enhancing human-Earth relationships is being established" (Berry, 1988, p. xiii). Turning his focus to the political realm, Berry labels this phenomenon the movement "beyond democracy to biocracy" (Berry, 1999, p. xiii). In such a transformative biocratic movement, the larger-life community, inclusive of plants and animals, participates in our human decision-making processes. Within this expanded context, human affairs gain their meaning through intercommunion. When a biocratic reality has been fully realized, value and worth will then mark all professions, occupations and activities, precisely to the degree that they enhance and contribute to the larger life community (Berry, 2006). This is true, in Berry's estimation, because it is only when we take our cues "from the very structure and functioning of the universe [that] we can have confidence in the future that awaits the human venture" (1988, pp. 136-137).

In contrast to certain de-constructionist epistemologies that avow no truth claims, Berry (2009b) is setting a social target for the new story – he asserts that an integrative narrative should help constitute a contextually necessary moral order for our times. Thus, this story is meant to permeate human consciousness and character. In this manner, recalling an insight associated with the new story, we can see another key sense in which departing from holistic worldviews, integral education and knowing in relation to the ecological world at this point in history has grave consequences. For example, such a disconnect represents the real potential of causing the entire evolutionary process that brought us into being to collapse, potentially marking not only our own demise but also marking a collapse of the biosphere itself.

Such a collapse, even if *homo sapiens* were somehow able to mitigate its human-specific effects with technology, would be a tragedy from Berry's point of view. In his conception, it is the biodiversity of this world that both shapes and defines us as humans. For Berry (2009b), interaction with the beauty of the natural world allows humans to experience an essential sense of wonder and awe in relation to our purpose in the complex web of life. Further, he argues (Berry, 2009a) that an important feature of diversity is that it allows multiple avenues for human connection with the natural world. Berry sees a situation of interconnectedness in the universe as arising from its quality as the "only self-referent mode of being" (1996a). It follows that: "Since all living beings, including humans, emerge out of this single community there must have been a bio-spiritual component of the universe from the beginning. Indeed we must say that the universe is a communion of subjects rather than a collection of objects" (Berry, 1996a, p. 2). In terms of childhood development, Berry fully expresses these sentiments in his poem *It Takes a Universe*.

The child awakens to a universe.
 The mind of the child to a world of meaning.
 Imagination to a world of beauty.
 Emotions to a world of intimacy.
 It takes a universe to make a child
 both in outer form and inner spirit.
 It takes a universe to educate a child.
 A universe to fulfill a child.
 (Berry, 2005)

Additionally, for Berry, human-induced cycles of violence against the natural world, which are leading the Earth community towards ecological collapse, represent a complete separation of what he terms our “genetic” and “cultural codes”. In Berry’s formulation, it is through genetic endowment that we maintain “our intimate presence to the functioning of the Earth community and to the emergent processes of the universe itself” (1988, p. 199). Cultural codings, which emerge from and transcend our genetic makeup, allow us to “invent ourselves in the human expression of our being” (Berry, 1988, p. 200). Further, cultural codings results in a diversity of human expressions. Thus, cultural codings become representative of the human capacity for free determination. Nonetheless, once established, sets of cultural codes also become normative reference points for action within a community (Berry, 2006).

Due to this power of normative reference, such self-invention is seen not only as a privilege but also a responsibility. That Berry (1988) locates the nature of this responsibility in accountability to the Earth community is further demonstrated in his shading of the historicity of cultural codings. In the past, one essential feature of our cultural codings was located in the identification of our cultures with the ecological story and, by extension, the universe (Berry, 2006). If one accepts an evolutionary view of human development, this must be true because we are, in an important sense, all stardust; concomitantly, we owe our present state of being to the currently endangered evolutionary process.

Entire cultures were formed around such integral viewpoints and some human communities continue to uphold these values to this day. For example, many groups of Indigenous Americans¹ are understood to recognize the creative force of nature in their cultural context. Such recognition is represented in the special status accorded to the “Earth Mother archetype” in Indigenous American worldviews. For instance, Berry (1988) highlights that in the Navajo tradition, an illustration of the special importance given to ecological reality is found in the image of Corn Mother. This image is brought to life in the traditional practice whereby members of the Navajo nation will place an ear of corn beside a newborn child to acknowledge “the role of the mothering principle with powers beyond that of the human mother” (Berry, 1988, p. 187). However, it should be emphasized that, for Berry, Indigenous American cultures are not alone in displaying this connection to the ecological community. All human cultures, including Western European ones, emerged from genetic codings, which are essentially an ecological feature. It follows that every culture has at its generative source an integrated worldview that must be recovered in light of the present sustainability crisis. On a more basic level, the interplay between the two principle types of coding Berry identifies is illustrated in his

¹ The term “American” is used here in its dual continental sense to denote Indigenous peoples, who were and, in many cases still are, resident in what became North and South America.

metaphor of language use: “we are genetically programmed to speak; the manner of our speech, however, is our own invention” (Berry, 1988, p. 200).

In our current cultural context, presently existing unsustainability may be explained by the fact that, in the West, we have lost our connection with our genetic heritage. Yet, a past state of connectivity is present in our language. Even the word “human”, has its etymological roots in “humus” and is properly understood as connoting someone who is “of the Earth” (Klein, 1966, p. 749). As an ethical methodology for healing the disconnect that allows us to forget such relationships, Berry (2006) suggests that when our cultural codings and our genetic codings are working in harmony, human-induced violence against the natural world and other forms of destructive violence are kept in check. Today, however, especially in the West, our cultural codings are far too often in conflict with our genetic codings. This has turned into a situation whereby human-induced ecological unsustainability is fuelled by a “supreme pathology ... [that translates into a situation wherein] ... [w]e are indeed closing down the major life systems of the planet” (Berry, 1988, p. 206).

Recognition of the very fact of the existence of human genetic codings will go a long way towards solving the malaise of human-induced destructive violence against the ecological world, because the human codings necessarily “ties us into the larger complex of Earth codings” (Berry, 1999, p. 106). An act of recovery for the planet will, therefore, involve an act of recovery for human consciousness. We need to see ourselves as more than atomized individuals. Rather, we need to follow our duty as members of a dynamic life and strive to maintain space for creative antagonisms. In this area of his project, Berry (2009b) calls to our attention the real power of the new story: the power it has to change the way we dream about the future. This is the “dream of the Earth” (Berry, 1988). Almost paradoxically, the realization of this dream for the future requires returning to a past state of interconnectedness that existed between humans and their ecological context. Chiefly, what is required is an act of re-orientation away from unsustainable practices. This act is part of a larger process that I name as “essential recovery”, which needs to occur both on the level of worldview and in terms of bringing forward past sustainable practices.

It is important to emphasize that the form of recovery that Berry advocates in this regard is not representative of a fundamentalist appropriation of the past. Rather, Berry’s new story becomes oriented toward a better tomorrow—a future set on achieving a lost balance between the genetic and cultural human codes in a fresh, vital and historically appropriate manner. In this light, Berry’s writings can be viewed as an attempt to establish a more authentic new story as a challenge to the long held scientific-industrial myth that has been found to be unauthentic in relation to both human and larger life communities.

The educational project is important in this transformation. For Berry (2006), sustainability cannot be taught in a single class. Rather ecological consciousness must permeate all educational efforts. In line with this teleology, just as democratic curricula in Canada foster reverence for the “other” in the human sense, a biocratic education would foster reverence for the “other” in the ecological sense. A chapter in *The Dream of the Earth* (Berry, 1988) includes a discussion of the role of the American college in the ecological age that offers a model for biocratic education. Berry’s model is based on a tripartite unity of universe education, Earth education and human education. Educational institutions, like Western colleges, are located within this unity as “a continuation, at the human level, of the self-education process of the earth itself” (Berry, 1988, p. 89).

Berry (2006, 2009b) goes to some length to emphasize what he means by this process. When employing the expression “universe education”, he is referring to the type of learning “which identifies with the emergent universe in its variety of manifestations from the beginning until now”

(1988, p. 89). Additionally, when using the term “earth education”, he reminds us that he is signifying “not education about the earth, but the earth as the immediate self-educating community of those living and nonliving beings that constitute the earth” (Berry, 1988, p. 89). As such Berry asserts, “human education is primarily the activation of the possibilities of the planet in a way that could not be achieved apart from human intelligence and the entire range of human activities” (1988, p. 92).

What Berry advocates as the philosophical basis of such an integrated education is a new cosmology that underlies the new story. This cosmological formulation moves beyond the physical sense that cosmology all too often denotes in Western culture. Indeed, what Berry is suggesting here is a reformation of the manner in which schools deal with sustainability issues. Whereas, today, an empirical-scientific approach is often taken in schools and other social configurations as a way of dealing with environmental problems, Berry and others working in this vein advocate a rethinking of the relationship between the human and the larger Earth community. Berry’s new cosmology actively seeks to renew human-Earth relationships (Berry, 1999). As part of this proposed way forward, diversity is enshrined in a biocultural manner that at once includes, and also transcends, multiculturalism. Therefore, in this system the total educational process is imaged as a unity. Learning is meant to reflect an “unbreakable bond of relatedness” that rests on the spatial and temporal axiom: “nothing is completely itself without everything else” (Berry, 1988, p. 91).

In a paper delivered at Harvard University before the turn of the millennium, Berry (1996b) asserted that the failure to realize this unity is a major inadequacy “of the four basic establishments that determine human life in its more significant functioning”. He then defined the four basic establishments of society as (1) the government, (2) the church, (3) the university, and (4) the commercial-industrial corporation, or in other terms, “the political, religious, intellectual and economic establishments” (Berry, 1996b). His shading of the problem was particularly noteworthy because he saw a common thread underpinning the shortcomings of these establishments:

All four are failing in their basic purposes for the same reason. They all presume a radical discontinuity between the non-human and the human with all the rights given to the human to exploit the non-human. The non-human is not recognized as having any rights. All basic realities and values are identified with the human. The non-human attains its reality and value only through its use by the human. This has brought about a devastating assault on the non-human by the human. (Berry, 1996b)

In relation to the educational project it follows that a certain type of reconciliation is required in order to transcend this isolating situation. Indeed, overcoming the alienation between humans and the larger-life community is the exact function of the unifying dynamic in Berry’s work. Not surprisingly, he devotes an entire book, which grew from an adult education initiative and was written in co-operation with Thomas Clarke, to outlining a system that would help to change “the destructive processes of our time” (Berry & Clarke, 1991, p. 42) and therefore aid in the overcoming of alienation through the reconciliation inherent in befriending the Earth. This volume points out the deep need for a truly sustainable educational praxis in our present context. The stream of educational vision and praxis growing from the work of Edmund O’Sullivan takes up this cogent challenge.

Transformative Learning: Educational Vision for Social Justice, Substantive Peace and Ecological Health

In the stream of thought under consideration in this chapter, transformative learning builds on O’Sullivan’s collaboration with Berry, and the insights of other influences such as that of Buddhist peace educator Joanna Macy. This branch of transformative learning theory seeks to clarify areas in which the educational project can participate in what Macy and Johnstone (2012) name the “great turning” towards a sustainable and just future. In doing so, O’Sullivan’s work encourages educators to form critical but normative commitments supportive of social justice, substantive peace and ecological health. From a transformative learning perspective, the task of an educator is then to be an activist and an advocate working for a greener, more peaceful and socially just world.

This normative triadic affirmation recalls an important point made by Canadian philosopher and educator, Mary Jo Leddy. Based on her experience of living in solidarity with refugees in Toronto, Leddy (2011) asserts: “What a difference to be not only against violence but for peace” (p. 92). In a similar normative spirit, a group of transformative learning theorists and practitioners offer the following summative definition, “not as a fixed definition [of O’Sullivan’s term], but as a way to stimulate dialogue” (Morrell & O’Connor, 2002, p. xvii):

Transformative learning involves experiencing a deep, structural shift in the basic premises of thought, feelings, and actions. It is a shift of consciousness that dramatically and irreversibly alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power in interlocking structures of class, race and gender; our body awarenesses, our visions of alternative approaches to living; and our sense of possibilities for social justice and peace and personal joy (Collaborative Definition, as cited in Morrell & O’Connor, 2002, p. xvii).

To highlight its connection to integral ecological ethics and Berry’s thought, we can note how transformative learning views our essential location to be in diverse relationships with each other and the rest of the Earth community. Further, O’Sullivan’s deep commitment to fostering socio-political equality is firmly located within his sense of the larger cosmological context, what he labels “the Big Picture”, and is simultaneously sustained by “emancipatory hope” (O’Sullivan, 2005, p. 71). Such a perspective is well poised to question cultural values that are ultimately destructive of positive ethical relationships. Building on O’Sullivan’s mode of media and social analysis, transformative learning perspectives, for instance, might problematize aspects of a culture that supports shopping as a leisure activity. Further, transformative learning practitioners might question what is happening when children’s imaginative play is branded by corporate categories.²

In light of such issues, transformative learning praxis strives to establish sets of more nourishing cultural stories. It is also deeply respectful of diversity and indigeneity in particular, for the way indigenous cultures often represented a sustainable model of deep relationality (Ridgeway & Jacques, 2014). A principle focus is on the celebration of hope and joy—here being understood to exist in diverse relationships with individuals, across cultures and with the larger natural world. As

² This point, addressing what she called the phenomenon of “branding imagination” evident in pre-school children’s play, is inspired by Aisha Alexander, student in EDUA 1540 Cross-Cultural Education, summer term 2010.

the nomenclature of O’Sullivan’s methodological approach indicates, an essential goal is the transformation (not, where other transformative options are possible, the destruction) of systems and relationships to bring them in line with creative functioning (O’Sullivan, 1999). Following Berry’s lead, this goal is cast as bringing the human establishments (e.g., education, politics, law, religion, etc.) to a place where they foster creative, not destructive, tension. As such, transformative educators actively promote and seek to establish the cultural conditions necessary for ecological health, social justice and substantive peace (O’Sullivan, 1999). The Transformative Learning Centre at the OISE emphasizes that this teacher-activism is centered on a grounded hope for positive socio-ecological change:

In sum, transformative learning makes us understand the world in a different way, changing the way we experience it and the way we act in our day-to-day lives. Transformative learning has an individual and a collective dimension, and includes both individual and social transformation. In the Transformative Learning Centre we are inspired by the notion of grounded hope. We believe that one of the best ways to predict the future is to actively create it, moving together towards our collective visions by developing viable alternatives that recognize the limitations and possibilities (especially the possibilities!) of each particular context (Transformative Learning Centre, 2012).

Such grounded hope, focused on integral possibilities, can be usefully employed in the normative educational task of fostering mutuality-enhancing socio-ecological relationships. The implications here are profound; the above referenced-possibilities extend in many directions. The reach of the multifaceted collaborative definition of transformative education has been explored by a diverse group of scholars. These scholar-practitioners often hold similar worldviews that share a meta-concern for social change and emancipation (Schugurensky, 2002). Nonetheless, they take different approaches to fostering shifts in consciousness and practice.

For example, Takahashi (2004) provides a helpful series of consideration for linking personal and social transformative change in regards to many of the issues surveyed above. Within such processes, Miles (2002) emphasizes the importance of transformative learning allying itself with social movements presenting an alternative to global capitalism. In a complementary manner, Kovan and Dirkx (2004) note the value of a transformative learning framework for nurturing the passions of environmentalists and avoiding activist burnout. For her part, Goodman (2002) reinforces the insight that both critical and visionary perspectives are required in transformative activism. Working from a feminist perspective, Ettlign and Gillian (2004) name a significant set of considerations surrounding embodied identity, race, class and white privilege for those “midwifing” transformative change. Providing further support for an integral perspective, Selby (2002) firmly connects failures in worldview with the present global environment crisis by contrasting an individualist billiard-ball model with a web image of relationality. While highlighting the importance of cultivating a sense of place, Daloz (2004) expands on the value of bioregional citizenship for nurturing transformative work. Dei (2002) adds that the uprooting and separating people from the land harms their identity formation and educational prospects. Notably, Cajate (2004) provides a unifying set of points through noting how two key basic questions about relationships his Pueblo ancestors asked remain essential for educators today. These questions centred on concerns about how to best get along with each other on the social level and how to properly deal with our relationship to the Earth community. Moreover, these are the underlying questions that inform this chapter.

Implications for Schooling and the Educational Project

The educational theorists surveyed above help fill in the nourishing content of a transformative vision, which is necessary to drive efforts to foster substantive peace, ecological health, and social justice as a response to pressing social and ecological crises that threaten to remove the basis socio-ecological flourishing on this planet. In light of their contributions, education for sustainability and well-being takes on major ethical challenges to build up mutually enhancing human-Earth and intra-human relationships. For the transformative educator, the scope of this effort must reach into all areas of learning so that a type of socio-ecological imaginary is fostered amongst learners and educators that allows for the visioning of alternatives to the all-pervasive commercial/ military/industrial vision of progress. As such, transformative learning, like the new story which underpinned its genesis in the case of the stream of thought surveyed above, cannot itself be assigned to a single course or subject. Rather, transformative learning needs a presence in every course as substantive peace, ecological health and social justice inform a contextual necessary effort to foster the conditions necessary for socio-ecological flourishing at a time of planetary stress. The cost of continuing on the currently dominant unsustainable path is just too great as the prevalence of wars, inequality, ecological degradation, climate change and biodiversity loss serve to illustrate. Something akin to a cross-circular transformative vision is thus needed at this juncture in planetary history if humanity is going to form just social arrangements that can positively contribute to a vibrant and diverse Earth community.

By way of closing this chapter, I will offer some initial comment on what specific subject areas can contribute to the education project at the present juncture. I will parse these potential contributions into subject clusters: the natural sciences, law, social sciences and humanities. My specific goal will not be to offer a set of prescriptions. Rather, I humbly offer a series of ideas, which are meant to stimulate dialogue about how the educational project can be nourished by a transformative vision that fosters socio-ecological flourishing. These thoughts have been informed by the thinkers surveyed above and ought to be further developed, contextualized and otherwise modified or rejected by educational theorists and practitioners with an interest in a sustainable world characteristic by integral well-being.

Natural Sciences

The natural sciences have contributed to the de-sacralization of nature. They contain the knowledge sets, having often practiced a segmented approach to research, that help to make the exploitation of people and the planet possible. Yet, the natural sciences also hold within themselves the seeds for a renewal of human-Earth relationships. The work of the conservation scientist Aldo Leopold (1949/1986) is a case in point here with his efforts to demonstrate how humanity is a part of a larger land community. Moreover, the ecological sciences tend to recognize a similar point in placing humans within the functioning of ecosystems. Also, the cosmological and biological sciences can help foster wonder and awe at the complexity and vastness of the biological and universe communities. Such wonder and awe may, in turn, engender respect for those communities on the part of humanity. In any case, what is key from a transformative learning perspective is that teachers of the natural sciences emphasize for their students that the scientific project takes place within the larger Earth and universe communities. This orientation can serve to place science within a deeper relational context and mediate the reception of its results with a concern for socio-ecological

flourishing as measured by its contributions to the incarnation of substantive peace, social justice and ecological health.

Law

The study of Western law has been mostly limited to intra-human relational issues. Where nature is discussed it tends to be imaged mainly as property. Further, Western law has frequently served to protect limited liability for corporations and other segmented interests to the detriment of the common good. Even human rights have been presented in opposition to rights for nature, suggesting that human rights are eroded by according rights to other members of the Earth community. As an end result in Western jurisprudence, marginalized humans and the non-human elements of the ecological world have too often suffered without the recourse to established law systems (Cullinan, 2011).

Teachers of law can contribute greatly to healing this malaise. They can suggest creative ways to integrate the principles of integral Indigenous laws, which tend to view nature as holding a set of rights that is complimentary with human rights, into established systems. To list some important examples, dominant law systems need to find ways to better:

- (1) Protect biodiversity
- (2) Hold corporations accountable for polluting practices
- (3) Ensure that marginalized human communities do not become victims of toxin-related illnesses
- (4) Reinvigorate the global commons
- (5) Generally help humanity heal the fracture of human-Earth relationships manifest in presently existing unsustainability.

In these areas, a hopeful set of developments can be sourced in the *Constitution of the Republic of Ecuador's* (2008) protection of the Rights of Nature (Articles 71-74). Significantly, the inclusion of these articles was motivated in large part by ecojustice concerns as informed by indigenous concepts of rights and politics (Ridgeway & Jacques, 2014). To further foster such development, the legal project's function of serving a socio-ecological common good must be emphasized by teachers of law given the current crises facing the planetary community. Teachers of jurisprudence can contribute to the mitigation of such crises through the promotion, drafting and enforcement of laws that contribute to the conditions necessary to foster socio-ecological flourishing.

The Social Sciences

The social sciences not only study reality, they also help shape it. To take a prime example, mainstream economics enjoys considerable influence in this world. However, its failure to integrate “externalities” like pollution, results in a fictional orientation from many of the perspectives surveyed above. Simply put, mainstream economics fails to adequately account for the real social and ecological costs of commerce and production. As such, ecological economists and contemporary green thinkers argue that a viable *oikos*, i.e., household (here etymologically connecting ecology and economics (see Capra, 1996), can ensure that we head our way into a time-rich, high well-being and sustainable society (Barry, 2012). Sometimes these writings are shaded as supporting a gift economy.

The gift is here grounded in a type of reciprocal altruism which is understood as supportive of mutual-enhancing relationships (see Manolopoulos, 2009).

If educators can foster spaces to emphasize the feasibility and desirability of such alternative green ways of being human, approaches to living firmly grounded in just relationships with each other and the larger Earth community, they can help us challenge and remove the underpinnings for currently unsustainable practice. For example, a growth-based economy that seeks to maximize consumption will want everyone to have a certain “widget”, and never share. However, a transformative learning approach along the lines unfolded above will encourage us to realize that sustainable desire can be based on pleasure through use in cooperative sharing (as opposed to use through ownership). It is in such a manner that social goods like libraries, light-rail systems, and laundromats become part of John Barry (2012)’s vision for addressing presently existing unsustainability. Given the realities of the socio-ecological crisis there is an imperative to support the concept of sharing social goods to reduce the human ecological footprint and provide mechanisms to allow all people access to such goods. Here, we can witness a cogent sense in which the “embeddedness” of economics and ecology within the Earth community can be integrated by both students and teachers.

From a transformative learning perspective, it is also important that educators and learners take emerging insights from ecopsychology and ecosociology seriously. For example, concepts of eco-alienation and nature-deficit disorder (see Louv, 2005) hold important consequences for the ways teaching ought to be structured. These concepts together point to how school programming ought to provide interactive moments between students and other members of the Earth community.

For their part, geography teachers can explore how toxic sites are too often situated in close proximity to or within marginalized human communities. They can further present the case for bioregionalism’s potential to inform how humanity exercises its ability to organize landscapes. Political studies educators can look at the potential and deficiencies of an international system, allowing their students to explore how that system might be transformed in order to better meet global challenges. In partnership with their colleagues in business studies, they can decry and expose the phenomenon of “greenwashing”, which at its worse merely re-labels unsustainable practices and policies that continue to negatively affect marginalized persons and the larger life community.

Humanities

Philosophy and religious studies as subjects that encourage deep reflection on ethical issues have much to contribute to a transformative approach to educational praxis. By employing their critical thinking approaches, teachers can help their students examine how taking our human dependency on the natural world for granted is unwise. Further, they can help students express how employing our religious traditions as an excuse to exploit people or a planet in peril is highly problematic. English and other primary language teachers can bring issues of pollution, ecojustice, and human-Earth relationship to the fore in their choice of creative writing, poems and literature assigned to their students. Through the use of narrative’s special perspective on human experience, they can employ the space in their classrooms to give students insight into the tangible negative impacts that ecological ill health has had on life in various contexts around the world. In this fashion language arts educators can contribute to a much needed increase in socio-ecological literacy.

Classics and history teachers can examine how civilizational collapse has frequently had ecological dimensions. For example, emphasizing cases where empires marginalized others while

ignoring natural limits to their own detriment. They can also note the wealth of knowledge that existed in the past, which allowed people to live well but more lightly on the earth. History teachers can further suggest ways that these approaches to being in the world can be recovered, so as to be brought forward in renewing ways today; so that, to take one example, the practices of self-sufficiency like canning seasonal produce, can be understood as ways to lower the carbon footprint of an industrial food system. Visual and performing arts teachers can help contribute the creative energy necessary to incarnate the transformative learning principles (Roy 2002). Language teachers can trace the roots of hierarchical and domineering concepts, delineating their presence in our everyday talk. They can then point to alternative constructions supportive of dialogue and consensus, which can help emancipate marginalized persons and an Earth community in peril. Cultural studies educators can map the origins and contradictions of a consumerist culture, emphasizing its ill effects on the creative functioning of the human project and the larger life community.

In short, from a transformative learning perspective, every discipline can be shown to have a profound contribution to make at this juncture in planetary history. It thus devolves to teachers and other learners to consider how to best integrate a transformative vision, so as to participate more fully in the worldview indicated by the new story. Educators become transformative practitioners when they accept the premise that they ought to be activists for a greener world, dialogue with others, undertake research building on their expertise with this goal in mind and seek to make the resultant insights come alive in their learning communities. It is in this manner that teachers and other learners can support the incarnation of social justice, ecological health and substantive peace, not only effectively responding to the current crises facing the planetary community but also actively fostering the conditions necessary for socio-ecological flourishing.

Conclusion: The Importance of Normative Interdisciplinarity at this Juncture in Planetary History

Even as I have parsed the educational project into the above four areas, I have tried to remain cognizant of their interconnectivity as part of larger human and Earth projects. As the perspectives surveyed above emphasize, the fates of these projects are now intertwined. Even the Earth project needs humanity to succeed, lest the conditions for diverse life on the planet undergo a major rupture. This reality of intertwined fate calls us towards the contextual necessity of the normative transformative principles of substantive peace, social justice and ecological health. At the same time, this call points towards the needs for a dialogue-based interdisciplinarity so that the different specializations within the educational project can bring their insights to bear upon the momentous problem at hand. Further, the conversations between those disciplines are likely to be transformative in and of themselves.

As such, this interdisciplinary dialogue can precipitate the type of insights that cement the visions of integral relationality presented above. Such integral dialogue helps to grow socio-ecological literacy in accord with the telos provided by Berry's new story. Normative interdisciplinarity is understood here as a continuous process of synthesizing insights supportive of interrelated goals of fostering substantive peace, social justice and ecological health. In this light, interdisciplinarity becomes a major part of a contextual transformative vision. Further, from this perspective, incarnating such a transformative vision emerges as an urgent imperative for the educational project at this juncture in planetary history. Taking up the resultant challenges, concerned educators working

in various fields can thus confidently work towards a fuller reality of mutual-enhancing intra-human and human-Earth relationships. In participating in this transformative agenda, educators will not only be effectively responding to the major crises of our times but will be working towards actively fostering socio-ecological flourishing. In this regard, transformative learning represents a cogent expression of the educational project's inherent responsibility towards a vital future.

References

- Barry, J. (2012). *The politics of actually existing unsustainability: Human flourishing in a climate-changed, carbon-constrained world*. Oxford: Oxford University Press.
- Berry, T. M. (1988). *The dream of the Earth*. San Francisco: Sierra Club Books.
- Berry, T. M. (1996a, April 9). *Ethics and ecology*. A paper delivered to the Seminar on Environmental Values at Harvard University. Retrieved from <http://1043mabovethesea.files.wordpress.com/2011/08/ethics-and-ecology.pdf>
- Berry, T. M. (1996b, April 11). *The university: Its response to the ecological crisis*. A paper delivered before the Divinity School and the University Committee on Environment at Harvard University. Retrieved from <http://web.archive.org/web/20030210200927/http://ecoethics.net/ops/univers.htm>
- Berry, T. M. (1999). *The great work: Our way into the future*. New York: Bell Tower.
- Berry, T. M. (2005). *It takes a universe*. Retrieved from [http://www.thomasberry.org/Biography/It Takes a Universe.html](http://www.thomasberry.org/Biography/It_Takes_a_Universe.html).
- Berry, T. M. (2006). *Evening thoughts: Reflections on Earth as sacred community* (M. E. Tucker, Ed.). San Francisco: Sierra Club Books.
- Berry, T.M. (2009a). *The Christian future and the fate of Earth* (M. E. Tucker and J. Grim, Eds.). Maryknoll, NY: Orbis.
- Berry, T. M. (2009b). *The sacred universe: Earth, spirituality and religion in the twenty-first century* (M. E. Tucker, Ed.). New York: Columbia University Press.
- Berry, T. M., & Clarke, T. E. (1991). *Befriending the Earth: A theology of reconciliation between humans and the Earth*. Mystic, CT: Twenty Third Publications.
- Capra, F. (1996). *The web of life: A new scientific understanding of living systems*. New York: Anchor Books.
- Cullinan, C. (2011). *Wild law: A manifesto for Earth justice*. Totnes, UK: Green Books.
- Constitution of the Republic of Ecuador*. (2008, October 20). Retrieved from http://www.mmrree.gob.ec/pol_exterior/constit_eng.pdf
- Daloz, L. A. P. (2004). Transformative learning for bioregional citizenship. In E. O'Sullivan & M. Taylor (Eds.), *Learning towards ecological consciousness: selected transformative practices* (pp. 29-46). New York: Palgrave Macmillan.
- Dei, G. J. S. (2002). Spiritual knowing and transformative learning. In E. O'Sullivan, A. Morrell, & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. 121-134). New York, Palgrave.
- Eaton, H. (2013). Forces of nature: Aesthetics and ethics. In S. Bergmann, I. Blindow & K. Ott (Eds.) *Aesth/ethics in environmental change: Hiking through the arts, ecology, religion and ethics of the environment* (pp. 109-126). Zurich: LIT Verlag.

- Ettling, D. & Gillian, L. (2004). Midwifing transformative change. In E. O'Sullivan & M. Taylor (Eds.), *Learning towards ecological consciousness: selected transformative practices* (pp. 115-132). New York: Palgrave Macmillan.
- Goodman, A. (2002). Transformative learning and cultures of peace. In E. O'Sullivan, A. Morrell & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. 185-198). New York, Palgrave.
- Klein, E. (1966). *A comprehensive etymological dictionary of the English language*. New York: Elsevier Publishing Company.
- Kovan, J. T., & Dirkx, J. M. (2004). Nurturing the internal flame: Sustained commitment to environmental work. In E. O'Sullivan & M. Taylor (Eds.), *Learning towards ecological consciousness: Selected transformative practices* (pp. 133-148). New York: Palgrave Macmillan.
- Leddy, M. J. (2011). *The other face of god: When the stranger calls us home*. Maryknoll, NY: Orbis Books.
- Leopold, A. (1986). *A Sand County almanac*. New York: Ballantine Books. (First published 1949)
- Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books of Chapel Hill.
- Macy, J., & Johnstone, C. (2012). *Active hope: How to face the mess we're in without going crazy*. Novato, CA: New World Library.
- Manolopoulos, M. (2009). *If Creation is a gift*. Albany: State University of New York Press.
- Miles, A. (2002). Feminist perspectives on globalization and integrative transformative learning. In E. O'Sullivan, A. Morrell & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. 23-34). New York, Palgrave.
- Morrell, A., & O'Connor, M. A. (2002). Introduction. In E. O'Sullivan, A. Morrell & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. xv-xx). New York, Palgrave.
- Orr, D. W. (1994). *Earth in mind: On education, environment and the human prospect*. Washington, DC: Island Press.
- O'Sullivan, E. (1999). *Transformative learning: Educational vision for the 21st century*. Toronto: University of Toronto Press.
- O'Sullivan, E. (2005). Emancipatory hope: Transformative learning and the strange attractors. In J. P. Miller, S. Karsten, D. Denton, D. Orr and I. C. Kates (Eds.), *Holistic learning and spirituality in education: Breaking new ground*. Albany: University of New York Press.
- Ridgeway, S. J., & Jacques, P. J. (2014). *The power of the talking stick: Indigenous politics and the world ecological crisis*. Boulder, CO: Paradigm Publishers.
- Roy, C. (2002). The transformative power of creative dissent: The Raging Grannies' legacy. In E. O'Sullivan, A. Morrell & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. 257-272). New York: Palgrave.
- Schugurensky, D. (2002). Transformative learning and transformative politics: The pedagogical dimension of participatory democracy and social action. In E. O'Sullivan, A. Morrell & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. 59-76). New York: Palgrave.
- Selby, D. (2002). The signature of the whole: Radical interconnectedness and its implication for global and environmental education. In E. O'Sullivan, A. Morrell & M. A. O'Connor (Eds.), *Expanding the boundaries of transformative learning: Essays on theory and praxis* (pp. 77-94). New York: Palgrave.
- Swimme, B., & Berry, T.M. (1992). *The universe story: From the primordial flaring forth to the ecozoic era – A celebration of the unfolding of the cosmos*. New York: HarperCollins.

- Takahashi, Y. (2004). Personal and social transformation: A complementary process toward ecological consciousness. In E. O'Sullivan & M. Taylor (Eds.), *Learning towards ecological consciousness: Selected transformative practices* (pp. 169-182). New York: Palgrave Macmillan.
- Transformative Learning Centre. (2012, August 16). *About the transformative learning centre*. Retrieved from <http://tlc.oise.utoronto.ca/About.html>

Chapter 8

The Heart of Education and Well-Being Is Spiritual: Autoethnographic Inquiry as an Educational Practice for Sustainable Well-Being

XIA JI

As an initial attempt at connecting education with well-being, spirituality, and autoethnographic inquiry, I suggest that autoethnographic inquiry harbors extraordinary potential as an educational practice to contribute to sustainable well-being for both individual learner and communities of learners. Autoethnographic inquiry offers one possible way to view and connect education with well-being and spirituality. To illustrate these points, I present two examples. One is an autoethnographic inquiry into one of my own life/educational experiences, and the other is a sharing of insights gained from employing autoethnographic inquiry as pedagogy in teaching a graduate course on curriculum development.

Two Kinds of Intelligence

There are two kinds of intelligence: one acquired, as a child in school memorizes facts and concepts from books and from what the teacher says, collecting information from the traditional sciences as well as from the new sciences.

With such intelligence you rise in the world.
You get ranked ahead or behind others
in regard to your competence in retaining
information. You stroll with this intelligence
in and out of fields of knowledge, getting always more
marks on your preserving tablets.

There is another kind of tablet, one
already completed and preserved inside you.
A spring overflowing its springbox. A freshness
in the center of the chest. This other intelligence
does not turn yellow or stagnate. It's fluid,

and it doesn't move from outside to inside
through conduits of plumbing-learning.

This second knowing is a fountainhead
from within you, moving out.
(Rumi, 2004, p. 178)

‘And what is as important as knowledge?’ asked the mind.
‘Caring and seeing with the heart,’ answered the soul.
– Anonymous –

Since joining the conferences organized by the Education for Sustainable Well-Being Research Group at the University of Manitoba I have been contemplating about the possible connections between well-being, education, spirituality, and how autoethnographic inquiry can serve as both a research methodology and an educational pedagogy to link the three interconnected dimensions of a human being. The need for reflecting on these interconnections and on the purpose of public education is never greater, considering the ecological, environmental, social, and economical challenges of our time. Pinar (2012) summarizes it all by stating that “it is a terrible time for America’s school children who are pressed not to discover or cultivate their talents or understand the world they inhabit, but are pressed to do one thing: produce higher scores on high-stake standardized exams” (p. xii). In such commerce oriented, lean model driven neoliberal mindset and practice, educational institutions only produce “more effective vandals of the earth” (Orr, 2004, p. 5) and further increase the gaps and inequalities in society. The challenges and problems of current educational institutions are obvious.

In the new world of globalization and migration, the classroom has become a receptacle for a mosaic of minds shaped by history, ethnicity, personality, prejudice, opinion – diversity that may enrich the educator-student experience and may also push to the surface underlying dialogic malfunctions. Sometimes the school is the safe haven, or sadly, it may be a source of trauma. . . . However nicely and caringly we may treat students in this kind of education, still fundamentally we are treating them as learning machines that are in the service of obtaining products (grades, awards, status, jobs, security, social approval) as opposed to validating their intrinsic beingness and inherent worthiness. No wonder, then, that people who are “produced” through such a mold of education in turn see and relate to the world (other people, the environment) primarily instrumentally and proceed to turn the forest into a lumberyard and people into human resources. (Bai, Scott, & Donald, 2009, p. 332)

This paper is an initial attempt at linking education with well-being, spirituality, and autoethnographic inquiry. The human heart is often seen in association with emotions, with love and compassion, as well as indicating the confluence of things. Hence, the focus for this chapter is the confluence of education, spirituality, and well-being – the intersection, connections, and the need for congruency of all in the often spirit – deprived landscapes of most educational institutions in North America, which tend to disregard the holistic well-being of students. For this task I set on myself as a human being and as a teacher educator I focus on autoethnographic inquiry as an

educational/pedagogical practice for sustainable well-being. I will illustrate my points with two cases - one from an individual learner such as myself, and the other from a community of learners in a graduate course on curriculum development. First, I will lay out the theoretical framework that has guided my autoethnographic inquiry into the relationships between education, well-being and spirituality.

Theoretical Lenses

The work of many scholars has guided the formation of my understanding of the intricate/intimate connections between education, well-being, and spirituality. Autoethnographically speaking, the awareness of these interconnections was inscribed in me as someone who was born and who grew up in the People's Republic of China, where education is viewed as the most important part of a human life. This is similar to Dewey's view that "education, life, and experience are one and the same" (cited in Huber, Caine, Huber, & Steeves, 2013, p. 220). For Dewey, "education is life and life is education, and to study life, to study education, is to study experience" (Huber et al., 2013, p. 220). Education is also closely linked to if not equated as spiritual cultivation, which is an important path to enlightenment and to ultimate well-being. Ten years of graduate study and living in the United States almost led me to forget about the early life influences on me if I had not been reminded by the work of the following scholars.

For this article and its title I draw inspiration from Parker Palmer's work on "courage and renewal" in human service professions and in particular from two of his books – *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life* (Palmer, 2007), and *To Know as We Are Known: Education as a Spiritual Journey* (Palmer, 1993). Also, perspectives from deep ecology (Naess, 1995) and from humanist geography (Tuan, 1999, 2007, 2012; Tuan & Strawn, 2009) have informed my understanding of these important aspects of being human and have guided the autoethnographical inquiry part of this paper. To visually represent my understanding of the interconnections between education, well-being, spirituality, and autoethnography I have created the diagram in Figure 1.

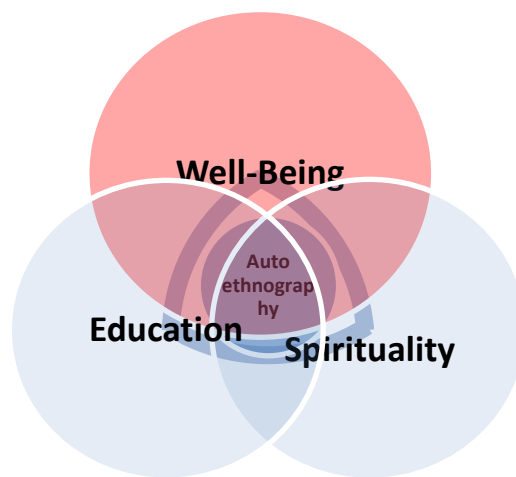


Figure 1

Ideally it should be shaped as a 3-D water molecule structure of oxygen and hydrogen. When education, well-being, and spirituality are bound together, the ‘water molecule’ is formed, which is resilient, vibrant, creates and sustains life. Autoethnographic inquiry is potentially a mighty chemical bond connecting the three vital dimensions of a human life: education, spirituality, and well-being. What unites education, spirituality, and well-being is their connection to life. Autoethnographic inquiry – either as a research methodology or as an educational practice – centers around life and life experiences embedded within / across / beyond cultures.

When education is thought about and carried out without regard to life, to well-being, and to spirituality, it may lead to distress, isolation, and even harm for some students, which is reflected in Cohen’s work as a psychotherapist and an educator. Cohen (2006) writes that

The educational system has contributed significantly, even decisively, to the wounding experience of my clients. My clients speak of alienation, feelings of despair, loneliness, and emotional pain. My students and my colleagues in graduate school also speak of these experiences. I have lived these experiences in my own life. (p. 16)

Palmer (1997) suggests a few points that would transform education if we could embody them in our knowing, teaching, and learning. First, if we could “recover a sense of the sacred in knowing, teaching, and learning, we would recover our sense of the precious otherness” of the things of the world (p. 7). Second, know and pay attention to the “precious inwardness of the things” of the world (p. 8). If we do not respect the “inwardness of things we study (genes and ecosystems, symbols, artifacts, materials, people, communities, the shapes and colors of music and art, etc.)” (p. 8), we do not respect the “inward learnings” that those things have for us. “Recovering the sacred might be one path towards recovering the inwardness without which education does not happen” (p. 9). I would add that without inwardness, well-being cannot be fully experienced. By sacredness Palmer means “worthy of respect”. Third, by recovering the sacred, we could recover our *sense of community* with each other and with all of creation. Palmer has become increasingly convinced that “this recovery of community is absolutely at the heart of good teaching” (p. 9). Fourth, if we recovered a sense of the sacred, we would recover the “*humility*” that makes teaching and learning possible. And finally, if we recovered a sense of the sacred, “we would recover our capacity for wonder and surprise, an absolutely essential quality in education” (p. 11). According to Palmer (1997), we should carry these qualities of the sacred in our hearts into the world in solitude and in community.

We cannot address the need for a sense of the sacred without addressing spirituality. One indigenous view shared by Lee (2006), a Cree Elder, is that

being spiritual is . . . remembering the first thing that was gifted to you when you came into being was the spirit. Sadly we tend to forget that. Then we neglect our spirit and take it for granted. So we need to remember where we came from and the gifts that were given to us as human beings. (p. 3)

Palmer (1997) speaks of spirituality as primarily about “reality... an effort to penetrate the illusions of the external world and to name its underlying truth” (p. 12). Spirituality can also be understood as being aware of and connected with the life in each of us regardless of our life happenings or life situations (Tolle, 1999). Spiritual cultivation and development is described by Jason (1997) as undergoing four stages. Stage one is called “Chaotic and Antisocial, where people are unprincipled and selfish and incapable of empathetic responses to others, and they tend to be manipulative and

self-serving” (p. 54). Stage two is called “Formal and Institutional”, which is the stage of most churchgoers. Stage three is called “Skeptical and Individual”, where people reject formal religious life but remain committed to social causes. Stage four is called “Mystical and Communal”, at which stage the seeker experiences the “underlying unity and interconnectedness of all things” (p. 55).

Naess (1995) proposes a similar view on “self realization” as he ponders upon the thousands of years old questions about “who we are, where we are headed, and the nature of the reality in which we are included” (p. 225). Naess’s (1995) “deep ecology” theory encompasses six points. First, as human beings, we tend to underestimate our self – where self should not be confused with the “narrow ego”. Second, human nature is such that, with sufficient comprehensive (all-sided) maturity, we cannot help but “identify our self with all living beings; beautiful or ugly, big or small, sentient or not” (p. 225). Third, the development of our self may go through stages of ego to social self (comprising the ego), and to a metaphysical self (comprising social self), and eventually to “ecological self”. Fourth, the meaning of life, and the joy we experience in living, is increased through increased self-realization, which may be different for different persons, but all implies a “broadening and deepening of the self” (p. 226). Next, because of an inescapable process of identification with others, with increasing maturity, the self is widened and deepened. We “see ourselves in others” (p. 226). Our self-realization is hindered if the self – realization of others, with whom we identify, is hindered. Thus “we act beautifully, but neither morally nor immorally” (p. 226). Finally, Naess (1995) writes that one of the great challenges today is to save the planet from further ecological devastation which “violates both the enlightened self – interest of humans” and more than humans, and decreases the “potential of joyful coexistence for all” (p. 225-226).

In terms of what is meant by well-being, there will be probably as many ways to understand and to experience well-being as there are many of us on this planet. I am of course talking about our subjective sense of well-being. Falkenberg (2013) extends conceptions of human well-being from the notion of subjective well-being, which he viewed as focused on “hedonistic perspectives” prominent in psychology. He summarizes three other notions of human well-being: “objective” measures of well-being – measuring “living condition aspects” that is prominent in health research; the “capabilities approach” to well-being, which is based on choice and ability to act as seen in philosophy and economics; and “eudaimonia / character approach” to well-being: that is “living a meaningful life in light of ethical standards” as evidenced in philosophy and psychology. Falkenberg is doing groundbreaking work in developing an index of well-being for schools using a multidisciplinary / interdisciplinary / transdisciplinary approach.

To add to our understanding of well-being from an indigenous perspective, Lee (2006) shares her “Tipi Teachings” about the Medicine Wheel. She says that “there are four parts of a human being: the spiritual, physical, emotional, and mental aspects of the self. The self is symbolized as fire at the center of the Medicine Wheel” (Lee, 2006, p. 2). Lee brings home the need to balance these four parts that were given to us, to function as people. All the above views and teachings informed my understanding of well-being. For me the idea of education for living a harmonious and meaningful life resonates well. I see well-being intricately related to Naess’s notion of “self-realization”. The urgency to search for meaning and purpose is dramatically summarized by Tuan (2012).

Let’s say that our life span is the biblical ‘three score and ten’; that is, seventy years translate into approximately 600,000 hours. Subtract a third of that time for sleep, and we have 400,000 hours left to do what we need or like to do. Now, if we work full-time for fifty years, we will have spent something like 150,000 hours earning our daily bread;

250,000 hours remain during which we live and live it up; eat, socialize, go to the movies, watch television, play golf, potter around, daydream. A practical course in college can be of use to us in the working life but impractical for the rest.

Humanist geography, by contrast, is impractical for the working life but practical for the days, hours, and half-hours that are our own, when we are free. How so? It empowers us to be engaged productively with certain questions that are incumbent upon us as thinking men and women to raise – and to raise them with a sense of urgency, for our time on Earth as individuals is the briefest. The questions are: ‘What is it- what does it mean – to be human?’ More specifically, ‘what does being human mean for me?’ (p. 3)

So, what is education for? Bai (2008) beautifully writes that

education is learning the ways of life that promote well-being for all sentient beings with whom we share our planet. Ultimately, what else is education for? If that is not the ‘bottom line’ for any conception of education, such education is *mis*education. (p. 110)

I hope that with Figure 1 and the above texts I have illustrated in some way the inter-connections between education (defined as drawing out from what is within each person), well-being (holistic), and spirituality (“certain altered states of consciousness and a sense of connection characterized by a sense of non-duality between the perceiver and the perceived, subject and object” (Cohen & Bai, 2008, p.46)). Although I am presenting the diagram in Figure 1 at the beginning of this paper, it did not come to me until toward the end of my autoethnographic inquiry, which to me shows the revelatory potential of attending to autoethnographic endeavour. Our brief time on Earth as individuals should arouse an urgency in us to attend to our spiritual core/inner being, to attend to our “somatic, sensuous, relational, perceptual, as well as intersubjective well-being” (Bai, Scott, & Donald, 2009, p. 332), which autoethnographic inquiry seems to be a promising practice to assist with.

Next, I like to focus on education and autoethnography as a form of narrative inquiry. Huber et al. quote Angela Sidney, who said that “story is education in its most holistic form, a kind of education that honors the knowledge of previous generations” (Cruikshank, 1990, as cited in Huber et al. 2013, p. 215).

Autoethnography/ Autoethnographic Inquiry

For the scope of this paper it is not my intension to give a thorough and comprehensive overview of autoethnography, but to share the ones that have resonated well with my understanding. The term autoethnography, originated by Hayano in 1979, has been in use for more than 30 years and has become the term of choice in describing studies of a personal nature (Ellis & Bochner, 2000). The popularity of self-narratives such as memoir, autobiography, diary, journal, self-reflective essay is not new, especially in the disciplines of arts and humanities. The study of the self as a subject of research studies is becoming acceptable in many social science disciplines with the “waxing interest in self on the back of postmodernism” (Ellis, 2003, p. 31). Ellis and Bochner (2000) state that “autoethnographers vary in their emphasis on the research process (graphy), on culture (ethno), and on self (auto) and that different exemplars of autoethnography fall at different places along the

continuum of each of these three axes” (p. 740). It “overlaps art and science”, and is “greater than its parts” (auto, ethno, and graphy) (Ellis, 2003, p. 31-32).

Autoethnography as an emerging qualitative research methodology “allows the author to write in a highly personalized style, drawing on his or her experience to extend understanding about a societal/cultural phenomenon” (Wall, 2006, p. 1). The intent of autoethnography is to “acknowledge the inextricable link between the personal and the cultural and to make room for non-traditional forms of inquiry and expression” (Wall, 2006, p. 1). As a form of autobiographical inquiry as well as a form of ethnography, autoethnography has become “the term of choice” (Ellis, 2004) to refer to more than 60 similar and related research genres. Autoethnography helps researchers and educators understand their relationship to others. Chang (2008) claims that autoethnography is particularly helpful for professionals who work with people from various backgrounds, e.g., ministers, educators, social workers, and health care providers. The benefits of autoethnography include “self transformation, cross-cultural understanding, and coalition building” (Chang 2008, p. 51). A longtime proponent of autoethnography, Ellis (2009) values the “concrete understanding and theorizing that can be evoked from personal storytelling” (p. 361). She further argues that “you can’t have autoethnography without heart and soul: caring, feeling, passion, and vulnerability as at its center (p. 362). Ellis (2009) likes to see autoethnography as “unruly, dangerous, passionate, vulnerable, rebellious, and creative in motion, showing struggle, passion, embodied life, and collaborative creation of sense-making” (p. 363). As diverse as the viewpoints are about autoethnography, most autoethnographers seem to agree on the importance of connecting the personal to the social cultural, and on seeing autoethnography as both a process and a product. I am in particular drawn to the valuing of “narrative truth based on what a story of experience does – how it is used, understood, and responded to for and by us and others as writers, readers, participants, audiences, and humans” (Ellis, Adams, & Bochner, 2011). Richardson (2000, as cited in Ellis, Adams, & Bochner, 2011) believes that writing is a way of knowing, a method of inquiry. Consequently, writing personal stories can be therapeutic for authors as we write to make sense of ourselves and our experiences (Kiesinger, 2002, Poulos, 2008, all as cited in Ellis, Adams, & Bochner, 2011), purge our burdens (Atkinson, 2007, as cited in Ellis, Adams, & Bochner, 2011), and question canonical stories – conversional, authoritative, and projective storylines that plot how ideal social selves should live (Bochner, 2001, 2002, Tololyan, 1987, p 218, all as cited in Ellis, Adams, & Bochner, 2011). In so doing, we seek to improve and better understand our relationships, reduce prejudice and bigotry, encourage personal responsibility and agency, raise consciousness and promote cultural/societal change (Ellis, Adams, & Bochner, 2011). Writing personal stories thus makes “witnessing” possible (Denzin 2004, Ellis & Bochner 2006, all as cited in Ellis, Adams, & Bochner 2011). “Carr’s (1986) exploration of the need for ‘coherence in our lives’, similar to Dewey’s (1938) understandings of experiences where we feel continuity” (Clandinin, 2013, p. 87) help strengthen my conviction that autoethnographic inquiry has much to offer education and to contribute to human kind’s pursuit of happiness and well-being.

Although we have seen growing interest in and engagement with autoethnography as a research methodology, little has been done to utilize autoethnographic inquiry as an educational practice with the potential to bring about learning experiences which are deeply meaningful and personally /socially transformative. Huber et al. (2013) write a comprehensive and in-depth review on narrative inquiry as pedagogy in education, where the authors quote King in saying that “the truth about stories is that that’s all we are” (p. 153). If we change the stories we live by, quite possibly we change our lives (Okri, 1997, as cited in King, 2003, as cited in Huber et al., 2013, p. 212). Huber et al. draw extensively on the scholarship of Clandinin and Connelly, who understand that it is

education that lived at the core of narrative inquiry “and not merely the telling of stories” (Clandinin & Connelly, 1998, as cited in Huber et al., 2013, p. 213). A group of narrative inquirers continue to draw on “stories as a way to share, and to understand, who we are, who we have been, and who we are becoming” (Huber et al., 2013, p. 214). Indeed, “storytelling is about survival” and “our very identities as human beings are inextricably linked to the stories we tell of ourselves, both to ourselves and with one another” (Huber et al., 2013, p. 214). These scholars/ practitioners call us to “imagine pedagogy through the transcendent power of story, to see how much difference, openness, and place matter” as they wondered about “possibilities for storying and restoring ourselves and one another into being”; they wonder about new kinds of, or maybe “forgotten or written over, obligations and ways of interacting and responding to and with one another” (Huber, et. al., 2013, p. 216).

Huber et al. (2013, pp. 226-227) propose that when thinking narratively with stories as pedagogy, we need to stay wakeful to the three-dimensional narrative inquiry space – *temporality* (which draws attention to the past, present, and future), *sociality* (which draws attention to interaction between the personal and social/cultural), and *place* (which draws attention to the place or places where stories of experience are lived and told. In their words, “thinking narratively about pedagogy is a complex undertaking, and entails the asking of hard questions about ‘what is educative’” (Dewey, 1938, as cited in Huber et al., 2013, p. 227). “Education is interwoven with living and with the possibility of retelling our life stories” (Clandinin & Connelly, 1998, as cited in Huber et al., 2013, p. 228). In this way, we understand that “we meet on storied landscapes with a sense of wonder about who students and teachers are, and are becoming” (Huber et al., 2013, p. 228). Huber et al. (2013) present powerful cases where “narrative inquiry is shown to hold extraordinary potential for envisioning new pedagogical ways of considering teacher education for diversity” (p. 232).

This chapter aims at proposing autoethnographic inquiry as an educational practice for both individual learners and communities of learners, harboring great potential for uncovering/getting in touch with “the other tablet” or “inner intelligence”, which Rumi wrote about and which is quoted at the beginning of this chapter, and for contributing to our subjective sense of well-being (Witter, Akun, Stock, & Haring, 1984, p. 165). To illustrate the above ideas further, I now take a “turn to the narrative” – the autoethnography part of this chapter by looking at two examples.

Example 1: Autoethnographic Inquiry into One of My Life / Educational Experiences

The angle to this autoethnographic inquiry are not so much chronological memories/stories of things and events, but is rather a sharing of practices, reflection, re-evaluation, and “sharing of emotion, mind, and spirit” (Tuan, 1999, p. 9). Autoethnography is partially autobiography in that it writes about “epiphanies” – remembered moments perceived to have significantly impacted the trajectory of a person’s life, times of existential crises that forced a person to attend to and analyzed lived experiences, and events after which life does not seem quite the same (Ellis, Adams, & Bochner, 2011). As Leggo (2012) writes, “the story of my education is a tough text full of wonder, and, if I ever hope to make sense of it, I need to approach it with reverence” (p. 90). Here I like to share an example of my awakening to the “other tablet” along the “living water” journey.

As I ponder upon my own “narrative beginnings” (Clandinin, 2013, p. 89), my memory immediately takes me back to my involvement with the Keepers of the Waters and the Living Water Garden projects in Chengdu, China, and in Lahsa, Tibet, between 1995 and 1997. After finishing

another ordinary university year in late June 1995, I was not all that eager to go back home to Taixing – which was about 48 hours away by train - for the summer holidays as I had always done in previous years. As a student arbitrarily admitted to the English Department instead of the School of Clinical Medicine at the West China University of Medical Sciences, my dream of becoming a medical doctor was more and more like a bubble drifting away. I dreaded thinking about what I was going to do after graduation. Up to that point I had lived two thirds of my life resolving around schools – 14 out of 21 years to be exact. I had become seasoned at accumulating credentials which measured up to external expectations, such as certificates, language proficiency, political affiliation, a Bachelor's degree soon. In Bai's (2012) words, all my life to that moment "I knew best how to study hard, compete, win and survive" (p. 66). I survived the "examination hell" (Bai, 2012, p. 66) in China. University years are supposed to be about "big learning". What I lacked or failed to really learn or embody is how to live a life "illuminated by spirit and infused with soul" (Palmer, 1997). Now in the midst of my university life I suddenly realized and was dreading the perceived certainty of life after graduation – finding a job, getting married, having one child (due to the one-child policy of China, unless I am lucky to have twins), being a considerate, caring wife and a kind, gentle mother. Is that all to my life?! I dozed off with this uneasy awakening in my summer nap.

Why am I telling this section of my life story here? To me, this experience reminds me of the sense of urgency I felt. It was the "half hour" of my own where I felt "free" as I was winding down from a busy semester of study in university. Somehow I woke up to my inwardly distressing reality, which appeared fine from the outside. I wondered about the possibilities for my life and for my future. Although not versed that way at the time, I became aware of the perennial questions of "what does it mean to be human? What does being human mean for me?"

"Amy, wake up fast!" I woke up to the pressing voice of my friend and roommate Helen. She continued as I sat up, rubbing my eyes to figure out what was going on. "There is opportunity for summer work here in Chengdu, and they are interviewing students at the Foreign Teachers' Residence on campus. Let's go and check it out!" We all had English names as students majoring in English. So, Helen and I went to the Foreign Teachers' Residence on campus for the interview. Keepers of the Waters was the hiring organization, which was initiating an international art and science collaboration project focused on learning the ways of waters so as to restore health to them through public education, community engagement, and influencing public policy. I got the job as an interpreter. It turned out to be a watershed event in my life in that working with the Keepers of the Waters projects presented many opportunities for me to explore the boundaries and limits of who I am, what I am, and "revealed aspects of me to myself that would otherwise remain hidden" (Tuan, 2004, p. 18). This summer work experience also allowed me to peek into others' worlds – both people's and the more than human worlds.

My experiences in working with the Keepers of the Waters and with the Living Water Garden project awakened me to the "mystical and communal" and enabled me to experience the "underlying unity and interconnectedness of all things" (Jason, 1997, p. 55). It taught me the importance of getting in touch with my inner wisdom – "the capacity to cope with uncertainty, and the ability to frame events and issues in their larger contexts" (Jason, 1997, p. 53). Betsy Damon, an environmental activist, an artist and designer, was the Executive Director of the Keepers of the Waters project. She embodied her work, her vision, and her teaching. One of the very first things I learned from Betsy was the microscopic images of "living water" drop and the "dead water" drop (<http://www.keepersofthewaters.org/ArticleLiving2012.cfm>), which stay with me to this day. Living water refers to life-giving water and dead water refers to death-dealing water. As a science major since high school and mostly throughout my university, I never doubted that water is the same

everywhere. How could these water drops show up so differently under powerful electron microscope? How would they impact life when we consume these different waters? These two images and Betsy's teaching woke me up to the realization that many forces in our lives can be either life-giving or death-dealing. Forces of death abound in society. Growing up in mainland China, sexism, urbanism, ageism, and scientism stood out for me the most. I did not realize their crushing power and how they had kept me small and caged until my work with Betsy Damon.

Here, I like to share a particular experience I had while working as an assistant to Betsy Damon for the eight week voluntary Re-evaluation Counselling (RC) group sessions she facilitated and I interpreted for project staff. At the time I was not aware of autoethnographic inquiry or even narrative inquiry as a research or education tool. However, now looking back, the eight week RC sessions were de facto what Chang, Ngunjiri, and Hernandez (2012) call "collaborative autoethnography" in that we shared our life stories within all sorts of social cultural and political contexts that have shaped and coloured our lives: gender, social class/economic status, age, urban/rural upbringing, family tensions, political ideologies, etc. During these sometimes timid, sometimes generous, sometimes distressful, sometimes joyous and happy, sometimes emotionless sharing, the unity, uniqueness, and diversity of each of our lives were played again and again. I never felt such compassion for other people. I never felt such compassion for my own life and for all life forms indeed. What made these weekly RC groups sessions powerful and transformative was the practice of deep listening – which is listening with our whole being and undivided presence, with love and compassion, with no intension to judge, evaluate, fix, or to offer advice and direction. What I learned from this process and practice is that when we listen better, we become better human beings. When we listen better, we allow others the space and freedom to be better human beings.

Ever since my encounter with the Keepers of the Waters, I have embarked on a journey of my own – a journey that really brings out and nourishes the life in me. What I experienced in the Keepers of the Waters projects and in particular the eight week RC groups sessions was what Palmer (1997) describes as

education at its best—these profound human transactions called knowing, teaching, and learning—are not just about information, and they're not just about getting jobs. They are about healing. They are about wholeness. They are about empowerment, liberation, transcendence. They are about reclaiming the vitality of life. (p. 3)

Applying Naess's theory on deep ecology, I see the example of "self realization" and formation of "ecological self" in my experience with the Keepers of the Waters and the Living Water Garden projects.

To link back to the "water molecule" framework for integrating "Autoethnography, Education, Spirituality, and Well-Being" I like to share the following few points. First and foremost, the framework for the interconnections between education, spirituality, well-being, and autoethnography as a water molecule (see Figure 1) occurred to me long after I finished the first draft of this article, in particular during my sustained and sometimes frustrating contemplation with the feedback/critique from reviewers of the first draft over a year's time. This shows that autoethnographic inquiry sometimes may not have a clear destination as one embarks on such a research/inquiry journey. But as long as one remains open to what's emerging, we can stumble upon some new views on or insights into things. The learning/discovery from such re-searching is an on-

going unfolding/witnessing/living of new views and possibilities. We as teachers and/or teacher educators should strive to be lifelong learners. Autoethnographic inquiry is one of such tools.

In my examples of the Keepers of the Waters and the Living Water Garden projects, autoethnography – especially collaborative autoethnography – was implicitly practiced as a voluntary part of working together on these various projects as a way to work out the tensions of working together and differences in languages, disciplines, perspectives, values, attitudes toward and approaches to problems. It has transformed my understanding of education, awakened me to domains previously unknown to me, and led me to a life centred around truth, compassion, and well-being.

Example 2: Initial Insights from Employing Autoethnographic Inquiry as Pedagogy in a Graduate Course on Curriculum Development

In my current work as a teacher educator I noticed both during class and in students' class journals that many of them were under constant stress or feeling unwell and many got sick towards the end of the 16 week semester at the university. This prompted me to wonder how experiences in formal educational institutions are contributing or not to these people's health and well-being. If these pre-service teachers experience their educational experience at the university teacher education programs as stressful or harmful, will they replicate those experiences for their K-12 students? If they have not experienced education as life-giving and soul-elevating how will they then envision the best possible educational experiences for the children in their care? In light of my own educational journey and practices so far I will now address the implications for teacher education, which might lead to personal/professional transformation and to sustainable well-being for all.

A couple of years ago I taught a graduate course on Curriculum Development as part of a Summer Institute on Anti-Opressive Education. The guiding questions I had for teaching this class of eight in-service teachers/education professionals were: What contributes to/sustains my well-being? What contributes to/sustains our collective well-being? What does it mean to be an educated person? How can education contribute to/sustain the well-being for all? What learning experiences can we engage in to answer the above questions? What questions do you have and like to explore? In this course we drew extensively upon Pinar's notion of curriculum as "complicated conversations" (Pinar, 2012), where the central question is "what knowledge is of most worth?" We explored together what it meant to "teach autobiographically". Pinar writes that to teach autobiographically is to "thread one's subjectivity through subject matter, converting private passion into public service attuned to the historical moment. Such autobiographical labor takes allegorical forms, knowledge that is simultaneously specific and general" (Pinar, 2012, p. 6).

Students in the Curriculum Development course were invited to practice two minute silence (which eventually extended to 5 minute silence at the requests of students) at the beginning of each day's gathering, which I called "practice of silence and stillness". Others may call it meditation. Students were also encouraged to keep a daily personal learning journal so as to engage with the course materials at a deeper personal level – to weave their little stories into the larger/ bigger stories of racism, sexism, ableism, ageism, and many other forms of oppression and injustice. This pre-class practice of "silence and stillness" was meant to help them relax and focus, but also to enrich and deepen their exercise with one assignment where I asked them to engage in an autoethnographic

inquiry into “curriculum as lived and life as curriculum – re-storying the ways we live our life and education”. Here is the description of the expectations for this assignment:

Based on the purpose of this course, guiding questions, your assumptions about self, others, the environment, aboriginal peoples, citizen, teacher, student, text, technology.... and what you have learned throughout the Summer Institute (readings, lectures, in class discussions, guest speakers, field trips, etc.), critically examine your own lived experience of curriculum. BE CREATIVE with this assignment as with all assignments. The format of the final product/ presentation of what you have learned is open to your imagination (i.e. autoethnography, essay, multimedia blog, performances, art work, drama/skit, documentary film, etc.

We visited this assignment daily for two weeks– treating it as work in progress. Every day we practiced deep listening as we shared our assignment in progress with each other, and engaged in one another’s study through questioning. What came out of the two week autoethnographic inquiries was astounding– jaw-dropping for me and for everyone who witnessed and participated. Due to ethical concerns I cannot share the details of what the students presented for the assignment on “Curriculum as Lived and Life as Curriculum” or from their weekly learning logs. What I can share is that there were performing autoethnography, poetry and singing, multimedia blogging regarding schooling experience of students with special needs, intimate partner abuse, societal stigma toward teenage pregnancy, challenges of being raised by a single parent, white /male privilege, and racism. What I saw and read in students’ journals regarding this assignment experience was, “relieving”, “reconciling”, “healing”, “peace-bringing”, and “beautiful”. At the end of the sharing we all stood there in the circle – speechless! It seemed that we just wanted to savor that moment for as long as possible. I remember myself speaking after a long period of silence: “I really don’t know what to say, but I want to openly tell you that I am in love with each of you”. Tears poured out, hands were shaken, and mostly we found ourselves hugging each other. Now almost two years later, it dawned on me that what happened in that summer Curriculum Development class was what Palmer (2000) writes that “we are exploring together. We are cultivating a garden together, backs to the sun. The question is a hoe in our hands and we are digging beneath the hard and crusty surface to the rich humus of our lives” (p. 103).

How does the above example illustrate the power of autoethnographic inquiry as an educational practice to potentially link education, spirituality, and well-being? For myself as the course instructor, teaching this way was exhilarating, humbling, transforming, challenging, intimidating, and required conscious attending to the moment to moment “lived curriculum” (Aoki, 1993) as one keeps in mind the planned curriculum. It required a “radical presence” of the instructor/teacher (O’Reily, 1998, p. 3). One thing I know for sure is that I intentionally encouraged students to use autoethnography to explore the historical, political, racial, cultural, social, ecological contexts of curriculum development and of education overall. I did this primarily with my own autoethnographical stories integrated with brief presentation of main ideas related to these various contexts of curriculum-making/ education. In terms of achieving the educational objectives I had for this course, the various issues in education were no longer abstract and somewhere out there happening to some faceless people, but were concrete lived stories as shared by the people sitting right by us. Here is an observation I made of one student. She went beyond her comfort zone to experiment with performing autoethnography – to weave her own personal/family stories with the larger stories of Canadian society. Her sharing of “Life as Curriculum and Curriculum as Lived”

project in class brought home the complexity of lived lives and educational experiences as a Métis woman growing up in Saskatchewan. Her stories and story-telling made "witnessing" the lived racial/cultural tensions of her/our time possible.

In terms of the potential power of autoethnographic inquiry to effectively teach/learn and to spiritually awake both the story-teller and the story-listener, Bai and Cohen (2014) borrowed the Bakhtinian notion of the "space of authoring" (Holland et al. 1998, as cited in Bai & Cohen, 2014) as a good way to understand the power of story as a transformative teaching tool. Bai and Cohen (2014) proposed that

a story presents to the reader or listener a virtual world populated not only by human action but also by intention, desire, emotion, perception, volition, and sensations. By virtue of entering and participating in an imaginative story-world, a person lets go of, or at least may hold more loosely, his or her old patterns and meanings, and thus is open and receptive to trying out vicariously patterns of thinking and ways of looking and feeling that are unfamiliar and fresh. Story listening has the potential to facilitate a different state of consciousness in the listener, at least temporarily, and in that altered state an openness may emerge that allows for new possibilities of being—possibilities that are predisposed to be in line with the experience of awakening and seeing the world nondually. (p. 603)

Although I cannot cite directly from students' learning logs, I can summarize the impacts of autoethnographic story-telling on one another in this course as the description in a popular children's book "Stellaluna" – "we are so different, yet feel so much alike, also, we can feel so different and be so much alike!" (Cannon, 1993, p. 28).

How might have the autoethnographic practice of teaching and learning contributed to students' sense of well-being? I will probably never know for sure. What I do know is that by opening up with my own stories and with my invitation to everyone to share, the teaching and learning space became blurred and united. I witnessed a strong community of human beings and learners forming during the short three week intensive Summer Institute. Here, I will share one anonymous comment in the course evaluation for this Curriculum Development course to illustrate my point.

Dr. Xia Ji humbly and courageously embodied qualities of anti-oppression and civic discourse in the Curriculum Development course, creating a vital learning community within the classroom space, both indoors and outdoors...This course allows one to reflect on the ecological self for sustaining well-being for self, others, and the earth which is rare in academia. Students explored their lived curriculum in creative ways that brought connections within the class that will be maintained as friendships into the future. Dr. Ji walks her talk in contributing to sustaining the well-being of all.

Another comment in the anonymous course evaluation referred to my teaching style as follows:

She created an atmosphere within the class that lent itself to learning. And the way the curriculum was negotiated and co-constructed by the instructor and the students worked out really well. . . . She is a great role model for teachers and she models what she teaches.

Finally, from what I witnessed as the course instructor, it was hard to tell the lines between education, spiritual nourishment, and well-being. It was humbling to teach this way, and I learned alongside the students. My understanding deepened of the course content, pedagogy, and most of all, each of the students as unique beings full of possibilities.

Since I was reminded of the healing and transformative power of autoethnography during the Eighth International Congress of Qualitative Inquiry in Urbana-Champaign in 2012 I have been engaging in autoethnographic writing regularly – almost daily – for personal and professional reasons. This practice keeps me awake and attuned to the “fountainhead”, the “fire”, and the life within me. It reminds me and enables me to live my being well one day at a time.

Conclusion

In this chapter I tried to make a case for what autoethnographic inquiry can do as an educational practice for education, spirituality and well-being at the individual and community levels. With my ongoing active engagement with autoethnographic inquiry over the last two years, but more so from living the first 40 years of my life as revealed through autoethnographic inquiry, I have come to a temporary conclusion that what is at the heart of both education and well-being is spiritual, meaning that it requires “innerworkings” (Cohen, Porath, Clarke, Bai, Leggo, & Meyer, 2012) and “an inner transformation” within each of us as individual human beings and as citizens of institutions and communities. It requires connection to ourselves as spiritual beings; it requires the human soul finding home and/or feeling at home in our being and in the “grace of great things” of this world (Palmer, 1997). Imagine how different our lives might be if we approached each day with an appreciation of ourselves and each other as spiritual beings. Placing spirituality at the centre of our lives opens a realm of possibility that leads to our deepest self (Cole, 2011, p. 1). I even go so far to suggest that education, spirituality, and well-being are one and the same.

Plainly speaking, this chapter is about the need for connecting education with well-being and spirituality through autoethnographic inquiry, about learning from personal narratives, which are stories about authors who view themselves as the phenomenon and write evocative narratives specifically focused on their academic, research, and personal lives (Berry, 2007, Goodall, 2006, Poulos, 2008, Tillmann, 2009, all as cited in Ellis, Adams, & Bochner, 2011). Personal narratives propose to understand a self or some aspect of a life as it intersects with a cultural context, connect to other participants as co-researchers, and invite readers to enter the author’s world – to “world-travel” (Lugones, 1987, p. 3), and to use what they learn there to reflect on, understand, and cope with their own lives (Ellis, 2004, as cited in Ellis, Adams, & Bochner, 2011).

Whether or not this sharing of my understanding along with two examples of my own educational experience and teaching practice have done enough to illustrate the potential power of autoethnographic inquiry in the attainment of true education – education for enlightenment (Bai, 2012, p. 63), or education as a spiritual journey (Palmer, 1993) – is up to the reader to decide. I hope that at least the possibility has been established for the reader that autoethnographic inquiry may offer to both writers and readers to shape and transform their identities and to lead to a new understanding of themselves, of education and well-being. I also hope that this chapter has shed light on the small but growing area of interest in spirituality in education, which has been “definitely under researched, but also severely misunderstood” (Abdi, 2011, p. xiii). In Palmer’s words, “what will

transform education is not another theory or another book or another formula but a transformed way of being [I would add ‘living’ in the world” (Palmer, 1997, p. 1).

To conclude, I like to quote O’Reilly (1998): “Some pedagogical practices crush the soul; most of us have suffered their bruising force. Others allow the spirit to come home: to self, to community, and to the revelations of reality” (p. 3). There is a saying in Chinese, 抛砖引玉 (Pao Zhuan Yin Yu), meaning that we attract jade by laying out bricks. I hope by offering my humble views, proposals and imperfect examples, others will offer something better to enhance our collective understanding of the three dimensions of being human: education, spirituality, well-being. There is tremendous potential in autoethnographic inquiry to connect these dimensions and to help us move towards true realities and infinite possibilities.

References

- Abdi, A. A. (2011) Foreword. In N. Wane, E. Manyimo, & E. Ritskes (Eds.), *Spirituality, education & society: An integrated approach* (pp. xi-xiii). Rotterdam, The Netherlands: Sense Publishers.
- Aoki, T. T. (1993). Legitimizing lived curriculum: Towards a curricular landscape of multiplicity. *Journal of Curriculum and Supervision*, 8(3), 255-268.
- Aoki, T. T. (2005). Teaching as indwelling between two curriculum worlds. In W. Pinar & R. L. Irwin (Eds.) *Curriculum in a new Key: The collected works of Ted T. Aoki* (pp. 159-165). Mahwah, NJ: Erlbaum. (Original work published in 1986)
- Bai, H. (2008). Out beyond the ideas of wrongdoing and rightdoing. *Complexity: An International Journal of Complexity and Education*, 5(1), 109-114.
- Bai, H. (2012). Education for enlightenment. In A. Cohen, M. Porath, A. Clarke, H. Bai, C. Leggo, & K. Meyer (Eds.), *Speaking of teaching . . . Inclinations, inspirations, and innerworkings* (pp. 63-82). Rotterdam, The Netherlands: Sense Publishers.
- Bai, H., & Cohen, A. (2014). Zen and the art of storytelling. *Studies in Philosophy and Education*, 33, 597-608.
- Bai, H., Scott, C., & Donald, B. (2009). Contemplative pedagogy and revitalization of teacher education. *Alberta Journal of Educational Research*, 55(3), 319-334.
- Cannon, J. (1993). *Stellaluna*. San Diego, CA: Harcourt.
- Clandinin, D. J. (2013). *Engaging in narrative inquiry*. Walnut Creek, CA: Left Coast Press.
- Chang, H. (2008). *Autoethnography as method*. Walnut Creek, CA: Left Coast Press.
- Chang, H., Ngunjiri, F. W., & Hernandez, K. (2012). *Collaborative autoethnography*. Walnut Creek, CA: Left Coast Press.
- Cohen, A., Porath, M., Clarke, A., Bai, H., Leggo, C., & Meyer, K. (2012). *Speaking of teaching . . . Inclinations, inspirations, and innerworkings*. Rotterdam, The Netherlands: Sense Publishers.
- Cohen, A. (2006). *Attending to the inner life of an educator: The human dimension in education*. Doctoral dissertation, University of British Columbia.
- Cohen, A., & Bai, H. (2008). Suffering loves and needs company: Buddhist and Daoist perspectives on the counsellor as companion. *Canadian Journal of Counselling / Revue canadienne de counseling*, 42(1), 45-56.
- Cole, S. (2011). Situating children in the discourse of spirituality. In N. Wane, E. Manyimo, & E. Ritskes (Eds.), *Spirituality, education & society: An integrated approach* (pp. 1-14). Rotterdam, The Netherlands: Sense Publishers.

- Ellis, C. (2003). *The ethnographic I: A methodological novel about autoethnography*. Walnut Creek, CA: AltaMira Press.
- Ellis, C. (2009). [Review of the book *Autoethnography as method*, by H. Chang]. *Biography*, 32(2), 360-363.
- Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: An overview. *Forum: Qualitative Social Research*, 12(1). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/1589/3095>.
- Ellis, C., & Bochner, A. P. (2000). Autoethnography, personal narrative, and personal reflexivity. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.; pp. 733-768). Thousand Oaks, CA: Sage.
- Falkenberg, T. (2013, November). *Developing an index of well-being for schools as communities and places of public education: The notion of well-being*. Paper presented at the 2nd Interdisciplinary Conference on Educating for Sustainable Well-Being: Well-Being for Children and Youth, University of Manitoba, Winnipeg, Canada.
- Huber, J., Caine, V., Huber, M., & Steeves, P. (2013). Narrative inquiry as pedagogy in education: The extraordinary potential of living, telling, retelling, and reliving stories of experience. *Review of Research in Education*, 37, 212-242.
- Jason, L. A. (1997). *Community building: Values for a sustainable future*. Westport, CT: Praeger Publishers.
- Lee, M. (2006). *Cree (Nehiyawak) Teaching*. Retrieved from <http://www.fourdirectionsteachings.com/transcripts/cree.pdf>
- Leggo, C. (2012). Living poetically: A teacher's credo. In A. Cohen, M. Porath, A. Clarke, H. Bai, C. Leggo, & K. Meyer (Eds.). *Speaking of teaching . . . Inclinations, inspirations, and innerworkings* (pp. 89-108). Rotterdam, The Netherlands: Sense Publishers.
- Lugones, M. (1987). Playfulness, "world"-travelling, and loving perception. *Hypatia*, 2(2), 3-19.
- Naess, A. (1995). Self realization: An ecological approach to being in the world. In G. Sessions (Ed.), *Deep ecology for the 21st century: Reading on the philosophy and practice of the new environmentalism* (pp. 225-239). Boston: Shambhala.
- Orr, D. (2004). *Earth in mind* (2nd ed.). Washington, DC: Island Press.
- O'Reily, M. R. (1998). *Radical presence: Teaching as contemplative practice*. Portsmouth, NH: Boynton/Cook Publishers.
- Palmer, P. J. (1993). *To know as we are known: Education as a spiritual journey*. San Francisco: HarperCollins Publishers.
- Palmer, P. J. (1997). *The grace of great things: Reclaiming the sacred in knowing, teaching, and learning*. Retrieved from http://www.couragerenewal.org/PDFs/Parker-Palmer_The-Grace-of-Great-Things.pdf
- Palmer, P. J. (2000). *Let your life speak: Listening for the voice of vocation*. San Francisco: Jossey-Bass.
- Palmer, P. J. (2007). *The courage to teach: Exploring the inner landscape of a teacher's life* (2nd ed.). San Francisco: Jossey-Bass.
- Pinar, W. F. (2012). *What is curriculum theory* (2nd ed.). New York: Routledge.
- Rumi, J. a-D. M. (2004). *The essential Rumi* (C. Barks, Trans.; exp. ed.) New York: Harper Collins.
- Tolle, E. (1999). *The power of now: A guide to spiritual enlightenment*. Havota, CA: New World Library.
- Tuan, Y. (1999). *Who am I? An autobiography of emotion, mind, and spirit*. Madison: University of Wisconsin Press.
- Tuan, Y. (2004). *Place, art, and self*. Chicago, Centre for American Places.
- Tuan, Y. (2007). *Coming home to China*. St. Paul: University of Minnesota Press.

- Tuan, Y. (2012). *Humanist geography: One individual's search for meaning*. Staunton, VA: George F. Thompson Publishing.
- Tuan, Y., & Strawn, M. A. (2009). *Religion: From place to placelessness*. Chicago: University of Chicago Press.
- Wall, S. (2006). An autoethnography on learning about autoethnography. *International Journal of Qualitative Methods* 5(2), 1-12. Retrieved from http://www.ualberta.ca/~iiqm/backissues/5_2/pdf/wall.pdf
- Witter, R. A., Akun, M. A., Stock, W. A., & Haring, M. J. (1984). Education and subjective well-being: A meta-analysis. *Educational Evaluation and Policy Analysis*, 6(2), 165-173.

Chapter 9

Sustainable Livelihood Approach to Achieve Food Sovereignty in O-Pipon-Na-Piwin Cree Nation

ASFIA GULRUKH KAMAL, SHIRLEY THOMPSON, RENE LINKLATER
AND ITHITNO MECHISOWIN COMMITTEE

In the contemporary colonial regime of Canada food sovereignty for First Nation people is a necessary struggle for socioeconomic and cultural survival. The marginalization process of First Nation and other rural remote northern Manitoba communities, by Canadian government feeds into undermining food sovereignty and sustainable livelihood. These communities do not have access to natural resources or control over their development. O-Pipon-Na-Piwin Cree Nation (OPCN) has been fighting against colonial and post-colonial state hegemony by holding on to significant parts of its traditional food system and livelihoods. To revive their traditional food culture and restoring its declining economy, they started a community based food sovereignty program, Ithinto Mechisowin (food from the land). This article explores Ithinto Mechisowin program (food from the land), through the lenses of indigenous food sovereignty and sustainable livelihoods approach. The study has applied community based participatory methods and First Nation OCAP principles for data collection and analysis.

In the era of “contemporary colonialism” (Cornstassel, 2012), food sovereignty for Aboriginal peoples is a necessary struggle for cultural survival. In Canada, colonial and neoliberal policies have been detrimental to First Nation (FN) peoples’ livelihoods, as their traditional lands were taken over by settlers in the name of development (Ballard, 2012). These policies deprive and isolate them from land, culture, community, traditional food and medicinal resources (Anderson & Bone, 2009; Nue & Therrien, 2003). Access to natural resources and other assets are required for achieving food and livelihoods security but FN peoples are still being deprived access.

While Canadian policies are undermining FN access to natural resources, ongoing local community economic development to revive cultural knowledge and food access is increasing possibilities of restoring their livelihood assets (Thompson et al., 2011). In this article, we explore the role of the community-based country foods program in providing increased access to livelihood assets. We trace how past and contemporary colonial assimilation policies have damaged traditional livelihood security and created multiple and multi-generational socio-economic consequences. The sustainable livelihoods approach is applied to rural development worldwide yielding great insights. However, this approach has seldom been applied to consider food sovereignty in the context of Aboriginal communities in Canada. Sustainable livelihood and food sovereignty analysis is

undertaken for a country food program at O-Pipon-Na-Piwin Cree Nation (OPCN). OPCN is a remote northern Manitoba FN reserve community.

Food Sovereignty

The Declaration of Nyéléni defines food sovereignty as: “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods and their right to define their own food and agriculture systems” (International Planning Committee for Food Sovereignty, 2007, p. 1). Food sovereignty connects people to land and challenges colonialism creating potential to provide indigenous peoples more cultural, social and political freedoms. A food sovereignty analysis looks at the agency and structure of local people in ownership over the food system in addition to considering whether they have sufficient access to local and culturally appropriate food (Wittman, Desmarais, & Wiebe, 2011, p. 87).

The indigenous and peasant organizations initiating the food sovereignty movement prioritized protection of their territory and the need for land redistribution (Altieri, 2008; Holt-Giménez, Patel, & Shattuck, 2009). The movement considers land as a place where ecological and social reproduction takes place (Menser, 2014; Pimbert, 2009). Discussing food sovereignty Pimbert (2009) says,

Comprehensive agrarian reforms need to consider ‘territory’ as a more inclusive and important concept than mere ‘land’ and, with this, the right to self-determination of indigenous peoples in their territories. (p. 14)

The indigenous food sovereignty concept resonates with the “self-determination of indigenous peoples in their territories”. Actions and slogans of the British Columbia food system network and the Idle No More movement show the need and hope for indigenous sovereignty.

Indigenous Food Sovereignty and Sustainable Well-Being

Indigenous food sovereignty is integral to the indigenous food system, health and well-being (Corntassel, 2012; Indigenous Food System Network, 2014). While food sovereignty is peoples’ control over their food system (Wittman et al. 2011), indigenous food sovereignty depends on successful knowledge sharing about sustainable food systems (Turner, Ignace & Ignace, 2000). The Indigenous Food System Network (2014) identifies four distinct characteristics of indigenous food sovereignty, namely that: a) food is sacred, spiritual and a gift from the creator; b) food harvest is collective and participatory; c) consumption of locally harvested and produced traditional food brings ownership and self-determination; and d) valuable against colonial law and policies.

Indigenous food sovereignty is also based on the Aboriginal worldview that perceives land as living (Morrison, 2011). The Aboriginal worldview acknowledges land as a sacred, resourceful and shared space where people feed each other and pass on knowledge for a better future (Alfred, 2009). Land is more than a space to harvest and produce food for indigenous people— it is identity and something sacred. Land is shaped from freedom of democratic entitlement for a dignified life on earth. Land is not to be “stripped, taken apart or desecrated, nor should boundaries of property (ownership) be placed up on her” (Verney, 2004, p. 134). Rather than owning land, many indigenous peoples’ relationship to land is based on active stewardship and reciprocity (Corntassel, 2012).

In Canada, Aboriginal peoples' livelihood is built around their ability to manage, practice and access to land and land-based/country food resources. The process of their sustainable well-being is integrated to this food system (Corntassel, 2008). According to Corntassel (2008), every day practice of knowledge transmission is key to cultural continuity, which keeps the food system connected with individuals, households and communities. In other words, traditional livelihoods of Aboriginal people are sustainable when they are connected to land economically, culturally and environmentally. As Corntassel (2008) explains, sustainability is connected to "the transmission of traditional knowledge and cultural practices to future generations" and for maintaining traditional language, culture, family and livelihood, the constant connection to "natural world (i.e. gathering medicines, hunting and fishing, basket making, etc.)" is essential (p. 118). Indigenous scholars argue that it is the interconnectedness and inherent practice of maintaining sustainable food system that made indigenous people challenge the inequities of colonial policies (Corntassel, 2012; McDonald, 2000).

Colonization and Food Insecurity

Aboriginal peoples in Canada were deprived of their rights to access culturally appropriate food by colonial policies. Their traditional culture and customs were undermined by the colonial government (Anderson & Bone, 2009; Nue & Therrien, 2003). With centuries of colonial oppression, the social, economic, educational and most importantly, health conditions of the FN population have become dire. This was not their situation in pre-colonization (Hungry Wolf, 1996). FN were able to lead a healthy and hearty life based on their sustainable subsistence economy, traditional knowledge and culture. FNs had access to natural resources. The land and water resources were renewable that fostered this economy applying the common property concept (Nadasdy, 2008).

Economic and ecological damage to FN communities are a result of institutional rules enacted through the Indian Act for the Canadian FN population and the "maldevelopment" (Shiva, 1989) that resulted in many industrial projects, including hydro development, on FN lands and resource areas (Mascarenhas, 2012). This process created a cycle of poverty and health problems in northern Manitoba FN reserve and non-reserve communities. The rise of colonial enterprise gradually expanding the capitalist mode of production by controlling fur trade followed by taking over land by treaty settlements and Indian Act sheds lights on gradual development of "institutionalized poverty" (Hungry Wolf, 1996, p. 79) through resource extraction (Anderson & Bone, 2009). Contemporary colonial enterprise continues the process. With the massive damming for hydropower, the FNs "life in harmony with nature" turned out to be "harder than ever to locate" (Hungry Wolf, 1996, p. 79). Kellough (1980) argues that colonialism is embedded within many kinds of colonial instruments, which were produced to hinder the natural subsistence economy of the local FN people.

Canadian Bill C-45, passed into law in 2012, can be considered as an addition to the Indian Act (Wotherspoon & Hansen, 2013). The Bill has proposed changes to the Indian Act, involving changes to land and water resource management on FN reserves which will provide Canadian federal government more control over reserve land and water resources (Wotherspoon & Hansen, 2013).

Indigenous food sovereignty justifies peoples' right to livelihood and country/traditional food. Sustainable livelihoods around food build the capacity of the community. In this context we apply the sustainable livelihood approach to understand how FN communities living under colonial policies can achieve well-being, reduce their vulnerability and challenge the discriminatory socio-economic situation imposed on them.

Sustainable Livelihood Approach

Sustainable livelihood approach developed as a framework used as a means to identify the context and complexities of livelihood and well being of rural people (Davies et al, 2008). The concept is defined as “the assets, the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by an individual or household” (Ellis, 2000, p. 10). This approach is described through four major factors. A sustainable livelihood approach:

- (1) Emphasizes that people live “within a vulnerability context” where they are “exposed to risks, through sudden shocks, trends over time and seasonal change” (Brockiesby & Fisher, 2003, p. 187);
- (2) Defines how individuals have a number of assets or capitals, which support them to compose their livelihoods. The assets are key to livelihoods are identified as natural, physical, human, financial, and social capitals;
- (3) Links these assets with people’s livelihood approaches which means the decisions and actions people take to fulfill or achieve livelihood outcomes;
- (4) Associates “policies, institutions and processes” responsible to shape “people’s access to assets and livelihood activities, as well as the vulnerability context in which they live” (Brockiesby & Fisher, 2003, p. 187). Overall, the approach examines that livelihood can be sustainable “when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base” (Chamber & Conway, 1992, p. 7).

The original theory of sustainable livelihood was criticized for not being a people- and community- centered approach (Brockiesby & Fisher, 2003; Chambers, 1987) and defining well-being only through the lenses of “market production, salaried employment, and cash income” (Davies et al., 2008, p. 56). This approach has been defined as “ethnocentric” and “reductionist” as it does not acknowledge the different strategies people practice to achieve livelihood security for example, hunting, fishing, land ownership, etc. (Davies et al., 2008, p. 57). However, environmental sustainability, participatory approach to development allied with acknowledgement of local peoples’ knowledge and insights of sustainable well-being was discussed to broaden sustainable livelihood and resources management analysis (Davies et al., 2008).

The approach has been successfully used to understand poverty, rural development and environmental resource management in communities around the globe (Brockiesby & Fisher, 2003). Recently this approach was applied to food sovereignty and the community economic development context of FN communities in Canada (Thompson et al., 2012). Scholars have taken a historical approach to address the deep-rooted issues of colonization (Ballard & Thompson, 2013; Davis et al., 2008; Thompson et al., 2012). Studies have attested that livelihood analysis can be applied at the community and household levels to assess the policies causing poverty, food insecurity and underdevelopment on FN reserves (Ballard, 2012; Ballard & Thompson, 2013; Thompson et al. 2012). According to Sen (1983), food insecurity occurs when there are some changes in a person’s “endowment e.g. alienation of land, loss of labour power, ill health” or in “exchange entitlement (e.g. fall in wages, rise in food prices, loss of employment, drop in price of foods)” (as cited in Thompson

et al. 2012, p. 48-49). Referring to this quote from Sen, Thompson et al. (2012) argues colonial institutional structures and processes undermine FNs on multiple levels to alienate them from land and food resources.

Sustainable livelihood assets of FN communities differ greatly from those in other communities in Canada. The same year Canada placed number one on the Human Development Index (HDI), FN peoples' living on reserves ranked sixty-third on this same index (Cooke, Beavon & McHardy, 2004). This HDI, which is a composite analysis of life expectancy, education and economic indices intended to capture complexities of human capabilities and livelihood well-being, indicates the endowment sets or assets are very low in FN communities generally. This ranking alludes to Canada's FN people having poor living conditions and high food insecurity comparable to the Third World.

Methods and Study Area

The study applied community-based participatory research (CBPR) guided by OCAP (ownership, control, access, and possession) principles. Community-based participatory research is a research approach that inspires equal participation of research partners with "underlying goals of social change" (Castellano, 2004, p. 1394). OCAP principles, approved by Steering Committee of the FNs Regional Longitudinal Health Survey in Canada, are research guidelines set to enhance FN peoples equal participation in research process. The guidelines suggest common ownership and possession of research information conducted with FN people (Schnarch, 2004). Both CBPR and OCAP principles are adopted in indigenous research with positive reviews for its bottom-up approach where FN participants share equal control and ownership of the research (Castellano, 2004; Petrucka et al., 2012; Schnarch, 2004).

The country foods project was inspired by the findings of the research on food security (Thompson et al). The project was started when we received approval from the University of Manitoba Ethics Board, OPCN band council and the community in 2012. The first author began her fieldwork in May 2012 after ethics approval to August 2013. We started the participatory research process with a number of focus groups discussing the challenges of starting a community-based country food program. We conducted focus groups, semi-structured interviews and participant observation during community gatherings throughout the fieldwork. Interview questions were articulated in an open-ended style based on peoples' experiences of food insecurity, flooding and other socio-economic challenges.

O-Pipon-Na-Piwin Cree Nation Background

O-Pipon-Na-Piwin Cree Nation (OPCN), (South Indian Lake community), was formed as a community in the early 20th century (Waldram, 1988, p. 117). Situated by Southern Indian Lake (see Figure 1 below), peoples' livelihood in the settlement was established around hunting, fishing, trapping (Waldram, 1985). Wild game was used mostly for domestic consumption (Waldram, 1985, 1988). Starting in 1942, OPCN had a commercial fishery famous for quality fresh water fish (Hoffman & Martin, 2012; Waldram, 1988). The community was food secure and had an active healthy lifestyle. OPCN elder Annie Spence who is 98 years old in 2014, shares stories about how

before the flooding, the community was known for the high number of centenarians who lived a long life on land-based culture. With an abundance of natural resources, community members had flourishing subsistence economy and longer life expectancy.

At present the settlement has a population of 767 (Statistics Canada, 2011). The community members are almost exclusively FN peoples. OPCN is about 130 km Northwest of Thompson and 64 km from Leaf Rapids by air. Like many other reserve communities in northern Manitoba, OPCN is deprived of adequate transportation, housing and health care services.

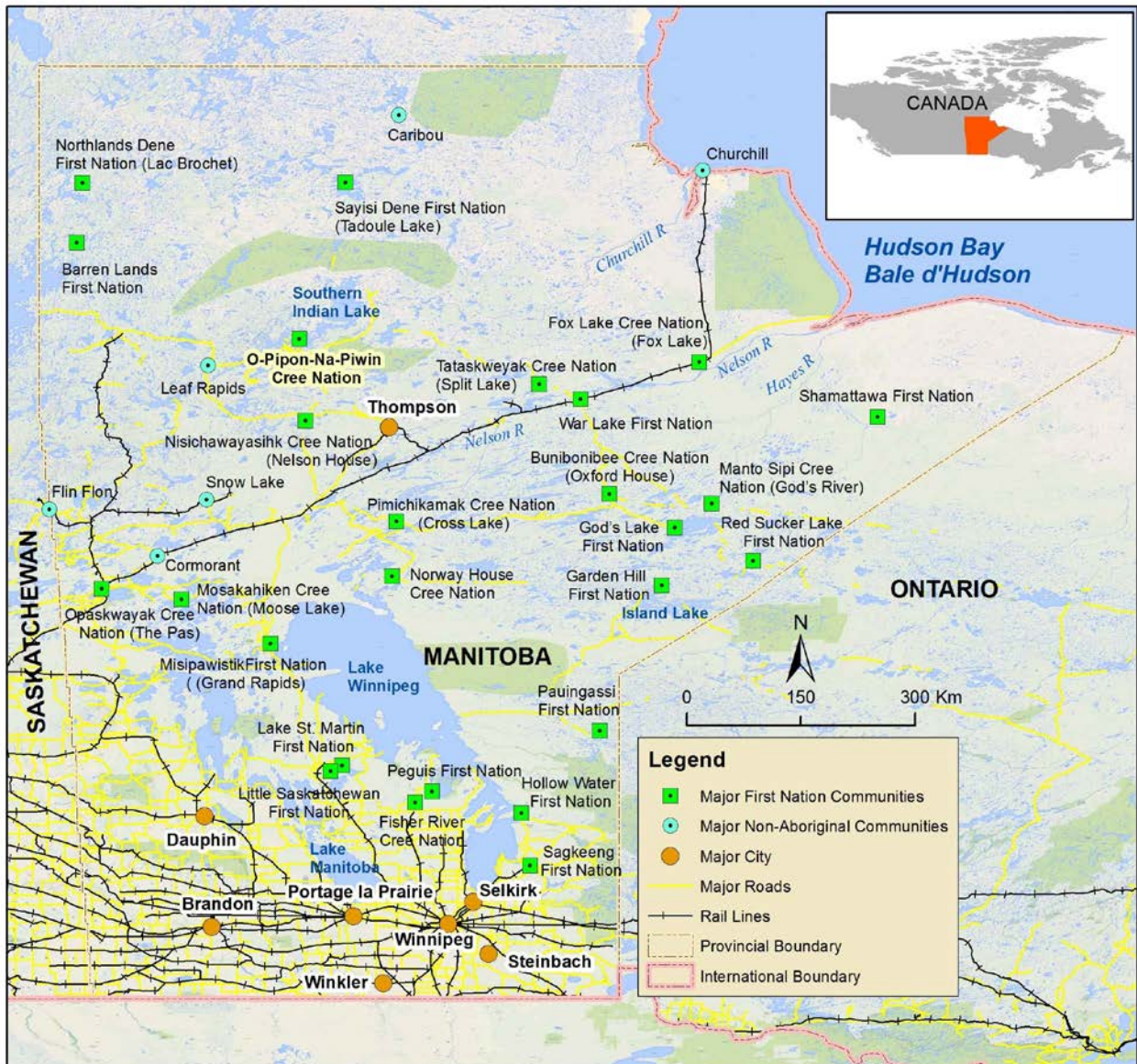


Figure 1. Study Area: OPCN.

Food Insecurity in OPCN Caused by Manitoba Hydro

OPCN lost its food resources and subsistence economy due to a flood caused by Manitoba Hydro (Hoffman, 2008). Manitoba Hydro, supported by the Manitoba provincial government, developed a hydroelectric dam called the Churchill River Diversion (CRD) generating station in 1966 (Hoffman, 2008). The CRD created more energy on the Churchill River through water storage on South Indian Lake and by reversing the flow of the Churchill River (Hoffman, 2008; Lienafa & Martin, 2010). The process diverted most of the water from Churchill River into the Burntwood and Nelson River systems and use it at Nelson River generating stations. In this way the project was cost effective for hydro since did not have to build plants on Churchill River (Hoffman, 2008). However, this resulted in the flooding of OPCN and other FN communities in the area.

Manitoba Hydro proceeded quickly with relocation, construction and then operation of water control structures and the Churchill River Generation station. In comparison, compensation and accommodation of OPCN people was much slower. Since OPCN was not recognized as an autonomous band during the flooding and were situated on Crown land, community members were vulnerable to the province's decision of forced relocation from traditional home/camping areas to a new settlement (Hoffman & Martin, 2012, p. 37). This new location lacked adequate infrastructure for housing, schooling or running water and sewage to their homes.

The CRD made fishing and transportation impossible for OPCN and surrounding communities (Linklater, 1994). Water control structures changed the direction of the rivers' flow and increased its speed of flow. It also caused massive debris due to flooding of wooded land, which made access for small boats to reach a road to gain access to other centres. As a ferry was not available until 1977, the lakes effectively cut off access to other communities. Like many other development projects in Canada, this project did not consider the long lasting environmental, cultural and economic repercussions to the indigenous communities living in and around the "target" area (Hoffman & Martin, 2012).

People suffered the property damage, destruction of their livelihoods and disruption of access to traditional diets and medicines. From the forced displacement to this day, OPCN suffers from housing shortages and lacks running water and sewage. The community currently has 155 houses for 767 people (Statistics Canada, 2011), with an average of 5.1 persons in each house. Compensation from Manitoba Hydro came 20 years after the flooding. Social, economic and cultural damages were severe by that time in OPCN (Hoffman, 2008). For 20 years in this forced relocation, the displaced community suffered tremendously without financial or other assistance to rebuild their lives and access their basic needs. The community's basic economy, their domestic fishing industry was damaged. Like many other flooded CRD communities in northern Manitoba, loss of livelihood, land, traditional food and medicinal resources resulted in a number of suicides in the community during this time. Research has found that the suicide rate in northern Manitoba flooded communities is ten times higher than the Canadian National average (Mikkelson, 2005).

The procedure for compensation and agreement was also not without bias. As Waldram (1984) states, "the legal representation of the affected community was either omitted or impaired through poor advice, funding restrictions, legal stalling tactics and the refusal on the part of the Government to disclose the necessary information to allow the communities to properly define their legal positions" (as cited in Hoffman, 2008, p. 121).

Ithinto Mechisowin (Food from the Land) Program

OPCN's Food Sovereignty Movement

As a community, OPCN strives for “empowerment and reflexive action” (Lienafa & Martin, 2010, p. 58). After the flooding, community food champions and elders returned to their traditional methods of intergenerational knowledge exchange; they taught youth to harvest food and medicines from the land, to a local food movement. Like many other FN communities in Canada, this best practice was culturally-appropriate and well-accepted as a way of celebrating life during all seasons in OPCN (Hoffman, 2008; Lienafa & Martin, 2010; Waldram, 1985). The CRD flooding disrupted this cultural practice and disconnected people from land and land-based food. Land was too damaged to sustain them. Since the sense of well-being and community was replaced by colonial intrusions and disrupted family and community life, the community needed a shift towards traditional health and well-being.

Kiwikapawetan (a summer food and medicine harvesting youth camp started in 2006), and Wassasihk (summer youth food and medicine harvest with a particular focus on traditional way of healing, started in 2005) are two major gatherings in OPCN that focusing on retrieving land-based culture and reconnecting with traditional food. Initiatives like these suffer because of costly transportation and lack of logistic support for hunting, fishing or trapping. For the revival of the lost traditional food economy, a year-round seasonal program was suggested by the community. Ithinto Mechisowin was proposed by community champions and University of Manitoba researchers based on this idea and considering that country food programs are effective at improving food security (Thompson et al, 2012).

Community Strategy for Livelihood Outcomes

Ithinto Mechisowin program trains youth on traditional food harvesting. They participate in hunting, trapping and fishing workshops. These workshops are guided and supervised by elders and food champions. Food collected from the workshop is distributed to single mothers, low-income families and elders who suffer the most in regards to health and food access. Also, a youth gardening program, managed through the school in nearby community Leaf Rapids, is collaborating and teaching the community on hands-on gardening skills. The community school, health complex¹, community band/local government, Fishermen's Association, Trappers' Association and community Aboriginal diabetes initiative (ADI) program have supported the program by providing in-kind resources.

From May 2012 to June 2013, the program completed its planning (assessing available resources), operationalizing (preparing food handling area as per Health Canada regulations and apply for funding) and implementation (schedule and start workshop, hire coordinator and start workshops and food distribution) phases. Food collected during the workshops is labeled and stored

¹ The community health complex is a major contributor of the program since its inception. All components of Tommy Thomas Memorial Health Complex and community care have been providing in kind support to training activities, particularly the Aboriginal Diabetes Initiative (ADI) Program. Besides the committee members, program finances and workshops are being supervised and evaluated by the health director of community health complex.

in freezers purchased for the program. This program prioritizes elders' needs and prepares smoked fish/meat or any other traditional food requested by the community elders.

Storytelling and knowledge sharing is an essential part of these workshops. During the workshops, elders shared stories to teach participants about respecting the land and the ways of life before flood. For example, elder Ross said during a beaver snaring workshop that, "our stories teach our children about respecting animals, land, trees, water and they listen. We tell them [that the] beaver works hard to stay alive. You need to work hard too. We teach them [that] beaver meat is medicine for your body". Community food champion and fisherman Steve, organizes muskrat trapping workshops in spring. He said, "Each food harvested from the land has a story that teaches something to us".

Food from the program is distributed to single mothers, low-income families and elders. Each household gets four fish fillets, four fish heads or two kilos of wild meat and seasonal berries and medicine if available. The program started distributing food in June 2013. From June to September the number of families receiving food from the program has grown rapidly from five families to 390 families. This indicates that program has been successful, is providing healthy food to food insecure people and giving them access to resources which they of which they were otherwise deprived.

Ithinto Mechisowin's collaboration with OPCN's Oscar Blackburn School is noteworthy. In 2009, OPCN's Oscar Blackburn School created a course called the Alternative Life Skill Class that teaches students about traditional diet, arts and crafts and other skills of land-based culture. The course incorporated the Ithinto Mechisowin's traditional food harvest trainings into the Alternative life skills credit program. For successful completion of the course, a student needs to take 55 hours of outdoor training with Ithinto Mechisowin. At present, 12 students from grade one to grade eight are participating in the course. This credit program has enrolled new students for 2014.

The community is taking ownership of the program as it creates a positive environment for the youth and the elders. Hilda Dysart, community elder and northern food champion said, "It teaches our youth to be happy and active, stay close to the family and serve the community responsibly. And harvest only what you need from the land."

In 2014, Ithinto Mechisowin scheduled many seasonal food-harvesting workshops (hunting, fishing, smoking meat or fish, berry and medicine picking etc.) The program also accumulated financial resources to hire a youth coordinator for the summer and teach youth about the traditional perspective of sustainable harvest.

Discussion

The Sustainable Livelihood approach is applied to analyze the effect of flooding and displacement and how that has impacted on loss and revival of livelihood assets and food sovereignty in OPCN. The status of the five sustainable livelihood assets in OPCN is:

- (1) Human capital comprises of to the abilities of well-being, knowledge and health of the people considering productivity of labour and physical capacity important for livelihood strategies. In OPCN human capital is low. Compared to most areas in Canada OPCN suffers from lower education attainment, high unemployment and disease rates (Statistics Canada, 2011). In 2009 a household food security survey

found 100% food insecurity rate OPCN which is higher than the rest of the Canadian population (Thompson et al., 2012);

- (2) Social capital means social resources (network, associations, relationships). It contributes to cooperative action and builds social ties supportive to livelihood strategies. OPCN's history of collective living and the present day community activities is built on cultural and social bonds. However, the colonial and existing discriminatory judicial policies, lack of human capital and increased racism create challenges towards social resources and weakens the ties (Ballard, 2012; Thompson et al., 2011);
- (3) Natural capital is peoples' access to and everyday practice of natural and land resources that helps resource flow to make useful for sustainable livelihood. OPCN has lost most of its natural resources due to hydro flooding. Besides like many other northern Manitoba reserve communities they do not have any regulatory rights to their resources from water and land (Ballard, 2012; LaDuke, 2002; Thompson et al., 2011). Continuous flooding by Manitoba Hydro, settler controlled development in the community are causing depletion of natural resources.
- (4) Physical capital means basic infrastructure and production equipment in a community. As a community OPCN suffers from housing shortages, unpaved roads, clean drinking water create additional barrier to peoples' livelihood and food security system.
- (5) Financial capital refers to people's access to the savings and credit, wages or income in a community. The loss of fishing industry in OPCN took a heavy toll the economy. People have lost their subsistence economy and more people are living on social welfare (Waldram, 1985). Additionally, OPCN reserve housing and land being Crown property, local people do not have right to leverage these resources to create credit or develop business (Ballard, 2012).

OPCN's Ithinto Mechisowin program applies an indigenous lens to achieve food sovereignty and increase livelihood assets. This program is a step to regaining sovereignty over FN resources and land by revitalizing traditional food and community responsibilities. The program success assures that the Sustainable Livelihood framework is an asset building approach that inspires community development in FN communities in Canada (Thompson et al., 2012).

The five key assets that were improved achieved after the Ithinto Mechisowin program in OPCN are:

- *Human capital*: Through the program, youth, elders and adult food champions are getting opportunities to practice land-based food harvesting and preparation skills, which is strengthening their traditional livelihood. The Ithinto Mechisowin program creates institutional support for sharing transferring indigenous knowledge. The vision for the program has been to strengthen knowledge transmission, through existing resources and institutions rather than building upon a new model. Table 1 shows the number of different capacity building workshops organized by Ithinto Mechisowin program. Both youth, elders are coming out in great numbers.

Type and number of workshops	Youth	Volunteer	Elder
Fishing (15)	55	11	9
Smoking (10)	20	6	6
Hunting (9)	14	4	6
Gardening (12)	31	10	3
Berry Picking (5)	13	2	0
Medicine picking (1)	10	2	1

Table 1. Number and Types of Workshops in the Ithinto Mechisowin Program

- Physical capital:* This program contributed to build a country food program house and centre with equipment (cutting boards, meat cutting machines, knives etc.) for program participants to harvest food from the land. As well as this centre established smoke houses, freezers to store food and community gardens for fresh produce during summer. This involved upgrading an existing building to provide a commercial and public kitchen space allowing for country food distribution. The space may be further modified to include a small restaurant and breast feeding centre – to provide much needed healthy food and a meeting place in the community, as well as support for breast feeding mothers.
- Social capital:* Harvesting food from the land creates community bonding and challenges the colonial ways of living. The success of the program heavily relied on the fact that key community members came together to teach land-based culture. The workshops provided through the program created knowledge transmission between elders and the youth. The program benefited from the collaboration between community institutions and non-indigenous outsiders, in this case the University of Manitoba.
- Financial capital:* The program started without any funding in 2012. The success, community bonding and networking with the University of Manitoba resulted in a partnership with interested non-governmental organizations who contributed funding to this project. Right now the project has sufficient financial resources to run many workshops throughout the different seasons of the year. The program is also creating employment opportunities for the community. Program members are training themselves to write proposals and produce deliverables, etc. However, generally most settler funds and programs are not accepting of wild meat and do not fund fishing. More advocacy is required.
- Natural capital:* The program provides opportunities to pay attention to local food production. The program started workshops for youth to know traditional methods of wildcrafting - tracking moose footprints and other wildlife, art of picking medicines and preserving the growing area etc. As a result their management and ownership to resources in their territories will become more pronounced. Regular and seasonal workshops are already starting to give people more access to land-based

food, Table 2 shows the amount of country food distributed from the program from June to October 2014.

MONTH	HOUSEHOLD	FAMILY MEMBERS	AMOUNT DISTRIBUTED 4 fish, 4 fish head, 2-4 KG meat per pack
JUNE	5	20	10
JULY	27	351	55
AUGUST	30	390	66
SEPTEMBER	35	385	63
OCTOBER	26	286	49

Table 2. Country Food Distribution in OPCN

An essential part of indigenous food sovereignty is cultural integrity (Morrison, 2011). Through the Ithinto Mechisowin program, OPCN has cultivated its strength of cultural identity and gained a community focused resurgence alternative to Canadian state hegemony. The community's desire for cultural integrity provided the possibility for the food sovereignty platform in OPCN. However, natural assets and wild food supply are still being undermined by lack of control over the land and water in their territory. Many people complained about Manitoba Hydro controlling water levels to maximize its revenue, against natural cycles. The fish eggs are exposed when Manitoba Hydro reduces water levels every spring during spawning season. This destruction of fish eggs reduces fish populations and thus food supply.

To reduce people's vulnerability, the Sustainable Livelihood framework suggests capacity building and gaining wide support networks. OPCN's Ithitno Mechisowin program benefitted from support from many sources (school, University of Manitoba, health complex). This program shows the success of the local food sovereignty and community economic development program is conditional on thoughtful planning, resource assessment, resource accumulation and the wise selection of allies in indigenous and settler communities. With the colonial power undermining community resources, through repeated flooding due to hydro-electrical dams (Ballard & Thompson, 2013) for example, support to rebuild community inspired plan for a collaborative project from settlers is required. However, capacity is important that their participation and political realization comes out of the lived realities of a remote, food-insecure FN community. As settlers they need to understand the existing privileges sustained at the cost of FN land and food resources. This process can help bring institutions to engage in community and to use social and political capital.

Conclusion

The Ithinto Mechisowin program is a community program formed through collaboration with many different OPCN organizations and the University of Manitoba. This program was created to improve food security, sustainable livelihoods and food sovereignty. This case study explores the potential of the sustainable livelihood approach as a means for participatory engagement of researchers, with local people and deepened perception of the subtleties of local socio-economic systems through a food sovereignty program.

Analysis of indigenous food sovereignty and sustainable livelihood indicated that the land-based harvesting program built capacity and assets in the community (Ballard & Thompson, 2013; Thompson et al., 2012). Community economic development based on traditional land based food harvesting practices produced sustainable livelihood assets, which is building capacity for future generations. Activities around country food program by distributing food to people in need is increasing food security and creating community bonding and knowledge transmission for all participants.

The Ithinto Mechisowin program has developed a local food economy that is alternative to the Canadian state hegemony and global food economy. OPCN's desire for cultural integrity resulted in the Ithinto Mechisowin program and food sovereignty platform in the community (Morrison, 2011). Here, this culturally-appropriate food program played the role of the mediator influencing all five livelihood assets. Following cultural traditions resides at the heart of the indigenous food system and contributes to the contemporary analysis of sustainable livelihood approach (Davis et al., 2008).

By linking to existing institutions and expertise, this food program is considered sustainable over the short term. However to be sustainable over the long term – the FN has to gain control over natural resources and land management in its territory. OPCN, which is heavily impacted by the Manitoba Hydro water control structure, should have the defining voice in determining the water levels of the lake it lives by. Manitoba Hydro is controlling water levels to maximize energy production and its revenue. Changing water levels every spring during spawning season reduces fish populations when fish eggs are exposed, negatively impacting the food supply and the community's fishing economy. Despite the detrimental effects, Manitoba Hydro's plans for the creation of new dams in northern Manitoba are continuing, exclusively for export purpose (Birnie, 2014; Kulchyski, 2013). A proper "mitigation" plan is required for the hydro flooded communities in northern Manitoba (Kulchysiki, 2014). Communities should receive equal revenue profit and be part of every decision making process concerning any mitigation plan to reduce destruction of natural resources and should be informed and consent to the development prior to its implementation.

The community based participatory research approach allowed the first author to learn about the value of land-based food from OPCN elders. Besides witnessing as a researcher, she helped with proposal writing, advocating, and worked towards approvals from Manitoba Conservation and Public Health Inspectors for this program. The collaboration involved advocacy, which was needed to obtain resources for OPCN and access to country foods. Most importantly, this collaboration witnessed, documented and created awareness of the acute socioeconomic discrimination of FN people in northern Manitoba (Thompson et al., 2011). The collaboration strengthens social capital and supports OPCN community economic development plan.

This research shows that programming in indigenous communities, when community inspired and reflective of their traditions, can be successful. Non-indigenous people have a role in building capacity where needed based on community goals. However, by settlers working as partners towards community goals, a small step would be made to return the freedoms that have been stolen and to use social and political capital more effectively to build support for FNs in settler society. The participation and political realization in community life by settlers should acknowledge that their benefits have been at the cost of FN land and food resources and is unjust. Future research and dialogue is needed to have FN peoples' right to land and water resources restored to ensure food sovereignty. Sustainable livelihoods and indigenous food sovereignty analysis can contribute to the required institutional change.

References

- Alfred, T. (2009). *Wasáse: Indigenous pathways of action and freedom*. Toronto: University of Toronto Press.
- Alfred, T. & Corntassel, J. (2005). Being Indigenous: Resurgence against contemporary colonialism. *Politics of Identity*, 9, 597-614.
- Altamirano-Jiménez, I. (2004). North American First Peoples: Slipping up into market citizenship? *Citizenship Studies*, 8(4), 349-365.
- Altieri, M.A. (2008). Small farms as a planetary ecological asset: Five key reasons why we should support the revitalization of small farms in the global South: Institute for Food and Development Policy. Retrieved from <http://www.foodfirst.org/en/node/2115>
- Anderson, R. B., & Bone, R. (2009). Integrating environmental and social sustainability: corporations and Aboriginal people and the Mackenzie Valley Pipeline. In R. B. Anderson & R. Bone (Eds.), *Natural resources and Aboriginal Peoples in Canada* (pp. 509-525). Concord, ON: Captus Press.
- Ballard, M. (2012). *Flooding sustainable livelihoods of the Lake St Martin First Nation: The need to enhance the role of gender and language in Anishinaabe knowledge systems*. Winnipeg, MB: Natural Resources Institute, University of Manitoba.
- Ballard, M., & Thompson, S. (2013). Flooding hope and livelihoods: Lake St. Martin First Nation. *Canadian Journal of Nonprofit and Social Economy Research*, 4(1), 43-65.
- Birnie, S (2014). *Manitoba Hydro really wants new dams*. Canada Vice. Retrieved from http://www.vice.com/en_ca/read/winnipeg-hydro-fresh-concerns
- Brocklesby, M. A., & Fisher, E. (2003). Community development in sustainable livelihoods approaches – an introduction. *Community Development Journal*, 38(3), 185-198.
- Canadian Community Health Survey (CCHS). (2011). *Household food insecurity, 2011-2012*. Retrieved from <http://www.statcan.gc.ca/pub/82-625-x/2013001/article/11889-eng.htm>
- Cattermoul, B., Townsley, P., & Campbell, J. (2008). *Sustainable livelihoods enhancement and diversification: A manual for practitioners*. Gland, Switzerland: IUCN/CORDIO/ICRAN. Retrieved from <http://www.eldis.org>
- Castellano, M. (2004). Ethics of Aboriginal research. *Journal of Aboriginal Health*, 1, 98-104.
- Chambers, R., & Conway, G. (1992). *Sustainable rural livelihoods: Practical concepts for the 21st century*. Brighton, UK: Institute of Development Studies, The University of Sussex.
- Chambers, R. (1987). *Sustainable livelihoods, environment and development: Putting poor rural people first*. Brighton, UK: Institute of Development Studies, The University of Sussex.
- Cooke, M., Beavon, D., & McHardy, M. (2004). Measuring the well-being of Aboriginal People: An application of the United Nations Human Development Index to Registered Indians in Canada, 1981-2001. In J. P. White, P. Maxim, & D. Beavon (Eds.), *Aboriginal policy research: Setting the agenda for change* (Vol. 1; pp. 47-70). Toronto: Thompson Educational Publishing Inc.
- Corntassel, J. (2012). Re-envisioning resurgence: Indigenous pathways to decolonization and sustainable self-determination. *Decolonization: Indigeneity, Education & Society*, 1(1), 86-101.
- Corntassel, J. (2008). Toward sustainable self-determination: Rethinking the contemporary Indigenous-rights discourse. *Alternatives*, 33, 105-132.
- Corntassel, J. (2003). Who is Indigenous? “Peoplehood” and ethnonationalist approaches to rearticulating Indigenous identity. *Nationalism & Ethnic Politics*, 9, 75–100.
- Davies, J, White, J., Wright, A., Maru, Y., & LaFlamme, M. (2008). Applying the sustainable

- livelihoods approach in Australian desert Aboriginal development. *The Rangeland Journal*, 30(1), 55-65.
- Ellis, F. (2000). *Rural livelihoods and diversity in developing countries*. Oxford, UK: Oxford University Press.
- Giddens, A. (1985). *The nation state and violence: Volume Two of a contemporary critique of historical materialism*. Cambridge, UK: Polity.
- Hoffman, S. (2008). Engineering poverty: Colonialism and hydroelectric development in Northern Manitoba. In T. Martin & S. Hoffman (Eds). *Power struggles: Hydro development and first nations in Manitoba and Quebec*, (pp.103-128). Winnipeg: University of Manitoba Press.
- Hoffman, S., & Martin, T. (2012). Enduring dreams: Social capital and hydro development in Northern Manitoba, *International Journal of Critical Indigenous Studies*, 5(1), 31-53.
- Holt-Giménez, E., Patel, R., & Shattuck, A. (2009). *Food rebellions! Crisis and the hunger for justice*. Oakland, CA: Food First Books.
- Hungry Wolf, B., (1996). *Daughters of the buffalo women: Maintaining the tribal faith*. Skookumchuck, BC: Canadian Caboose Press.
- Indigenous Food System Network. (2014). *Indigenous food sovereignty*. Retrieved from <http://www.indigenousfoodsystems.org/>
- International Planning Committee for Food Sovereignty. (2007). *Declaration of Nyelini*. Retrieved from <http://www.foodsovereignty.org/>
- Kellough, G. (1980). From colonialism to imperialism: The experience of Canadian Indians. In J. Harp & J. R. Holfey (Eds.), *Structured inequality in Canada* (pp. 343-377). Scarborough, ON: Prentice-Hall.
- Kulchyski, P. (2014). *Hydro workers need houses: First Nations citizens can live in trailers: Final submission to the clean environment commission on the Keeyask Generating Station*. Retrieved from <http://www.cccmanitoba.ca>
- Kulchyski, P. (2013). *Aboriginal rights are not human rights: In defence of Indigenous struggles*. Winnipeg, MB: ARP Books.
- LaDuke, W. (2002). *The Winona LaDuke reader: A collection of essential writings*. Penticton Indian Reserve, BC: Theytus Books.
- Liénafa, K., & Martin, T. (2010). Beyond the conflict: The reconstruction of the O Pípon-Na-Píwin first nation in Manitoba. *Geography Research Forum*, 30, 50-65.
- Linklater, E. (1994), *The footprints of Wasabkacabk: The Churchill River Diversion Project and destruction of the Nelson House Cree historical landscape*. Vancouver, BC: Simon Fraser University.
- Martinez-Torres, M., & Rosset, P. (2014, September). *Rural social movements and Diálogo de Saberes: Peasant territories, food sovereignty, and agroecology*. Paper presented at the conference on Food Sovereignty: A Critical Dialogue, Yale University.
- Mascarenhas, M. (2012). *Where the waters divide: Neoliberalism, white privilege, and environmental racism in Canada*. Lanham, MD: Lexington Books.
- McMullen, J. (2004). *Regenerating Indigenous health and food systems: Assessing conflict transformation models and sustainable approaches to Indigenous food sovereignty*. Victoria, BC: University of Victoria.
- Menser, M. (2014). The territory of self-determination, agroecological production, and the role of the state. In P. Andree, J. Ayres, M. Bosia, & M.-J. Massicotte (Eds.), *Globalization and food sovereignty*. Toronto: University of Toronto Press.
- Mikkelsen, D. (Director and Producer). (2005). *Green green Water* (Documentary). United States.
- Morrison, D. (2011). Indigenous food sovereignty: A model for social learning. In H. Wittman, A. A. Desmarais, & N. Wiebe (Eds.), *Food sovereignty in Canada: Creating just and sustainable food systems*. (pp. 97-113). Halifax, NS: Fernwood Publishing.

- Morrison, D. (2008). *Working group on Indigenous food sovereignty: Final activity report*. Retrieved from <http://bcfsn.org/>
- Mundel, E., & Chapman, G. E. (2010). A decolonizing approach to health promotion in Canada: the case of the Urban Aboriginal Community Kitchen Garden Project. *Health Promotion International, 25*(2), 166-173.
- Nadasdy, P. (2008). "Property" and Aboriginal land claims in the Canadian Subarctic: Some theoretical considerations. *American Anthropologist, 104*(1), 247-261.
- Notzke, C. (1994). *Aboriginal Peoples and natural resources in Canada*. Concord, ON: Captus Press.
- Neu, D., & Therrien, R. (2003). *Accounting for genocide: Canada's bureaucratic assault on Aboriginal People*. Halifax, NS: Fernwood Publishing.
- Patel, R. (2009). Grassroot voices, food sovereignty. *Journal of Peasant Studies, 36*(3), 663-706.
- Petrucka, P., Bassendowski, S., Bickford, D., & Goodfeather, E. (2012). Towards building consensus: Revisiting key principles of CBPR within the First Nations/Aboriginal context. *Open Journal of Nursing, 2*, 143-148. Retrieved from <http://www.scirp.org/journal/PaperInformation.aspx?paperID=20464>
- Pimbert, M. P. (2009). *Towards food sovereignty*. London, U.K.: IIED. Retrieved from: <http://pubs.iied.org/pdfs/14585IIED.pdf>
- Sen, A. (1983). *Poverty and famines: An essay on entitlement and deprivation*. Oxford: Oxford University Press.
- Schnarch, B. (2004). Ownership, Control, Access, and Possession (OCAP) or self-determination applied to research: A critical analysis of contemporary First Nations research and some options for First Nations communities. *Journal of Aboriginal Health, 1*(1), 80-95.
- Shiva, V. (1989). *Staying alive: Women, ecology and development*. London: Zed Books.
- Statistics Canada (2011). *Aboriginal peoples*. Retrieved from <http://www.statcan.gc.ca/pub/11-402-x/2011000/chap/ap-pa/ap-pa-eng.htm>
- Thompson, S, Ballard, M., & Martin, D. (2014). Lake St. Martin First Nation community members' experiences of induced displacement: "We're like refugees". *Refugee, 29*(2), 75-86.
- Thompson, S., Gulrukh, A., Ballard, M., Beardy, B., Islam, D., Lozeznik, V., & Wong, K. (2011). Is community Economic Development putting healthy food on the table: Food sovereignty in northern Manitoba's Aboriginal communities. *Journal of Aboriginal Economic Development, 7*(2), 14-39.
- Thompson S., Wiebe, J., Gulrukh, A. & Ashram, A. (2012). Analyzing food-related economic development in Indigenous communities in Northern Manitoba for impacts on food sovereignty, food security and sustainable livelihoods. *Canadian Journal of Nonprofit and Social Economy Research, 3*(2), 43-66.
- Turner, N. J., Ignace, M. B., & Ignace, R. (2000). Traditional ecological knowledge and wisdom of Aboriginal peoples in British Columbia. *Ecological Applications, 10*(5), 1275-1287.
- Verney, M. (2004). Authenticity. In A. Waters (Ed.), *American Indian thought*, (pp. 133-139). Malden, MA: Blackwell Publishing.
- Waldram, J. B. (1984). Hydro-electric development and the process of negotiation in Northern Manitoba, 1960-1977. *The Canadian Journal of Native Studies, 4*(2), 205-239.
- Waldram J. B. (1985). Hydroelectric development and dietary delocalization in Northern Manitoba, Canada. *Human Organization, 44*(1), 41-49.
- Waldram, J., B. (1988). *As long as the rivers run: Hydroelectric development and Native communities in Western Canada*. Winnipeg, MB: University of Manitoba Press.

- Wittman, H., Desmarais, A., & Wiebe N. (Eds.). (2011). *Food sovereignty in Canada: Creating just and sustainable food systems*. Black Point, NS: Fernwood Publishing.
- Wotherspoon, T., & Hansen, J. (2013). The “Idle No More” Movement: Paradoxes of First Nation inclusion in the Canadian Context. *Social Inclusion, 1*(1), 21-36.

Chapter 10

Sustainable Happiness: Assisting Pre-service Teachers to Understand the Relationship between Sustainability Education and Well-Being

CATHERINE O'BRIEN

The growing recognition that happiness and well-being are intertwined with sustainability is leading to new opportunities for enhancing happiness and well-being, sustainably – and also promising directions for assisting pre-service teachers to understand the relationship between sustainability education and well-being. The concept of sustainable happiness (happiness that contributes to individual, community and/or global well-being without exploiting other people, the environment or future generations) (O'Brien, 2010) offers an innovative perspective to re-invigorate sustainability education and is the overarching theme for a unique course in Cape Breton University's Bachelor of Education program. This chapter provides an overview of the sustainable happiness course with a discussion of implications for the future of education.

Those of us who are involved in pre-service teacher education have an extraordinary opportunity to engage with our students in exploring their emerging role as educators. We are part of their transition towards understanding their profession and reflecting on the purpose of education. We are encountering them at the outset of (hopefully) a long career that may take them into classrooms anywhere in the world or into the dozens of occupations that welcome Bachelor of Education graduates.

In Canada, we are doing an admirable job with teacher education. Results on international tests of student achievement rank Canada amongst the top ten countries (OECD, 2011) often discussed in the league of high performance leaders such as Finland (Hargreaves & Shirley, 2012; Sahlberg, 2010). Excellent teacher education is recognized as a factor that contributes to this commendable standard (Fullan, 2010; Hargreaves & Shirley, 2012). Is this good enough? Is it sufficient for our institutions to train teachers who can teach the basics well? For the countries and jurisdictions that are not witnessing high student academic success, we are in an enviable position. However, I am convinced that we could be doing far more, even leading further education innovation. Indeed, the social, economic, and ecological challenges that societies everywhere are grappling with demand creative solutions that are unlikely to evolve from coasting along in our comfort zone - teacher education programs offer an exceptionally important timeframe to establish new directions for

teachers and education. Successful teacher education also means that teachers understand, intellectually and emotionally, that their well-being, the well-being of their students, their community, and global well-being are intertwined – that sustainability is not simply a subject but a way of living, teaching and being – the essential ingredient in 21st century learning.

New directions in Finnish education support this view with a focus on well-being for all, forever (Hopkins, 2013). At Cape Breton University, our education department has made a commitment to sustainability education with the explicit intention of modeling sustainability in our courses and teaching practice. We developed a unique course for pre-service teachers that integrates sustainability education with positive psychology using the concept of sustainable happiness. It is a twelve-week elective course that has been offered annually since 2009. Topics range from an overview of positive psychology, consumer culture, positive education, Education for Sustainable Development (ESD), health education outcomes, as well as child and youth health and well-being. This chapter outlines the sustainable happiness course and implications for teacher education.

Rationale for Integrating Sustainability Education with Positive Psychology

Education systems do not exist in isolation, disconnected from the massive sustainability issues that impinge on human and environmental health and well-being. We live in an era in which authors such as Orr (2012) write about the “perfect storm” ahead brought about by the convergence of more severe climate change, deforestation, water shortages, species loss, and the acidification of oceans to name just some of the environmental challenges. He expresses skepticism concerning our species’ conviction to mobilize the political and individual will in time to avoid our own destruction. He states that “we have good reason to believe that this will be the closest of close calls, but we must hope that humankind will emerge someday from what biologist E. O. Wilson calls ‘the bottleneck’ chastened but improved.” (Orr, 2012, p. 48).

Traversing this bottleneck has been referred to as The Great Transition (Raskin et al., 2002). It is an optimistic perspective that hinges on humanity’s ability to shift from our unsustainable patterns, toward more equitable societies and governance structures that support sustainability, as well as a transition toward more sustainable lifestyles and livelihoods. Many authors posit that greater attention to happiness and well-being is at the heart of this transition (Abdallah, Michaelson, Shah, Stoll, & Marks, 2012; Helliwell, Layard, & Sachs, 2012; Kubiszewski et al., 2013; Royal Government of Bhutan, 2012; Solutions, 2011). This is in part due to the need to shift from a welfare policy focus towards well-being oriented policies (Hämäläinen, 2013). Additionally, a new economic paradigm has been recommended (Royal Government of Bhutan, 2012) through which economies contribute to sustainable well-being and happiness, in considerable contrast to the prevalent ethos of consumer societies that tend to equate happiness with consumption.

Formal and non-formal education have significant roles to play in this critical progression towards a more sustainable trajectory and given the severity and scope of the ecological and social challenges noted above, it would be myopic to focus assiduously on academic success while neglecting sustainability education. It would also be a gross error to shape a vision for 21st century learning competencies (C21 Canada, 2012) that overlooks sustainability and well-being. Certainly, teacher education programs have the potential to change this unsustainable pattern. However, a survey of Canadian faculties of education that investigated the implementation of Education for Sustainable Development (ESD) found that few faculties have explicitly implemented ESD courses

(Swayze, Creech, Buckler, & Alfaro, 2012). In fact, a UNESCO report on the worldwide progress toward ESD questioned whether education is contributing more to the problems rather than the solutions for consumer societies (United Nations Education, Scientific and Cultural Organization [UNESCO], 2005) and offered guidelines for reorienting teacher education to sustainability.

A considerable impediment for sustainability education is that much of the information can be distressing and many of us have been exposed to traditional environmental education “doom and gloom” messages, which aim to frighten the public to choose more environmentally-friendly behaviours (Kelsey & O'Brien, 2011). As a result, some people may have “tuned out” environmental messages. This problem-focused approach can provoke resistance from faculty and pre-service teachers to appreciate the positive and intriguing possibilities that are inherent in exploring sustainability.

As a sustainability educator, I have grappled for many years with questions around framing sustainability education in a light that would motivate individuals and organizations to embrace sustainable lifestyles and practices. I have wondered, how we can prepare pre-service teachers to incorporate sustainability education, while addressing the well-being factors that impact student success. How do we shift from a problem focus to a strengths focus? How can we equip student teachers to be resilient in their future professions?

These kinds of questions prompted me to investigate positive psychology research and to develop a new concept that reflects the interconnection between individual, community and global well-being. It is called “sustainable happiness,” defined as happiness that contributes to individual, community and/or global well-being without exploiting other people, the environment or future generations (O'Brien, 2010a). Sustainable happiness builds on the strengths focus of positive psychology while underscoring the fact that our happiness and well-being is intertwined with other people, and the natural environment.

Positive psychology is a natural fit with sustainability education, though positive psychologists who are interested in education have tended to focus on positive education and character strengths and virtues (Boniniwell & Ryan, 2012; O'Grady, 2013; Seligman, 2011). Educators who have recognized the extensive applications of positive psychology for the promotion of school health and student well-being have also adopted the phrase “positive schools” (Joint Consortium for School Health [JCSH], 2008; Morrison & Peterson, 2010). However, these documents rarely identify connections between happiness, well-being and sustainability.

Positive psychology looks at the character traits that help people to flourish and the characteristics of successful organizations. Many studies point to an association between happiness and physical and emotional well-being. Research has demonstrated that positive emotions correspond with numerous positive health outcomes (Davidson, Mostofsky, & Whang, 2010; Seligman, 2002; Steptoe, Wardle, & Marmot, 2005) including lower blood pressure, the inclination to seek out and act on health information, and a more robust immune system. Numerous studies have found that happy people tend to have healthy relationships (Diener & Seligman, 2004). Veenhoven (2006) completed an extensive survey of studies regarding the relationship between happiness and physical and mental well-being, concluding that the evidence “implies that we can make people healthier by making them happier” (Veenhoven, 2006, p. 6). Positive psychologists who study children and youth have found that character strengths such as love, gratitude, and hope are predictors of life satisfaction (Park, Peterson, & Seligman, 2004).

This growing body of evidence suggests that applications of positive psychology to schools and classrooms will contribute to curriculum and practices that foster student well-being and build skills that assist students (and teachers) to flourish. We are seeing further evidence of this through

research on health promoting schools (HPS) (Stewart-Brown, 2006). School boards are recognizing that student mental health is a key factor for student success (Toronto Catholic District School Board, 2011) and there is increasing recognition that social and emotional learning provides protective factors for mental health resilience (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2008). However, positive psychology is not traditionally integrated into the public school curriculum or teacher training despite the considerable merits of doing so (Conoley & Conoley, 2009; Seligman, 2011). Furthermore, positive psychologists (and educators) have, for the most part, overlooked the relevance of positive psychology for sustainability (O'Brien, 2008, 2012).

Benefits of Applying Sustainable Happiness to Teacher Education

With the dual challenges of sustainability education and the need for positive mental health instruction (Morrison & Peterson, 2010; O'Brien, 2012), it is ideal to have a course that assists student teachers to appreciate how their well-being is entwined with the health and well-being of other people and the natural environment. Discussions of happiness and well-being are a superb entry point for fostering healthy and sustainable lifestyles. Happiness is at the heart of who we are and what we do. But, in a consumer society, where consumption and happiness are often entangled, individuals confuse the “path to the ‘good life’ as the ‘goods life’” (Kasser, 2006, p. 200). Furthermore, student teachers (and their professors) can be caught up in this consumer mindset as well. While some educators may contend that it is not our job to teach happiness, efforts to teach sustainability are being thwarted by ubiquitous media messages that associate happiness with material consumption. This is compounded by the fact that many students are spending more hours on the three screens (smartphone, computer and television) than they are in school (Leatherdale & Ahmed 2011; Rideout, Foehr, & Roberts, 2010). Higher screen time usage appears to be associated with lower grades and students who report higher media usage also self-report lower personal contentment (Rideout et al., 2010; Tremblay et al., 2011).

Essentially, many of our education systems exist in consumer societies that have a tendency to reinforce individual lifestyles that are unsustainable *and* less likely to lead to sustainable happiness and overall life satisfaction. Therefore, one of the aims of offering a course in sustainable happiness to pre-service teachers is to foster reflection and transformation towards sustainable lifestyles that contribute to lasting happiness and well-being. A further aim is to instill a deep desire for new teachers to model sustainability and to engage in teaching practices that are aligned with health promoting schools (Morrison & Peterson, 2010; Stewart-Brown, 2006).

Sustainable Happiness Course

The Sustainable Happiness course incorporates readings regarding sustainability, education, positive psychology and health promoting schools. The students are pre-service teachers in the Bachelor of Education program at Cape Breton University. Most students range in age from 21-25 years old though there are generally several mature students in the program as well. The course has been offered online and face-to-face. Class size has varied from 18 to 50 students. The face-to-face course involves weekly 3-hour classes for twelve weeks. The course syllabus is available at: <http://sustainablehappiness.ca/university/>.

In addition to course readings, each week entails an out-of-class activity that prompts students to examine relationships between their daily life and the impact (positive or adverse) on themselves, other people and the natural environment. Some of these activities include a happiness interview, the completion of a 'Sustainable Happiness Footprint' chart, reflections on genuine wealth, shifting consumption [reducing consumption of non-renewable resources, changing consumption patterns towards more sustainable practices, or taking a 'techno-fast' (Louv, 2012)], drawing an 'interdependence map,' expressions of gratitude, explorations of 'happiness literacy,' lesson plan development, and a sustainable happiness project. The detailed description of these activities outlined below spans all of the offerings of the course since 2009.

Happiness Interviews

The first assignment requires students to interview the happiest person they know, modeled after the work of Foster and Hicks (1999). The purpose of the assignment is for students to determine their own view of happiness and how this is manifested in someone who strikes them as a happy person. The individuals who are interviewed have ranged from eight to eighty-two years of age. Typically, we discover that the "happy" people who were interviewed have made conscious choices about their happiness and well-being, often overcoming adversity. Subsequently, students compare their interview results with evidence from happiness research. For example, the students normally find that the happy interviewees appreciate their family, friends, natural environment, and other aspects of their 'genuine wealth' (Anielski, 2007). They are described by the students as thoughtful, generous, empathetic, optimistic, and resilient.

When asked to respond to the question, "what contributes most to your happiness?" one interviewee said:

My happiness stems from the people I surround myself with. I have great friends and a happy family who bring out the best possible side of me. My success plays a big part in my happiness, but I also find happiness when I see the success and happiness of the ones I love. Having positive social relationships and reaching goals I set myself are strong reasons why I am happy. Being healthy both physically and mentally also contributes to my every day happiness.

(Excerpt from happiness interview, 2013)

Another student interviewed her father and asked him what advice he would like to share about living a happy life. His response was:

It is important to accept things that you can't change. Maintain close ties and communication with those that you love. Don't worry too much about what people think and enjoy the things that make you happy.

(Excerpt from happiness interview, 2013)

Sustainable Happiness Footprint Chart

The 'Sustainable Happiness Footprint' chart (Figure 1) assists students to monitor their behaviour and emotional experience for one day and then reflect on what impact their activities had

for themselves personally, for other people, and the natural environment. The assignment also asks them to consider what opportunities exist for making different choices; what options they have for improving their own well-being, the well-being of their community, and the well-being of the natural environment. This assignment is intended to demonstrate that some of their activities may bring a fleeting experience of pleasure for themselves, but have adverse consequences for others. It also becomes evident that some actions that contribute to their own well-being (i.e. reducing consumption of fast foods) may have additional benefits, such as reducing waste. It is quite a simple activity but students tend to find it compelling because it reveals that in just a single day there are multiple decision points where they are making choices that contribute to, or detract from, well-being. It reinforces the opportunities that they have to be choice makers and change makers. An interesting adaptation of this activity would be to have student teachers explore a similar chart that investigates an “average” school day as a means to build awareness about the Sustainable Happiness Footprint for schools and education.



The **SUSTAINABLE HAPPINESS** chart

Time	Activity	Feeling	How it Affects Me	How it Affects other people	Affects on the environment
8:00	Breakfast, coffee, toast, cereal	rushed, distracted, thinking about day	didn't taste the food, healthy meal, better to have whole wheat bread	fair trade coffee, good for coffee workers; bread from farmers' market, good for local producers	fair trade coffee, good for env; local bread, not transported far; cereal, highly processed, transported long distance
8:40	carpooled to class/work	Enjoyed talking with friends	less expensive; less stress than driving alone; feel good about it	better for air quality; better if I could cycle or walk	better than driving alone; my best option for where I live

Figure 1. Sustainable Happiness Footprint Chart (Sample Chart)

Instructions: Choose one day this week to create your own log of activities. Fill in as much detail as you can. The chart on this page gives you a sample of what you might write. You may complete more than one day if you wish. Remember to answer the following question: What have I learned

about opportunities to improve my own well-being, the well-being of others, or the natural environment?

Genuine Wealth

Genuine wealth (Anielski, 2007) is a refreshing view of wealth. Anielski reminds us that the word 'wealth' is derived from two Old English words: *weal* (well-being) and *th* (condition). This means that the word 'wealth' was intended to mean 'the condition of well-being.' Genuine wealth is found in our relationships, nature, an appreciation of life, natural beauty, loving and laughing. Building genuine wealth can be as straightforward as taking time for family and friends, and enjoying life's simple pleasures.

Here is what some people have said in sustainable happiness workshops and presentations about what makes them genuinely wealthy:

It's my kids!
 Living in a great neighbourhood and having great neighbours.
 Feeling loved and appreciated.
 Being healthy to do the things I love.
 The beauty of the ocean.
 Living in a safe environment.

The inclusion of genuine wealth within the course complements readings about the impacts of hyper consumption (Hamilton & Denniss, 2005) as well as a discussion of "affluenza". We view a video on [teenage affluenza](#) and discuss the value of working with youth to identify how a consumer culture can be detrimental to mental well-being, lead to a sense of entitlement, and contribute to environmental deterioration.

The Sustainable Happiness course genuine wealth activity involves the following instructions:

1. List at least 10 ways in which you are genuinely wealthy.
2. Select three items from your list in #1 and answer these questions:
 - a) Do you tend to take these for granted?
 - b) Do you express appreciation for this wealth (to yourself, to others, through creative expression, through prayer, or other contemplative practice)? If so, how?
 - c) How does your life sustain this genuine wealth? Is there more you could do to sustain it? If so, how?
 - d) Is this the kind of wealth that you may want to increase? If so, how might you go about doing that?
3. How do you contribute to genuine wealth collectively? For example, consider how you contribute to genuine wealth where you work, go to school, in your community, household, country or globally.

One student expressed her thoughts like this:

I must admit that I have lain in bed a few Sunday mornings wondering what life would be like if I won the 649 [lottery]! I think that 'day dream' would play out differently now.

My measure of true happiness is ensuring I sustain solid relationships with my husband and children and maintain my health. Material items have been displaced further down the list.

(Student comment after completing genuine wealth activity, 2009)

Shifting Consumption

Recognizing that it is important for students to see themselves as choice makers - understanding the opportunities they have to make choices for more sustainable livelihoods, choices that enrich their relationships, choices that contribute to individual, community and/or global well-being - I intentionally build choices into the assignments. The Shifting Consumption assignment provides a list of options:

This week do one of the following,

- a) Reduce your consumption of non-renewable resources
- b) Make one day a “Buy Nothing” Day
- c) Shift your consumption of non-renewable resources toward renewable resources
- d) Take a “Techno-Fast” (Louv, 2012) and turn off your electronic devices for a period of time that is appropriate for you.

Students who select the Buy Nothing Day option for their assignment often recount that they expected it to be an easy assignment and then discover that they frequently engage in unconscious daily consumption. For some, it is a welcome opportunity to notice where they might also save some money:

For the shifting consumption activity, I had decided early on I would have a “Buy Nothing” day because I felt it would be the easiest to do and I would see the money I would save, which would influence my future spending. However, not buying anything for one day proved more difficult than I had originally thought. For close to one week I tried different days to go without buying anything, but it always seemed like I ended up buying things without even realizing I was spending!... This made me realize how unconsciously I spend money; if I had to put forth such an effort to make myself not buy anything, how often do I make purchases without even thinking about it? ... I came to the conclusion that much of our spending is senseless and wasteful, and it is activities such as this one that get people thinking about the effects of this spending. I think activities such as this shifting consumption activity are just one step toward changing society’s attitudes toward spending, because I know it has changed my attitude and made me more aware of my actions.

(Student comment after completing Buy Nothing Day activity, 2012)

Interdependence Map

An Interdependence Map is used to chart the web of interconnections between the student, other people, the natural environment, the resources they use, as well as historical and cultural events that have shaped who they are today. The concept of an interdependence map can easily be grasped by creating such a map for something as common as a piece of paper. Consider what needed to exist

or to be invented to create a piece of paper. This video on the sustainable happiness web site explains the mapping process further: <http://sustainablehappiness.ca/university/>.

Interdependence map for paper. Students generally suggest that trees, sun, soil, and water are needed for paper made from trees. Then they add that machines for tree cutting had to be invented, logs are hauled and trucks were made to transport the logs (you could trace backwards as far as the invention of the wheel!). Of course there are factories, factory machines that needed to be invented, energy to run the machines, people, tons of water, and chemicals. Students suggest various connections to stores where paper is bought and trucks to convey the paper from the factory to the store where people work selling the paper. And finally, there is the consumer who purchases the paper.

This map can help students to respect the value of a single piece of paper, potentially inspiring them to conserve paper use and to recycle discarded paper. The next step involves the creation of their own personal interdependence map taking into consideration how their basic needs are met, their relationships, their access to education, their gender, ancestors, hobbies, etc. Students are instructed to provide considerable depth of detail for at least three strands in their map. The final step in the assignment asks them to consider one thing on the map that they could change to enhance their well-being, the well-being of someone else, or the natural environment. For example, a student who drinks coffee daily could consider the broader well-being connections of selecting fair trade or direct coffee.

Gratitude and Appreciation

Positive psychology literature consistently affirms the value of expressing gratitude and appreciation (Lyubomirsky, 2007; Watkins, 2004). Frankly, I was skeptical about the merit of the gratitude activities that were discussed in the literature but decided I should experiment with the idea to learn for myself. The Sustainable Happiness course gratitude assignment aims to appeal to diverse learning styles so students are given the option to express gratitude through a letter, a journal or through artistic expression such as poetry, visual arts, and songwriting. Most students opt for the letter and write to parents, grandparents, friends, significant others, and teachers who have had a deep impression on them – often with quite profound and moving results. My students have told me repeatedly that writing a gratitude letter is one of the best assignments they have ever had.

This assignment was very enlightening in that before now, I did not realize how often I took my family members for granted. It's amazing how offering a simple "thank you" and a hug can go a long way to show your appreciation. It might not be something you think will have a huge impact, but it does.

(Student comment after completing Gratitude activity, 2012)

Happiness Literacy

The Sustainable Happiness course also explores social and cultural influences on our views of happiness with particular attention to the media. Students analyze a television commercial, magazine advertisement or popular song that portrays happiness to determine the overt and underlying

messages about happiness. This activity is important for them personally but also for the insights that may be gained about the impact of the media on the values of their future students.

For example, I facilitated a youth leadership weekend workshop with 60 seventeen and eighteen year-olds and we explored their understanding of happiness. I asked the question: who or what teaches us about happiness and has that changed from the time you were a child? Their response was that their parents had the greatest influence on them during their childhood – and to some extent their toys, pets and the television show *Sesame Street*. Now, as young adults, the media and their peers have the strongest influence. One of the students commented, “But it’s harder now, it’s more complicated.” Other students nodded in silent agreement and seemed to share this sentiment. From the nonverbal communication of the group, it was evident that there was strong resonance with this statement, so we spent twenty minutes on an activity called “Natural Highs” (also an activity in the Sustainable Happiness course). A Natural High can be anything that uplifts you, brings delight, a smile, a feeling of connection and contentment – naturally. Over the years, I have gathered hundreds of examples of Natural Highs: the first snow fall, the smell of freshly cut grass, the sound of an iceberg breaking up, picking berries, the sound of rain on a tin roof, a baby’s laughter, and so on. One parent said, “making eye contact with my son. It doesn’t happen very often because he’s autistic.” Another enchanting Natural High was, “having a forest bath” which meant walking into a forest and immersing oneself in the sensual experience, being completely present.

At the youth workshop, I invited the students to list at least ten of their Natural Highs on a piece of paper and then share one or two with a partner. The floodgates opened when I asked who wanted to tell the whole group about their Natural Highs. One after another, they shouted out their Natural Highs. There were giggles, smiles, laughter and clear feelings of buoyancy in the room. In a very short span of time, we had generated 600 Natural Highs - 600 *uncomplicated* ways to experience positive emotions! To a great extent, experiencing Natural Highs involves paying attention to the sensual experience of the world around you such as feeling the sun on your face, or actively creating connections with oneself and others by going for a walk, for instance. For youth who are so often focused on one of the three screens, opportunities to access these Natural Highs can easily be missed.

Happiness literacy reveals how we are being socialized to view happiness in a consumer society, which often associates it with material consumption. Appreciating Natural Highs offers a counterpoint.

Sustainable Happiness Project

The culminating assignment for the course is the sustainable happiness project, which is quite open-ended. The student designs and carries out a short project that contributes to personal well-being, community well-being and/or global well-being. Projects have ranged from reducing the use of plastic water bottles by utilizing a reusable water bottle (the student calculated that her personal savings would amount to more than \$800/year); shifting to sustainable modes of transportation such as walking, cycling, transit and carpooling; neighbourhood clean-ups; initiating workplace recycling; converting from disposable to cloth diapers; establishing a cell-phone free zone for a weekend; a series of family games nights. One student gathered her daughters and girlfriends to pick up litter and they called themselves “Girls Against Garbage” or GAG. Another student created a wind turbine from recycled materials and then gave it to a friend. An entire family was the focus of another project as the student engaged her family in a weeklong Buy Nothing contest. Incidentally,

the family member everyone thought was most likely to have the poorest record (viewed as a shopaholic) won the contest.

It is unlikely that the 'shopaholic' chose to change her consumption patterns after the Buy Nothing week contest, however, reports from students who have taken the sustainable happiness course suggest that the cumulative impact of the course activities leads to further sustainable lifestyle choices. For example, one student who described himself as an avid online shopper, surfing for deals everyday, established a new standard for himself to curb his spending habits. He decided that every time he had an impulse to purchase something online, he had to wait twenty-four hours. By the following day, he figured that the impulse would subside. His contingency plan was that on the occasions when he still felt compelled to purchase, he would have to seek out environmentally-friendly options for the product *and* defer the purchase for a month. Essentially, he created a plan to become a mindful consumer.

Characteristically, students identify something that they want to investigate further or a lifestyle choice that they want to try out for their sustainable happiness project. An Aboriginal student initiated an after-school program to teach Mi'kmaq to young children. A student whose project was a healthy lifestyle challenge for her family wrote:

I can honestly say to me this project made me feel so good knowing I was doing something great for my family and their health. This project opened my eyes tremendously, and I can't believe how easy it was to completely neglect our health and totally not notice doing it. I also can't believe how hard it was to get back into the routine of healthy living. The changes we have made as a family are definitely here to stay and every one of us can honestly say overall we genuinely feel better and this is just the start to our new way of life. We are already brainstorming phase two of our healthy lifestyle challenge.

(Student comment on her behaviour change during the sustainable happiness course, 2012)

Lesson Plan

The final course assignment requires students to create a lesson plan that links sustainable happiness with at least one of the education outcomes that they will be required to teach in an elementary, junior high, or high school class.

Lessons Learned

The Sustainable Happiness university course exemplifies transformational learning. Most students voice the realization throughout their assignments that an individual's actions *can* and *do* make a difference. They recognize that individual happiness and well-being are not isolated experiences, and that flourishing is not only about how one person thrives but also how other people and our planet thrive. As student teachers, this is a vital lesson to bring to their new profession. Some of the most significant transformations occur with students who entered the course with the assumption that, based on its name, it would be a lightweight or silly course. For instance, one

student candidly described the positive experience of writing a gratitude letter to a friend, which he initially thought was a trivial activity.

I thought at first that I would have trouble writing this letter, because I wasn't taking it seriously. After I started writing though, things got a lot more 'real' than I thought they would. While I was writing, I had a very emotional experience. I felt privileged to have someone that was always willing to drop everything and talk to me if I needed it. It made me realize how much I took her for granted. It really put things into perspective for me... I think that by actually showing appreciation for someone is one of the best 'pick-me-ups' that is free. Especially if it is a genuine love/care, the emotions involved just make you shine on the inside. I feel like sometimes it might seem cheesy to spill your feelings in a gratitude letter. When you really mean it, and the other person knows you mean it though, it can be very special.

(Student comment after completing Gratitude activity, 2013)

Another important transition for pre-service teachers follows from the understanding that they can address sustainability education through a practice that is both realistic and hopeful. They have learned that they can be both change makers and choice makers. The course also provides a context to question the significance of making sustainable choices. For example, one student questioned whether the positive choice to purchase fair trade coffee in a reusable mug really matters. It is a candid question. Given the vast scope and complexity of environmental degradation, human suffering, and unsustainable lifestyles, she is not alone in wondering if it matters if one person recycles, carpools, buys local produce and fair trade products. These kinds of questions about the significance of individual and collective actions lead to further discussions about the role of teachers and education for sustainable societies.

One of the most surprising and unanticipated outcomes of the Sustainable Happiness course is that many students elect to engage in healthy lifestyles even though the course content does not focus a great deal on conventional health information. Thus, it seems that exploring readings on happiness and sustainability can motivate students to take greater care of their health, and the health of their family and friends:

For my sustainable happiness project, I chose to contribute to my own individual well-being through a long-term sustainable happiness project. I chose to work on my own individual well-being because until I feel like I am living a healthy lifestyle, I cannot try to teach other people how to live a healthy lifestyle... this is a great sustainable happiness project for anyone to do to increase their quality of life. A lot of people do not realize that by just making a small change in their diet, exercise, and sleep that it can have a big impact on their well-being.

(Student comment after completing sustainable happiness project, 2011)

Further Applications

The success of the sustainable happiness course for teachers has led to diverse offerings in other settings. The nursing department at Cape Breton University now incorporates sustainable happiness into its program within a course on Health Promotion and Learning. An online [sustainable happiness course](#) for the general public was developed following requests from many sectors. That

course has been used as directed study credits by Stanford University. Health professionals have also signed up for the online course with the aim of determining how it could be applied in wellness activities. Green Communities Canada led a pan-Canadian project on School Travel Planning called [Children's Mobility, Health and Happiness: A Canadian School Travel Planning Model](#). The sustainable happiness component of the project involved surveying parents and children about their emotional experience on the trip to school. The study found that children who actively commute to school express more positive emotions than those who travel by motorized transportation (Ramanathan, O'Brien, Faulkner, & Stone, 2014). The development of the [Sustainable Happiness and Health Education: Teacher's Guide](#) (O'Brien, 2010b) was also made possible through this project. In May of 2014, the first Sustainable Happiness Certificate was launched at Dawson College in Montreal, with the support of the Earthvalues Institute, CCS Community Services, Dawson College, and Cape Breton University.

Implications for Teacher Education

It is widely recognized internationally that a transformation of education is needed for the benefit of our students and for society (C21 Canada, 2012; Fullan, 2010; Hargreaves & Shirley, 2012; Hopkins, 2013; Robinson, 2009, 2011; Swayze et al., 2012; UNESCO, 2005). It is challenging for teacher education institutions, educators and administrators to determine what vision to follow. If we embrace 21st century learning competencies, we will supposedly prepare our students to be successful and competitive in a rapidly changing global context. Yet these competencies do not define success, nor is sustainability integral to the vision – though at the time of this writing C21 Canada is striving to incorporate sustainability. One could argue that a 21st century learning vision without ESD would be modernizing education to support an unsustainable trajectory. We might also question if it is sufficient to incorporate the ESD competencies put forth by (United Nations Economic Commission for Europe [UNECE], 2012) and, thus, give our educators the capacity to model and teach ESD. Does this vision go far enough in challenging the role of education in a rapidly changing world landscape? Another valuable perspective has been outlined through Health Promoting Schools (HPS) and exemplary work in Canada from the Joint Consortium for School Health that developed a [Positive Mental Health Toolkit](#) for educators to assess and plan for positive school health. Each of these visions has tremendous merit but would benefit from a more integrated vision that combines the strengths of all three.

My recommendation is for educators and education policy to find the ideal nexus where these principles, competencies and visions converge. Canadians are well positioned to do so, and teacher education is one arena where we can have considerable impact. The Sustainable Happiness course has made some progress in this direction. It integrates recommendations for reorienting teacher education for sustainability (UNESCO, 2005) positive psychology, and HPS (See O'Brien, 2012 for further discussion about reorienting teacher education to embrace sustainability and positive psychology.) The course is also designed to provide considerable student choice about assignments and to reveal their role as choice makers – in part to model a teaching style that assists students to find and express their own voice. The Sustainable Happiness course also supports the emerging work on education for sustainable well-being and happiness that is arising from the United Nations Resolution on Happiness and Well-being (Royal Government of Bhutan, 2012; Solutions, 2011; United Nations[UN], 2011). Hopkins (2013) refers to this as 'repurposing education.'

The repurposing of education will be a long learning journey that may never end. Just as we must teach students how to learn and adapt, so too must our school systems. What better purpose can we begin with than a vision of well-being, for all, forever?
(Hopkins, 2013, p. 125)

Naturally, a single course will not transform education but it can contribute to transforming student teachers and our education institutions; enabling the education sector to enhance its capacity to redefine its role in building healthier, creative and more sustainable societies. Practicing teachers who are interested in lessons that integrate sustainable happiness with health education outcomes are encouraged to utilize the *Sustainable Happiness and Health Education: Teacher's Guide* (O'Brien, 2010b) available at: <http://sustainablehappiness.ca/teachers/>.

Teacher education institutions that are interested in offering a sustainable happiness course are welcome to adapt the syllabus and resources that are freely available at: <http://sustainablehappiness.ca/university/>.

References

- Abdallah S., Michaelson, J., Shah, S., Stoll, L., & Marks, N. (2012). *The happy planet index 2012: A global index of sustainable well-being*. London: New Economics Foundation.
- Anielski, M. (2007). *Economics of happiness: Building genuine wealth*. Gabriola Island, BC: New Society Publishers.
- Boniwell, I., & Ryan, L. (2012). *Personal well-being lessons for secondary schools*. New York: McGraw Hill.
- C21 Canada (2012). *Shifting minds: A 21st century vision of public education for Canada*. Retrieved from www.c21canada.org
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2008). *Connecting social and emotional learning with mental health*. Retrieved from <http://casel.org/wp-content/uploads/SELandMH.pdf>
- Conoley, C., & Conoley, J. (2009). Positive psychology for educators. In R. Gilman, E. Huebner, & M. Furlong (Eds.), *Handbook of positive psychology in schools* (pp. 463-476). New York: Routledge.
- Davidson, K. W., Mostofsky, E., & Whang, W. (2010). Don't worry, be happy: Positive affect and reduced 10-year incident coronary heart disease: The Canadian Nova Scotia Health Survey. *European Heart Journal*, 31(9), 1065-1070.
- Diener, E., & Seligman, M. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5 (1), 1-31.
- Foster, R., & Hicks, G. (1999). *How we choose to be happy*. New York: Perigree.
- Fullan, M. (2010). *All systems go*. Thousand Oaks, CA: Corwin.
- Hargreaves, A., & Shirley, D. (2012). *The global fourth way*. Thousand Oaks, CA: Corwin.
- Helliwell, J., Layard, R., & Sachs, J. (Eds.). (2012). *World happiness report*. New York: The Earth Institute, Columbia University.
- Hämäläinen, T. (2013). *Towards a sustainable well-being society*. Helsinki, Finland: Sitra. Retrieved from http://sitra.fi/julkaisut/muut/Towards_a_Sustainable_Wellbeing_Society.pdf
- Hamilton, C., & Denniss, R. (2005). *Affluenza: When too much is never enough*. Crows Nest NSW: Allen & Unwin.

- Hopkins, C. (2013). Educating for sustainability: An emerging purpose of education. *Kappa Delta Pi Record*, 49, 122-125.
- Joint Consortium for School Health (JCSH). (2008). *Investigating positive psychology themes in school health*. Retrieved from <http://www.jcsh-cces.ca/index.php/resources>
- Kasser, T. (2006). Materialism and its alternatives. In M. Csikszentmihalyi & I. Csikszentmihalyi (Eds.), *A life worth living: Contributions to positive psychology* (pp. 200-214). Toronto: Oxford University Press.
- Kelsey, E., & O'Brien, C. (2011). Sustainable happiness. *Green Teacher*, 93, 3-7.
- Kubiszewski, I., Costanza, R., Franco, C., Lawn, P., Talberth, J., Jackson, T., & Aylmer, C. (2013). Beyond GDP: Measuring and achieving global genuine progress. *Ecological Economics*, 93, 57-68.
- Leatherdale, S., & Ahmed, R. (2011) Screen-based sedentary behaviours among a nationally representative sample of youth: Are Canadian kids couch potatoes? *Chronic Diseases and Injuries in Canada*, 31(4). Retrieved from <http://www.phac-aspc.gc.ca/publicat/cdic-mcbc/31-4/ar-01-eng.php>
- Louv, R. (2012). Going on a techno-fast: Taking a break from the virtual world. *The New Nature Movement*. Retrieved from <http://blog.childrenandnature.org/2012/08/15/going-on-a-techno-fast-taking-a-break-from-the-electronic-world/>
- Lyubomirsky, S. (2007). *The bow of happiness*. New York: Penguin Group.
- Morrison, W., & Peterson, P. (2010). *Schools as a setting for promoting positive mental health: Better practices and perspectives*. Retrieved from <http://www.jcsh-cces.ca/index.php/resources>.
- O'Brien, C. (2008). Sustainable happiness: How happiness studies can contribute to a more sustainable future. *Canadian Psychology*, 49, 289-295.
- O'Brien, C. (2010a). Sustainability, happiness and education. *Journal of Sustainability Education*, 1. Retrieved from http://www.jsedimensions.org/wordpress/content/sustainability-happiness-and-education_2010_04/
- O'Brien, C. (2010b). *Sustainable happiness and health education: Teacher's guide*. Retrieved from <http://sustainablehappiness.ca/teachers/>
- O'Brien, C. (2012). Sustainable happiness and well-being: Future directions for positive psychology. *Psychology*, 3(12A), 1196-1201.
- O'Grady, P. (2013). *Positive psychology in the elementary school classroom*. New York: Norton and Company.
- Organisation for Economic Co-operation and Development (OECD). (2011). *PISA 2009 at a glance*. Paris: OECD.
- Orr, D. W. (2012). Can we avoid the perfect storm? *Solutions*, 3(3). Retrieved from <http://www.thesolutionsjournal.com/node/1124>
- Park, N., Peterson, C., & Seligman, M. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, 23, 603-619.
- Ramanathan, S., O'Brien, C., Faulkner, G., & Stone, M. (2014). Happiness in motion. Emotions, wellbeing and active school travel. *Journal of School Health*, 84(8), 516-523.
- Raskin, P., Banuri, T., Gallopín, G., Gutman, P., Hammond, A., Kates, R., & Swart, R. (2002). *The great transition: The promise and lure of the times ahead*. Global Scenario Group, Stockholm Environment Institute.
- Rideout, V., Foehr, U., & Roberts, D. (2010). *Generation M²: Media in the lives of 8 to 18-year-olds*. Retrieved from <http://kff.org/other/poll-finding/report-generation-m2-media-in-the-lives/>
- Robinson, K. (2009). *The element: How finding your passion changes everything*. New York: Viking.
- Robinson, K. (2011). *Out of our minds: Learning to be creative*. Chichester, UK: Capstone.

- Royal Government of Bhutan (2012). *The report of the high-level meeting on wellbeing and happiness: Defining a new economic paradigm*. New York: The Permanent Mission of the Kingdom of Bhutan to the United Nations. Retrieved from <http://www.2apr.gov.bt/>
- Sahlberg, P. (2010). *Finnish lessons*. New York: Teachers College Press.
- Seligman, M. (2002). *Authentic happiness*. Toronto: Free Press.
- Seligman, M. (2011). *Flourish*. Toronto: Free Press.
- Solutions (2011). Teaching happiness: The prime minister of Bhutan takes on education. <http://www.thesolutionsjournal.com/node/934>
- Steptoe, A., Wardle, J., & Marmot, M. (2005). Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory process. *Proceedings of the National Academy of Sciences*, 102(18), 6508-6512.
- Stewart-Brown, S. (2006). *What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach?* Copenhagen, WHO Regional Office for Europe. Retrieved from <http://www.euro.who.int/document/e88185.pdf>
- Swayze, N., Creech, H., Buckler, C., & Alfaro, J. (2012). *Education for sustainable development in Canadian faculties of education*. Retrieved from www.iisd.org/pdf/2013/esd_canadian_faculties.pdf
- Toronto Catholic District School Board (2011). *Mental health strategy 2012-2015*. Retrieved from http://www.tcdsb.org/ProgramsServices/SpecialEducation/mhs/Documents/Mental_Health_Strategy.pdf
- Tremblay, M., LeBlanc, A., Kho, M., Saunders, T., Larouche, R., Colley, R., Goldfield, G., & Gorber, S. (2011). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, 8(98). Retrieved from <http://www.ijbnpa.org/content/8/1/98>
- United Nations Economic Commission for Europe (UNECE). (2012). *Learning for the future: Competencies in education for sustainable development*. Retrieved from http://www.ensi.org/media-global/downloads/Publications/346/Competences_Publication.pdf
- UNESCO. (2005). *Guidelines and recommendations for reorienting teacher education to address sustainability*. Retrieved from <http://unesdoc.unesco.org/images/0014/001433/143370E.pdf>
- United Nations (UN). (2011). Happiness should have greater role in development policy - UN Member States. *UN News Centre*. Retrieved from <http://www.un.org/apps/news/story.asp?NewsID=39084#.VCDaZnckpmg>
- Veenhoven, R. (2006). Healthy happiness: Effects of happiness on physical health and the consequences for preventive health care. *Journal of Happiness Studies*, 15(11), 449-469.
- Watkins, P. (2004). Gratitude and subjective well-being. In R. A. Emmons & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 167-192). New York: Oxford University Press.

Chapter 11

Meditation in the Classroom: One Teacher's Practice of Promoting Physical, Mental, Emotional and Spiritual Well-Being

CARI SATRAN

In this chapter I share my experiences with meditation in a classroom setting. I begin with an explanation of meditation and why I have chosen to share this practice with my students. Drawing from my experiences as a teacher over the past eleven years, I offer my story of learning and growth through meditation with my students, as well as the firsthand accounts of my students reflecting upon their own experiences. It is my hope that these stories will inspire other educators to begin, or continue, meditation practices in their classrooms for their own well-being and that of their students.

When I first began teaching middle school eleven years ago, I didn't know very much. I knew seventh and eighth graders were a breed unto their own and I would be both challenged and entertained by them daily. I knew that I wanted to work with young people and facilitate their learning, helping them discover their capabilities, where their learning could take them and the satisfaction they could gain during the journey. And I knew that I wanted to meditate with my students. Though I couldn't quantify it at the time, I knew that after my many years of practice, meditation was beneficial for me, and I felt that it would also be beneficial for my students as individuals and my class as a whole.

The research was not available at the time, but I later found the benefits of meditation and its potential applications summarized by Mayo Clinic staff in an article on their website (Mayo Clinic Staff, 2009), which included basic meditation techniques, and reminded the reader that anyone can meditate, just about anywhere, at no cost, stating, "If stress has you anxious, tense and worried, consider trying meditation. Spending even just a few minutes in meditation can restore calm and inner peace" (Mayo Clinic Staff, 2009). The article provided a simple and clear outlook on the benefits of a meditation practice, regardless of whether it is motivated by health, physical, mental or emotional reasons, or by a desire for spiritual growth. It supports what practitioners of meditation, like myself, have known and experienced for a long time, that "meditation can give you a sense of calm, peace and balance that benefits both your emotional well-being and your overall health" (Mayo Clinic Staff, 2009).

From my first day of teaching, the first thing I did with my students was meditate, and I have continued to do so ever since. In my early years I was nervous. I was afraid students would protest or refuse, administrators would question, or parents would object. But my fears were just fears. I looked past them and meditated with my students. As I did, we all came to appreciate the time, and I always felt very grateful that my students and I enjoyed a quiet little practice. We meditated daily as part of our learning. It was never publicized, though it has always been common knowledge among students, staff and administrators at my schools. My initial fears of potential controversy or parental objection never came to pass, and as I gained experience and confidence, my fears have diminished to the point where I welcome questions and conversation, rather than dreading them.

My confidence and attitude was fostered through the experience of time and practice, as well as the learning I gained by completing my Master's program. Through my studies, I had the opportunity to clarify some of my own educational beliefs, and reflect upon my own teaching practice, affirming some areas and leading me to question, rethink and refine others. I had always recognized the great responsibility inherent in teaching, and came to appreciate the role I play in the lives of so many children on an even deeper level. With each year I spend teaching middle school students, I appreciate my students as growing individuals even more. I recognize that I am teaching children first and subject matter second, and that as an educator I have the huge responsibility of guiding my students through school and their learning, as they grow and develop as individuals. A daily classroom meditation practice provides the foundation on which I build my classroom culture to promote physical, mental, emotional and spiritual well-being in all of our learning and by extension every part of my students' lives.

Fostering Mindfulness for Well-Being and Learning

Awareness of our inner-selves, our thoughts, our feelings, our abilities, our circumstances and our experiences in the present moment at any given moment, is at the heart of what is becoming an increasingly popular branch of meditation, as well as its own way of living, called mindfulness. In his bestselling book, *Wherever You Go, There You Are: Mindfulness meditation in everyday living*, Jon Kabat-Zinn (1994) describes mindfulness as,

a practice which has profound relevance for our present-day lives...it has everything to do with waking up and living in harmony with oneself and with the world. It has to do with examining who we are, with questioning our view of the world and our place in it, and with cultivating some appreciation for the fullness of each moment we are alive. Most of all, it has to do with being in touch. (p. 3)

Within the field of education, this experience, when an individual student is in touch with what he is doing in the classroom, and is connected to the classroom environment and what he is learning, is called engagement. Classroom teachers employ numerous strategies to ensure their students are engaged in their learning. Though, as Babiuk (2010) points out, "student engagement needs to be more than a strategy, a program or a method. It needs to be a deeper understanding of how students learn and what motivates them to succeed and in turn inform educators on their teaching and how the curriculum is organized" (p. 4).

A meditation practice not only fosters engagement, but also allows students to become more aware as this experience, engagement, is happening. As Kabat-Zinn explains, "Meditation is a

process by which we go about deepening our attention and awareness, refining them, and putting them to greater practical use in our lives” (1994, p.xvii). Mindfulness becomes a skill that teachers and students can apply in all areas of life, in and out of the classroom.

Mindfulness in the Classroom

Miller (2006, 2010) and Schoeberlein (2009) write for educators, providing simple and meaningful explanations of mindfulness and how teachers can bring mindfulness to the classroom. Filled with practical strategies, Debra Schoeberlein (2009) brings mindfulness to the classroom and beyond, in her book *Mindful Teaching and Teaching Mindfulness: A Guide for Anyone who Teaches Anything* she outlines simple techniques in mindful breathing and a mindfulness living practice, which can be implemented for the development of both the educator and his or her students, as she states,

Mindful teaching nurtures a learning community in which students flourish academically, emotionally and socially - and teachers thrive professionally. *Teaching mindfulness* directly to students augments the effects of the teacher’s presence by coaching youth to exercise simple, practical and universal attention to skills themselves. These two approaches are mutually reinforcing and benefit everyone in the classroom. (Schoeberlein, 2009, p. 1)

A classroom meditation practice allows the educator to experience both mindful teaching and teaching mindfully simultaneously.

Miller (2006, 2010) also introduces his students to mindfulness, describing it as “being present in the activities we perform from moment to moment” (2010, p. 101). Miller (2006) explains,

Mindfulness and contemplation are different than reflection. Reflection allows us to step back and analyze what we are doing; mindfulness and contemplation just let us be in the present moment. One way of looking at teaching is the movement back and forth between mindfulness and reflection. Both are essential for good teaching. (p. 81)

Both are also essential for good learning, and a meditation practice allows students and teachers to practice mindfulness in all parts of classroom learning.

Introducing Meditation to Students

On the first morning in my grade eight classroom over eleven years ago, and in all the years that have followed in grades seven and eight, the first thing I have done with my students is introduce meditation and explain the practice that we are about to begin together. Meditating with my students has preceded the distribution of lockers and supplies, the explanations of procedures and even introductions. It is the very first thing we do as a class.

I introduce meditation to my students by asking them if they are familiar with the practice. During my years teaching grade eight students I noticed that, while some had heard of the word,

most did not have a clue what it actually meant. There would typically be a student who would mention the caricature of the guru, sitting in a contorted fashion, “ohming”, expressing the desire to levitate, especially during the years when such a character was featured in a *Red Bull* commercial. After several years, as I moved to another school, with a largely Asian population, I have observed that more students have some prior knowledge and experience with meditation, either as part of their spiritual lives or for its health benefits, though the numbers who meditate still remain few.

I explain that there are many forms of meditation and different techniques and regardless of their previous experience, or lack thereof, meditation is simply breathing and anybody can meditate. I further explain that for our purposes meditation will incorporate attention to breath, stillness, and silence in the room. While I initially mention that there is a lot of research that supports the benefits of meditation for health and stress relief, it is never the main focus in my discussion with my students. Instead I focus on the patience required to master the skill of stillness and the practice required to focus inwardly, and to let go of the desire to call attention to one’s self, to laugh and giggle, poke, or point across the room, and look and listen inward as they breathe.

This leads me to talk about breathing, always sharing the story of my own discovery that I had been breathing backwards and having to learn to use my full lung capacity from the top of my shoulders to the bottom of my rib cage. I then explain the breath count I have used since 2009, at which time I had the opportunity to travel to India where I met a fellow teacher, Ms. Bir, who transformed my practice. Before meeting Ms. Bir, I would simply suggest students follow their breath, noticing each inhale and exhale. While visiting Ms. Bir’s ninth grade values education class, she demonstrated guided breath and counted aloud, “Inhale, two, three, four, hold, two, exhale, two, three, four,” at the beginning of the meditation. Her count helped me, along with the eighty plus students in the room, become centered and focus on our breath, individually and as a whole.

I immediately recognized the power of using a guided breath count and since then I have devoted the month of September to meditations with this practice, coupled with using the same track of music every day. The month long repetition gives students the opportunity to actively practice their breathing and grow with it. My continuous counting further supports those who are uncomfortable and dissuades those who are tempted to talk and giggle. It is a lot harder if they have to talk over me and so it helps bring focus to the group in the beginning of our practice.

After the first month I continue to use the breath-count in the beginning of each meditation for the first minute to minute and a half, or about six to eight breaths at about ten seconds per breath. I have come to call this a time for students to “find their breath” and align it to the count, automatically slowing it down. I count down the final breath according to the counts and then invite the students to, “find the rhythm of their own breath,” inhaling deeply, filling their lungs, holding slightly at the top and exhaling completely, slowly and steadily emptying their lungs, making room for fresh oxygen and the next breath.

Throughout our practice, I turn off the lights and put on meditation music, as complete silence in a seventh or eighth grade classroom would be too demanding for both my students and myself. Calming meditation music allows for an achievable silence and while over the years the CDs have changed, the silence within the music has remained.

As part of the introduction, I also suggest that students sit tall with their feet flat on the ground, shoulders back and chest open. I also strongly recommend that they close their eyes. But early on in our practice, I also understood that often there are those who prefer to put their heads down, especially when it helps them avoid the distraction of others or calling attention to themselves. While not the ideal “meditation posture”, I felt that the silence and the time to look inward were far more important than how the students sit. Each September, as I prepare to begin meditating with

new students, I try to be stronger and more insistent on good posture, which supports better breathing and ultimately better meditations. I try to challenge them more, but in the end, I don't push them too much. I reason that I can only invite them to meditate. I cannot force it. The only constraint I lay on them is that they may not take away from someone else's experience. While I would prefer that they really try to sit straight, I can only ask that they allow their classmates the chance to experience the meditation, even if they do not want to experience it themselves. Although I have struggled with the idea of allowing my students the option of putting their heads down during the meditation, I continue to return to the belief that to allow them this choice is reasonable.

The respect each student is required to demonstrate - to allow every other student in the class the chance to breathe - is the focus of the initial day. They are reminded of this as needed. I tell my students that they are welcome to think whatever they choose to about this practice. I tell them that I know some think it is weird, crazy and a way to waste time, especially in the beginning. I invite them to talk about their opinions and ideas at any time, except during these moments in meditation. Finally, I remind them that regardless of what they may or may not think about the whole idea, sitting in silence for the length of one track, which in the first month is 4 minutes and 37 seconds, will never hurt them. As we begin to meditate on the first day, I end with a line that I return to many times throughout the year, "The only way to meditate wrong is to disturb someone else."

We Are What We Breathe

When I first began meditating with students I would occasionally focus our meditations on confidence or other traits or skills. Once in a while, usually before a test, I would remind students to breathe and tell themselves that they are prepared and to relax prior to the test. I would flippantly add that those who weren't prepared could always use the moments to pray for a miracle, which was generally the only reference I ever made to prayer, and I would usually get a laugh. At the time, I couldn't understand the potential I had to help students grow positive qualities like confidence, focus and optimism and positive emotions like compassion and kindness. Once again, I am grateful for my discoveries and my learning and how it has enhanced meditating with my students.

Through my personal practice of yoga and meditation, as well as my research of meditation, especially in relation to the brain, I have come to understand the power of breath, the power of thought and the potential impact of the two when brought consciously together in a few minutes of silence. Breath is life, without breath we die. Each new breath is new life. I was fascinated by the research that is beginning to show the changes in our brain and our ability to foster positive emotions through the singular focus a meditation practice provides. I began to understand the power of our thoughts to shape our identity and our lives. Consequently, I began to bring these understandings to classroom meditations. Maintaining the primary focus on breath, after completing the breath count, I have shifted the focus to inhaling fresh oxygen, and at the same time, whatever trait or quality students may need in the moment and then exhaling the waste, or those negative qualities or defects, which we do not. I have found many traits that balance the two.

The primary necessity, both in meditation and in middle school, is focus - the focus to sit and breathe for those four to six minutes and the focus to learn throughout the day. Breathing in focus has become a standard direction in meditation over the last several years. Contrary to the focus that is inhaled, I direct my students to exhale the distractions. Over the course of a few breaths, they inhale focus, visualizing the task at hand, whatever it may be and what that learning looks like and

feels like for them. If they are willing, students have the opportunity to envision themselves learning. As they exhale, they let go of distraction, all distraction, like talking to friends, sharpening pencils, noises around them, anything and everything that can distract a middle school student from learning. If their overall academic success in following through with their learning, with every student completing just about every assignment in every one of my courses to the best of their ability is any indication of the potential to develop focus, then the results of the last four years are very encouraging to me.

Building Confidence

Another focus I have found to be very useful and effective, especially when preparing for big events or dealing with social situations and other life issues, is inhaling and consciously growing confidence. Prior to an event, like a presentation or show, inhaling confidence reminds students that they are ready and able. I have the opportunity to help them focus on the work they have done and the fact they are prepared and capable. They can begin to envision themselves confidently facing their task and achieving it, building confidence in their abilities. After facing their challenge, students can be reminded of what they overcame, their feelings prior to the event and after, what they learned and any other focus that will help them credit themselves for their accomplishments and realize what they can learn or do. Part of the beauty of meditation is its focus can be easily tailored to highlight the positive and learning in any situation in school life.

As students inhale confidence, they exhale fear and doubt. This allows me to help them acknowledge their fears and realize that by recognizing that certain fears are natural, like nerves when presenting in front of fifty classmates, they can face them and do it anyway. I can also bring awareness of support and help that is available if and when their fears and doubts become too much and invite open communication with my students. Bringing attention to their doubts as they exhale also helps them appreciate it more once they have faced them and feel proud of their accomplishments, building further confidence in themselves. A positive cycle is born, evident to me by the total student participation in several research presentations over the course of the last three years, showing the potential to build confidence through focus and breath. Most recently, after completing a brief study in confidence, including a daily meditation practice, ten out of nineteen Exploratory¹ students also voluntarily participated in an eighth grade dance exhibition, which featured dances they had choreographed themselves.

Finding What They Need

The flexible nature of meditation allows me to direct its focus to truly meet the needs of my students. Though working with confidence/doubt and focus/distraction has become fairly routine, the opportunities to expand awareness of different traits are endless. At times when students are tired, like first thing in the morning or sometimes after gym, I suggest that they breathe in energy and exhale their fatigue. If they are hyper and loud, I direct their focus to inhaling a feeling of calm and

¹ Exploratory is a class offered as an option to Band with flexible, teacher and student-directed curricula.

exhaling their excess energy. I also suggest that when they are trying to figure out a problem, that they inhale clarity and let go of their confusion.

As students become more familiar with the possibilities that exist within meditation and directing focus and breath, I often encourage them to find what they need as we all settle into silence together. This way each student can learn to meet his or her own individual needs at the same time as meeting the needs of the whole - another benefit of a meditation practice. I also hope that my students begin to realize, that much like their learning, they are responsible for the people they become. They have the ability to help support their own development and grow into confident, capable young adults if they give themselves the chance.

Fostering Positive Emotions- METTA Meditations

As I continued to become more familiar with the practice of mindfulness, I also learned of METTA or loving-kindness meditations. METTA meditations nurture positive emotions like kindness and compassion by helping the practitioner recognize the human connection to other human beings, often strangers around the world, through a gradual process. METTA meditations align breath and thought statements, which connect the practitioner's basic wants and needs with every other human being, as all of our basic needs are the same. METTA meditations are guided meditations and I act as the leader.

After our breath count, I begin by having the students picture an image of themselves. I prompt students to imagine their best selves, whatever that may look like in their hearts, minds or imaginations. As I encourage them to hold that image or idea and breathe, I calmly say, "May I be happy. May I be healthy. May I be safe." As the students picture themselves these statements are repeated twice. Next I direct them to picture someone they love or several people if that's who comes to mind. I explain that we grow compassion as we realize we want the same things for that person as we want for ourselves. This time the statement shifts to, "May you be happy. May you be healthy. May you be safe." Again these statements are repeated twice, with encouraged alignment with breath. The meditation continues as students shift to visualizing an acquaintance. It could be another student, teacher, or a store clerk. It might be somebody they see regularly but may not really know. They don't even have to know the person's name. They just have to think of that person, that acquaintance who they know and extend their compassion, wishing for that person the same things they wish for themselves. Again I repeat the statements, "May you be happy. May you be healthy. May you be safe" twice.

Finally, we extend our compassion somewhere else in the world, wherever there is a need, recognizing we wish for everyone what we wish for ourselves and repeating each statement twice, before we end with a few moments in silent gratitude for all that we have in our lives today. METTA meditations can have a powerful and lasting effect especially when, like all learning, the focus is relevant to the lives of the students. Over the years, I have always introduced one or two METTA meditations simply because I wanted to be sure I exposed the students to various meditation techniques. As the year begins in September, the 11th has been a good day to reflect, as well as gauge my students' abilities and willingness to engage in meditation as part of our learning. Each year I am continuously surprised by their respect, reverence and insights in our meditation and the discussions that follow. With a METTA meditation, I begin the year with the awareness that we can and will take

steps to build compassion in our hearts for ourselves, each other and the world, and that it will be a part of all of our learning.

Over the years METTA meditations have had varying impacts, because unfortunately the more tragic and difficult the event, the more useful and comforting a METTA meditation can be. In March of 2011 when a major earthquake and tsunami hit Japan, my vice-principal, Mme. D., happened to have a son and other family members living there. She was quite worried. The morning after the disaster we had a discussion in all of my classes. I took the opportunity to introduce METTA meditations and ultimately extend our compassion to the people of Japan, including her son and family. My classes were open and willing and we experienced a powerful meditation. They were quiet and still and I could see their focus.

Later that day I saw Mme D. and asked about her son. She voiced her evident worry and in the course of our conversation, she expressed that she would appreciate it if we would think of her family and Japan in our meditation. When I told her we already had and explained our meditation, she was truly touched. I told her we would continue our meditations and she should join us whenever she could. For the next few days we practiced METTA meditations. When her son and his family were safely out of Japan, Mme. D. came by to update my class and thank them for their kind thoughts. I am not sure our meditations actually reached the people of Japan, but I know they helped support Mme D. I am also certain they enhanced at least some of my students' understanding of compassion. I know our METTA meditations were very powerful for me that year.

METTA Meditations and Death

Then a couple of years later, another fateful event occurred. It was a busy Friday morning, the first week back after Spring Break when my teaching partner and I were called into the office. Our principal sat us down and broke the news that one of our student's parents had passed away suddenly the night before. It was one of those moments where time stands still and a million thoughts happen all at once. Thoughts of my student, her family, and the randomness of life, took me back in time to November 1982 and the death of my father. I was thirteen. I could easily relate to what my student was going through.

After we had taken in the news, the conversation quickly turned to breaking it to our students and broaching the topic, the death of a parent. My principal told us that our guidance team would be there for us, but that we should work with our classes as we saw fit. As my partner and I were a team and functioned as a team, even in our separate classrooms, we immediately knew we would bring the classes together to talk. And I knew, as is our practice, we would begin with a meditation.

We went back to our classrooms to start our day. As I changed the morning schedule, from English Language Arts Debating to Class meeting with the other class, everyone began to ask why. They were quite pumped to present their debates and not thrilled with the change. However, when I told them that there was some serious news that we had to discuss, the mood immediately changed. They sensed the gravity of the situation and while I am certain they remained curious, they contained their questions. There was a respectful quiet throughout the room during attendance and announcements, until it was time to join together with the other class.

As we all gathered in the other room they settled quickly and quietly, more so than usual and soon we were ready to begin. I recognized that I faced the paradox of both wanting to start quickly, so as to not drag things out or be dramatic, and still to prepare the students as much as possible for

what was to come. So I explained that we were going to begin with a meditation as always and that day we would be doing a METTA meditation and as we got into it everything else would become clear. I also told them that as I went on it was very likely that I would cry and if I did, that would be okay, and if they started to cry, that would be okay too. And so we began.

As I started the music and spoke the words I speak every day, “Feet flat, backs straight, mouths closed,” a wave of silence swept over the room as students settled and we began to breathe. As I started the breath count we breathe every day, “Inhale, 2, 3, 4” I felt gratitude at the same time as I felt this immense sense of grief. I had to deliver this terrible news to my students, my learners, the kids I have come to know and love and it just sucked. Yet I was profoundly grateful that I knew exactly what had to be done and exactly how I would do it. In the ten plus years I had spent meditating with my students, having researched it for the better part of four years and written too many papers and my own story to complete my Master’s degree, I finally knew, had never been more certain, of the reason I meditate with my students. It is for the days like these, which happen once every ten years, at least I hope.

I continued the count, “Hold, 2...exhale, 2, 3, 4,” as we found our breath and went into the meditation. I began as always with the self, “May I be happy. May I be healthy. May I be safe.” Then as we went on to someone we love, I suggested that on this day they may wish to think of their parents, foster parents, grandparents or aunts and uncles and give them some extra love that day. We went on, extending compassion to the familiar acquaintance, as I prepared for the final part of the meditation, hoping I wouldn’t get too choked up and asking for the strength to get through it with the right words.

As we came to extending our compassion out in the world, I began by telling them that while we often send our thoughts to people far away sometimes we need to focus our compassion and caring on people closer to home. On that day I told them I had to give them some bad news. Somehow I got the words out that the student’s parent had died. We sent out our love and compassion, as the kids in the room absorbed the news. There was some quiet crying but the room remained still and silent as we extended our compassion and caring to our classmate and her family, “May you be happy. May you be healthy. May you be safe.”

I went on to the final part of the meditation, silent gratitude. Once love and compassion is sent, and before coming back to the space, I encourage students to find something for which to be grateful, no matter how small. On that day I suggested we spend a moment being grateful for our own families and friends, and remember to give them an extra hug when they went home later that day. About 15-20 minutes had passed from the beginning of the meditation to the end and the students had maintained their stillness and silence throughout. They do this almost every day, but on this day it was quite powerful. There was a palpable feeling of love, respect and support among the students and teachers and other adults in the room. Once again, I felt intensely grateful for the ability to connect with my students and connect them to each other during an extremely difficult time. We closed the meditation and everyone came back together as the adults in the room started passing around some boxes of Kleenex and preparing to open some discussion. The guidance team took over, leading a discussion that flowed very naturally. The rest of the day unfolded with some intense conversation and quiet learning. Everyone was exhausted.

A short time later, in my year-end Annual Reflection of Professional Learning, I looked back on that day. I noted how time had gone by and each day was packed full of learning and events, but that day had been like no other. In over ten years of teaching, it was the first time I had encountered the death of a student’s parent. I was grateful I had built a solid practice upon which I could fall back so that I knew exactly what to do. With a topic as scary as death, I was able to bring my students

together to foster compassion and caring for their peer and her family, and for each other. This is the truly miraculous part of teaching and why I keep doing it - to share the experiences of life and death and learn as we go through it together. I certainly hope my encounters with death in the lives of my students' remain rare, but when it does happen it is good to know I can help my students experience it in an honest and healthy manner and we can also get through, and learn from, life's difficult times together.

On that day I was grateful I had spent the previous ten years learning how to meditate with my students. Its value, which I had thought was pretty clear, especially through all of my research and writing, had become exponentially clearer that day. I was very sorry for the circumstances but grateful for the results. I felt even more inspired to continue to pursue my vision, meditating with students and carrying my message in the hope that other teachers begin, or continue, to meditate with their students, too.

Not Everyone Appreciates It

Meditation has been the foundation of my teaching practice for years. I have used meditation as a bridge to make curricular connections in Health, Social Studies and English Language Arts, as well as a practice to ground our classroom culture. I believe it has helped enhanced my relationships with my students and our learning. Over the years, I have also received a great deal of feedback from my students. Some has been through formal written reflections, and other feedback has been informal, through casual conversation and comments. Students have reflected that meditation has been helpful in bringing a sense of calm, preparedness for learning, a refreshing feeling, and freedom from their worries. I am grateful my students have shared some of their experiences with me in their written reflections, as well as verbally.

At the same time, I cannot ignore that each year there is always one, and occasionally two students per class who never come to appreciate or enjoy meditation. In my early years it was communicated informally, though still clearly, and in recent years through written reflections. Regardless of the method, I am grateful for the student in each class who is brave enough to tell me that she just never likes it. It is sometimes risky for a student to disagree with a teacher. When a student is honest with me and lets me know she dislikes meditation, even though she knows it may not be what I want to hear, she demonstrates a great deal of trust in me. She knows that she can speak openly and discuss opposing feelings without feeling threatened. The open communication I have been able to develop with my students is another benefit of the practice. For me it is almost reason enough to keep meditating with my students.

I take further comfort in the strong belief that sitting in silence for four to six minutes is not a harmful practice in any way. It is not too much to ask. It may not enhance their learning, but it does not take away from their learning either, especially as it is coupled with the belief that it makes me a better teacher. I also never force students to meditate. I invite them. I also invite them to talk to me about their feelings and ideas. If need be, I remind them they are not obligated to be there and if they like, we can talk and make alternate arrangements for the time. This generally happens on the rare occasions when students are acting out or calling too much attention to themselves. Simply giving them the choice to leave is enough to solve the problem and has not even been an issue in recent years. The students who do not like meditation are usually quiet and respectful. They just

don't like meditation. I am okay with that and grateful that they let me know. I believe that they are too.

Mr. Wolinsky's Sun Salutations

There are worse things for students than having to do something that they don't like, as is often the case in academics and school life. When I think of my students who dislike meditation, I also have to chuckle as it reminds me of my own experience and how one never knows. When I was in middle school I was a chubby kid so gym never thrilled me, especially the running and team sports. In addition to the usual sports, my eighth grade teacher introduced us to yoga. Sun salutations were a regular part of our warm-ups. Every gym class started with yoga and sun salutations, that year and for many that followed. I hated those exercises. I remember endless hours complaining with my friends about gym and making fun of Mr. Wolinsky, his long hair, and his "stupid" sun salutations - though in those days "stupid" was not the word we used.

Later, as I began to study yoga, the irony was not lost on me. I had to appreciate a certain familiarity with sun salutations. Now, almost twenty years later I still note the irony and its relevance. I never saw Mr. Wolinsky again, but if I do I will tell him yoga changed my life. My students don't know the impact meditation may have in their lives in later years. I will likely never learn of any long lasting effects of teaching meditation, or of any of my teaching, and I am okay with that. It is the nature of school life. I am also okay with knowing that some kids never come to value or like meditation in middle school, but doing it anyway, just like Mr. Wolinsky. Within these lessons contains my biggest hopes for well-being for my students and a sustainable future.

Student Reflections

With a homeroom class and a switch class with about 25 students per class, in the last four years I have meditated with about 200 different kids. Over the past five years, I have accumulated the written reflections of about one hundred and seventy five students. I feel grateful that they have shared their ideas and opinions with me. Their understandings have proven insightful and helpful. My students' writing is reflective of who they are as learners and individuals. I am grateful that they are willing to share their thoughts with me as it helps me appreciate them and our meditation practice all the more. While many responses were positive, I have chosen a selection of quotations I found to be particularly powerful. My initial intention to bring meditation to the classroom was so my students could begin to experience some of the benefits of meditation that I have gained through my own practice. Over eleven years of working with students I have learned so much about teaching, learning, and meditating with students. I know my practice will continue to evolve in the years to come. For now, I am encouraged by some of my students' understandings and insights. I believe their words indicate I am doing something right.

From the Beginning of the Year until the End

"At first I thought it was kind of weird because I had never thought of meditating before. I followed along to the breath counts and kind of enjoyed it. Now I really like meditating."

“When we first started meditating in class I thought it was kind of boring and I never really meditated. At the end of the year it was better because now I am actually meditating. I think meditating has changed me over the course of the year because I am more focused after meditating.”

“In the beginning it was new and awkward, because I wasn’t used to being so quiet or seeing my class so quiet. I didn’t really follow the breathing technique. For me, meditation was about sitting there and doing nothing. Now meditation is my favourite part about the room switch. Although, sometimes I don’t want to meditate, so I sit there and do nothing.”

“The first time we meditated I thought it was a bit weird and didn’t try doing it. But I still kept quiet to be respectful. Now, I really like it and look forward to meditating. It is very helpful to me because it helps me focus during class and to be confident for tests. It also helps me to be relaxed.”

“The very first day we meditated was very weird. I had never meditated before so I wasn’t that experienced when it came to breathing. I felt very uncomfortable because it was my first time meditating. Even though it was uncomfortable it was an excellent experience to become relaxed.”

How They Did It

“When I meditate, I listen to the music and breathe to my own count. I think about the positive things that can and will happen during the rest of the day. I just let myself go in the music.”

“When I follow every breathing pattern it feels like I am floating in air. Sometimes I take a little power nap or just do nothing.”

“I thought I used my meditation time pretty wisely this year. What helped the most while meditating was listening to the music because it got me focused.”

“I think about 75% of the time I was really into it with breathing with the counts and the music. I wasn’t talking and focusing. The other 25% I wasn’t really feeling it and just didn’t want to do it. The breathing pattern was okay sometimes, but sometimes I found it distracting.”

“I sometimes screwed up at meditating because I can’t focus but most of the time I tried to focus in meditation and not let anybody disturb me.”

“During meditation I always use my time to follow my breathing pattern. In the beginning of the year I was just breathing normally, but throughout the year I began to focus on my breathing pattern. Meditating had a positive effect on me throughout the day.”

Students and Their Bodies

“Sometimes my hands and feet feel tingly. After meditations, I feel calm and relaxed and usually positive.”

“My fingers, arms and toes are sometimes tingly or numb. I do feel like I am far away when I am meditating because it is just me and my thoughts.”

“Sometimes I feel really light and I’m basically floating away. Then when I open my eyes I notice that I’m still on the ground.”

“During meditation, my bones are relaxed and my body is not physically moving. After meditating my body feels renewed. Meditation relaxes me and gives me a good feeling/sensation.”

“I feel like I am floating and it is like there is nothing around me. After Ms. S tells us to open our eyes, I feel calm and relaxed after meditating.”

Meditation: Helping Students Deal with Their Feelings

“During meditation, it got rid of my negative emotions and replaced them with positive emotions. During and after, meditation was an excellent way to give me a positive attitude.”

“Meditating helped me to control myself whenever I’m hyper, angry or even tired. After meditating I fell really calm.”

“Meditation has helped me emotionally because I can just let out all of my problems and feelings into the song. The song is like a train. It is always moving. I put all of my problems and feelings on the train. When the song is done, the train has left to go to a different planet and it’s not coming back.”

“I think meditation has helped me sort of with my emotions. Because if I did not have a good day, meditation kind of lightens up my mood; if I have a test and I feel scared, I sort of calm down after meditation.”

Meditation and Learning

“Meditation helps me mentally. Because it helps me focus, feel confident and keeps me relaxed for upcoming work.”

“Meditation has helped me mentally, because when I meditate before a class, I become more focused and alert in class. I do much better. In class I have smarter answers and all the information I am learning stays in my mind.”

“Meditation really helped me with my tests because I am really nervous but when we start meditating, I feel more confident.”

“Meditating helps me to express myself in learning. I can think properly, more clearly.”

“Meditation helped me mentally. It helped me learn more easily and it made me more confident. It helped me relax before tests and presentations.”

Students’ Spiritual Lives

“I think meditation helped me connect spiritually to a part of me and my life, because it helped me know myself better.”

“Meditating makes me calm and it becomes easier to pray.”

“75% of the time over the year, when we meditate I was praying for strength for the rest of the day, that I focus in class and to just bless me and my family.”

“Meditating made me think about God and the bible and stuff around religion. I think it helped me become a better person.”

“Meditation helped me know how to be myself. It helped me to think about what kind of a person I want to be and what qualities I have and what I want to change.”

“I think it changed my way of thinking.”

Some Closing Words

“Meditating before class always brings the focus I need. The meditation helps me get through the rest of the day. I am always so relaxed during the meditation because of the music. All of my stress and tiredness just gets released into the music.”

“Over the year I have come to like meditating on a daily basis. It helped me throughout the year with many different things. It helped me to become confident in myself and it gave me a positive attitude.”

Carrying My Message

I am truly grateful that each year my students have come to value and appreciate, or at least respect, our meditation time, as it is a time I cherish and continue to cherish more and more. Sometimes I can relax and enjoy and some days I really need those moments to sit and catch my breath, but whatever my state, I share a part of myself through our daily meditation. After I facilitate the meditation and get it started, I can join in and meditate with my students, and in recent years they have even begun to lead meditations at times. Though I generally just sit and breathe, trying to model meditation and interrupt as little as possible, a student once described my eyes as “bugging out” in a writing piece. I thought that was hilarious but it also illustrated the potential impact my behaviour can have on my students. Meditation allows me the time to build a positive connection with my class every day.

I am also grateful that my meditation practice and its evolution are now going beyond my classroom walls. My purpose in telling my story is that now its telling has become my purpose. The reason behind my experience has led me to share my story. Maxine Greene (2001) reflects that, “Choosing to be a teacher (or agreeing to be one), a person singles out a particular mode of engaging the world” (p. 85), further stating, “For me, the teacher must communicate a kind of passion- a consciousness of risk and possibility- no matter how much blankness, disinterest, or difference of opinion is expressed by others” (p. 85). It has always been my intention to find a way to balance and embrace my spiritual self, and my passion for meditation, within my role as a classroom teacher. Meditation has been a bridge for the different parts of me, and a way to connect with my students and build stronger relationships.

By meditating together with my students, I share a part of myself that allows them to understand me and how I work in the classroom. I build a bond and a connection with my students that they may see is founded on caring, trust and respect. As a result, our meditations give me the unique opportunity to share thoughts and ideas as we focus our attention. As circumstances or events arise I can help them to focus their attention and notice ideas they may overlook, direct our priorities in learning, and support their development as they discover themselves, physically, emotionally, mentally and spiritually.

It is my belief that the meditation practice I have with my students embodies one method to reach the challenge Manitoba Education outlines in its Vision of Education for Sustainable Development, which states, “Students will become informed and responsible decision-makers, playing active roles as citizen of Canada and the world, and will contribute to social, environmental and economic well-being and an equitable quality of life for all, now and in the future” (Manitoba Education for Sustainable Development, 2013). Though I don’t know what the future will bring, teaching and meditating with students continues to be an amazing journey and I am grateful for every breath.

References

- Babiuk, G. (2010). Education for sustainable development – A natural foundation for student engagement. *Reflections: ASCD Manitoba Journal*, 10, 23-29.
- Greene, M. (2001). Reflections on teaching. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed.; pp. 82-89). Washington: American Educational Research Association.
- Kabat-Zinn, J. (1994). *Wherever you go there you are: Mindfulness meditation in everyday life*. New York: Hyperion.
- Manitoba Education. (2013). *Education for sustainable development*. Retrieved from <http://www.edu.gov.mb.ca/k12/esd/index.html>
- Mayo Clinic Staff. (2009, April 21). *Meditation: Take a stress-reduction break wherever you are*. Healthy lifestyle: Stress management. Retrieved from <http://www.mayoclinic.com/health/meditation/HQ01070>.
- Miller, J. (2006). *Educating for wisdom and compassion: Creating conditions for timeless learning*. Thousand Oaks, CA: Corwin Press.
- Miller, J. (2010). *Whole child education*. Toronto: University of Toronto Press.
- Schoeberlein, D., & Sheth, S. (2009). *Mindful teaching and teaching mindfulness: A guide for anyone who teaches anything*. Somerville, MA: Wisdom Publications.

Chapter 12

Education for Peace and Sustainable Development in Conflict Affected Countries

JAN STEWART

This chapter examines the theoretical underpinnings of both Peace Education and Education for Sustainable Development and discusses the conceptual intersections with internationally adopted principles and values found in documents and initiatives such as: Education for All, Decade of Education for Sustainable Development, the Earth Charter, and the International Network for Education in Emergencies (INEE). Findings from a study conducted on the educational and psychosocial needs of children and youth in northern Uganda illustrate the need for a comprehensive Peace Education program that encompasses the proponents of sustainability and strives to transform systems to safe, sustainable, and democratic environments. Global security and sustainability rest on the collective sense of global interdependence and a shared responsibility for the well-being of people around the world. The two complementing fields of Peace Education and Education for Sustainable Development, inclusive of all of the various co-disciplines, sub-themes, and strategies, offer a holistic approach that is necessary to facilitate new thinking, concrete action, and transformational change. Together these intersecting fields contribute to a framework that can provide multi-disciplinary strategies, pedagogical approaches, methods, and skills for teaching and learning about peace and sustainability.

Peace cannot exist without a sustainable world and the world is not sustainable if we do not have peace. Peace education and sustainable well-being are interconnected and it is essential that a comprehensive and holistic approach to education for peace and sustainable well-being be adopted to meet the needs of all learners, including those who are living in post-conflict situations. This notion of peace includes a critical look at ourselves and our collective roles and responsibilities as members of a global community. Addressing the inequities between the Global South and the Global North is essential to the sustainable well-being of the world's current population and to future generations.

This chapter examines the theoretical underpinnings of both peace education and education for sustainable development and discusses the conceptual intersections with internationally adopted principles and values found in documents and initiatives such as: Education for All (EFA), Decade of Education for Sustainable Development (ESD), the Earth Charter, and the International Network for Education in Emergencies (INEE). Together, these concepts provide an overarching framework

to examine educational strategies and support mechanisms to assist children who are living in conflict-affected countries.

Findings from a study conducted on the psychosocial and educational needs of children and youth in northern Uganda illustrate the need for a comprehensive peace education program that encompasses the proponents of sustainability and strives to transform systems to safe, sustainable, and democratic environments. Global security and sustainability rest on the collective sense of global interdependence and a shared responsibility for the well-being of people around the world. Although education and awareness of peace and sustainability are essential at all ages and through all ecological systems, this paper will focus on the need to address the specific issues concerning children affected by war. The post-conflict situation in northern Uganda will be discussed as an example of how the intersecting fields of peace education and education for sustainable development can be utilized to address the international standards set out for providing education. The confluence of these two fields provide multifarious interdisciplinary strategies that intersect and connect to support the educational and psychosocial needs of children who are living in conflict-affected environments.

Global Trends and Armed Conflict

At any given time, there are 20-30 countries experiencing major armed conflicts and most of these episodes include societal (civil, ethnic, and communal) and interstate warfare (Marshall & Cole, 2011). Conflicts routinely involve targeting civilians and the torture, killing, starvation and displacement of people along with widespread abuses of human rights. UNICEF (2009) reports that civilians throughout the world have been denied basic human entitlements and wars have taken a “devastating toll on children” (p. 5). Despite considerable attempts to intervene and address the issues and challenges affecting children, there is much more to be done to address the needs of children living in conflict and in post-conflict situations. The twentieth century has had more wars than both the eighteenth and nineteenth centuries combined (Boulding, 2000). Despite technological, scientific and political advances, our “modern” world has done little in the way of managing conflict and achieving peace (Brunk, 2012).

“Globally, just over one billion children under the age of 18 live in countries or territories affected by armed conflict – almost one sixth of the total world population. Of these, approximately 300 million are under the age of five” (UNICEF, 2009, p. 19). The United Nations Security Council Resolution 1612 has identified six “grave violations” affecting children: killing or maiming children; recruitment or use of child soldiers; attacks against schools or hospitals; rape and other grave sexual violence; abduction of children; and denial of humanitarian access (Watchlist, 2013). The UN Security Council established a monitoring and reporting mechanism for the six violations to record and report country specific information about children and armed conflict. Despite improvements in the form of resolutions and principles designed to protect children, there is little evidence of tangible improvements in the lives of children living in conflict-affected situations. According to the United Nations General Assembly Security Council May 15, 2013 report on Children and Armed Conflict, 55 parties in 21 countries committed grave violations against children. Twenty-eight of these parties are cited as “persistent perpetrators” having been listed for grave violations against children for five or more years.

Children are used as soldiers of war, instruments of war and they are targets of violence, abduction and torture. “War undermines the very foundation of children’s lives, destroying their

homes, splintering their communities and shattering their trust in adults” (Machel, 2001, p. 80). Access to education, particularly quality educational opportunities, is a prevailing issue in contexts of crisis, post-crisis, and state fragility (Kirk, 2011; Paulson, 2011). Without the skills to recognize and respond to children with these special needs, teachers struggle to provide appropriate programming. Although many children have a sense of normalcy by simply attending school, teachers in post conflict situations report that they have not had adequate training to help children heal from the trauma of war (Ezati, Ssempala & Ssenkusu, 2011). There can be no sustainable peace if we do not address the needs of children and youth living in conflict. When adults do not protect and secure the basic human rights of children and youth, the prospect of transforming systems and states to safe, sustainable, and democratic environments will remain unachievable.

Collectively, the international community has done little to address the inequities between the Global South and the Global North and concomitantly it has failed to provide protection to children living in conflict-affected areas. As the disparity between the North and South increase and the level of structural violence and oppression persists, we also observe increasing incidents of terrorism reported around the globe. Migrant populations move from region to region to escape poverty and violence, exacerbating the need for the world to accommodate more internally displaced people, asylum seekers and refugees (Boulding, 2000). By the end of 2012, 45.2 million people were forcibly displaced from their homes as a result of conflict, persecution, violence and human rights violations – 46 % of these people are children (UNHCR, 2012).

The Global South is not a homogeneous entity; rather, it represents a variety of systems spanning geographically dissimilar areas with complex histories, diverse economies, and distinct political systems (Brown, 2011; Kirk, 2011; Mundy, Bickmore, Hayhoe, Madden, & Madjidi, 2008; Mundy & Dryden-Peterson, 2011; Rappleye, 2011; Toh, 2002). Despite ambiguities, it is widely recognized that significant deficits exist throughout the Global South in the achievement or maintenance of sustainable well-being (Likhotal, 2007; Nussbaum, 2008, 2010, 2011). Extreme poverty and the denial of basic human needs such as food, water, shelter, health care, and sanitation coupled with limited access to education, gender inequity, and political instability are just some of the systemic and long term challenges facing more than a billion of the world’s people – the majority living in the Global South.

From Cultures of Conflict to Cultures of Peace

Peacebuilding strategies are essential to create a culture of peace that provides the foundation for a sustainable future. An overarching culture of violence, conflict and lack of trust must be replaced with a new culture of peace (Boulding, 2000). “It is incumbent upon educators to help foster the conditions that will continue building, on a global scale, cultures of peace” (Harris & Morrison, 2013, p. 17). “Education for peace and sustainable development needs to be holistic and participatory, focusing on peace and non-violence, human rights, democracy, tolerance, international and intercultural understanding, as well as cultural and linguistic diversity” (Thaman, 2010, p. 353). Thaman refers to the term “tolerance;” however, instead of encouraging “tolerance”, educators would best orient their philosophy towards nurturing compassion. Tolerating one another is not synonymous with showing compassion and understanding for others. Peace educators should be striving to encourage empathy, compassion and respect for others, not tolerance. That said, the work of peace education requires a balance of practical action and scholarly research (Bickmore, 2008) that

explores a wide range of epistemological, political, theoretical, and methodological orientations (Cannon, 2011; Finley, 2011; Weber, 2006) that provide the “possibility” for transformation to occur (Bajaj, 2008).

According to Holdren (2008) well-being is dependent on three equally important pillars: (1) economic conditions and processes; (2) sociopolitical conditions and processes; and, (3) environmental conditions and processes. He further posits that well-being is most meaningful if it is sustained. The pursuit or maintenance of well-being is fostered through development or by maintaining or expanding what is currently present. Jenkins (2008) argues that peace education is transformative and includes an analysis into the causes of violence in an effort to guide learners towards creating holistic changes in society. Beckerman and Zembylas (2012) argue that we must also consider the difficulties teachers encounter when “confronting contested issues as these relate to their immediate national contexts and learning experiences” (p. 4). Considering the complexities of conflict and the overarching historical importance of identity (Beckerman & Zembylas; Sen, 1999, 2006; Zembylas & Ferriera, 2009), many well-intentioned attempts to encourage peace may be defeated by current social, political and economic issues and contested narratives and memories of the past. Despite the potential for challenges that lay ahead on the path towards a sustainable and peaceful world, the hope for transformational change rests with committed educators who believe in the tenets of peace education and who offer pragmatic strategies towards a sustainable and socially just world.

Peace and Peace Education

Peace Education is not merely a focus on prevention of conflict and war, it is a broad and sometimes contested field of study that challenges issues of social justice, human rights, social and economic marginalization, conflict resolution, oppression, intercultural conflicts, environmental issues and inner peace (Bajaj & Chiu, 2009; Brunk, 2012; Harris & Morrison, 2013; Hung, 2007; Johnson & Johnson 2005; Kester, 2012; Reardon, 1988; Toh, 2010). Derived from the works of John Dewey (1916), Maria Montessori (1949), Paulo Freire (1970), Johan Galtung (1969), Elise Boulding (1988, 2000), and Betty Reardon (1988), peace education has emerged as a field of study that connects various disciplines and links scholars from diverse epistemologies. Betty Reardon (1988) broadly defines peace education as the educational policy, planning, pedagogy, and practice that develops awareness, skills and values toward peace.

The work of Swee-Hin Toh (2010), Jing Lin (2008), and Ian Harris (2013) continue to expand the field with new modes of inquiry that extend the conceptualization of what constitutes peace education. Human rights education, environmental education and global security are considered to be co-disciplines of peace education (Bajaj & Chiu, 2009). Beckerman and Zembylas (2011) encourage peace educators to question the epistemological and theoretical conceptualization of peace education and to be critical of the predominantly “Western” perspective on “peace” and “peace education”. Furthermore, they encourage theorists to consider the complexity and multiplicity of terms such as identity, memory and reconciliation. Considering the co-dependent and symbiotic nature of these various fields, the overarching influence from the internationally recognized Earth Charter, the unifying UNESCO theme of the Decade of Education for Sustainable Development (UNESCO, 2012), and the focus of Peace Education by UNICEF (2013), the confluence of peace education and sustainable development provide a shared vision for the future.

Without positioning one field at the center, both peace education and education for sustainable development must be recognized as converging fields that forge toward common goals and values. Social justice, human rights, personal well-being, ecological sustainability, respect for people and the earth, and equality and peace are mutually agreed upon goals for the future. Education for peace cannot be separated from education for ecological responsibility (Bajaj & Chiu, 2009) and, as UNESCO (2013) posits, “peace, development and environmental protection are interdependent and indivisible” (para.1). Furthermore, peace and ecological education are a lifelong commitment that must address both formal and informal learning opportunities. “Peace education involves methods and learning processes that include inquiry, critical thinking, and dialogue toward greater equity and social justice” (Bajaj & Chiu, 2009, p. 441). Living in a peaceful and secure environment is fundamental to human dignity, development and a sustainable future.

Considering the multidisciplinary focus of what constitutes “peace education” it remains difficult to delineate one dominant ideology that represents the field or a mutually agreed upon definition of what “peace” is. Lin, Brantmeier and Bruhn (2008) write that “peace is an ongoing process, attainable, and renewable” (xv). Johan Galtung (1969) denotes two forms of peace, “positive peace” and “negative peace”. “Positive peace” relates to living in balance with nature and with the respect for human rights and social justice. The term “negative peace” refers to the absence of something negative, such as violence, and war. Anger and conflict do not necessarily have a negative connotation; rather, both serve as an agent to foster change or transformation. Anger and conflict can be both helpful and harmful. It is what an individual does about it that can lead to a negative consequence. Earth Charter International defines peace as “involving right relationship with oneself, other persons, other cultures, and the larger living world” (p. 5). A culture of peace promotes these “right” relationships and strives to promote the interrelatedness and codependence of all Earth Charter principles. Education is fundamental to the mission of the Earth Charter whose overall goal is “to promote the transition to sustainable ways of living and a global society founded on a shared ethical framework that includes respect and care for the community of life, ecological integrity, universal human rights, respect for diversity, economic justice, democracy, and a culture of peace (Earth Charter, 2009, p. 1).

“Securing peace will require knowledge, changing attitudes, new ways of behaving and the skills for managing conflict, and political change” (Harris & Morrison, 2013, p. 4). Personal behaviours are a product of many faces of violence, and the individual will not be motivated to make different choices unless the structures of society are examined critically and transformed (Oxford & Lin, 2012). Moreover, peace educators need to be critical of non-peaceful views and the perpetuation of structures of violence in society. The earliest form of 20th century/modern peace education had its roots in critical thinking as a means to exploring systemic obstacles to peace (Cook, 2008). Furthermore, Jenkins (2008) argues, “peace education is overt in its intention to understand, confront, resist and transform violence in all its multiple manifestations” (p. 266). To transform education systems towards peace, we need to commit to “peaceful living, teaching, learning, researching and institutional transformation” (Lin, Brantmeier & Bruhn, 2008, p. xvii). As Reardon (2000) notes, there is a difference between educating *about* peace and educating *for* peace. Knowledge about peace needs to be coupled with teaching skills and values that promote peace such as: compassion for others; negotiation and mediation skills, anger management; personal well-being; community development, poverty reduction; and advocacy.

Sustainability and Education for Sustainable Development

The term sustainable development was originally documented in the 1987 United Nations Report *Our Common Future* also referred to as *The Brundtland Report*. Originating from this report is the most widely accepted definition of the concept: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” In Betty Reardon’s (1988) book, *Comprehensive Peace Education* she refers to the concept of “planetary stewardship” (p. 40). Even as the field of peace education was just emerging, the early relationship between building and managing the earth was forged between global citizenship and peace education.

Education for sustainable development includes the following characteristics: interdisciplinary and holistic; values driven; multi-method and inclusive of different pedagogies (e.g., word, art, drama); participatory decision-making; critical thinking and problem solving; applicability; and, locally relevant (United Nations, 2005). McFarlane and Ogazon (2011) suggest that the greatest challenge to sustainability education is that no agreed upon definition of the terms exists and this causes “fragmented understanding and diverse practices” (p. 81). They further argue that an all-encompassing concept of the term is more favourable than a narrow concept focusing on only “growing green.” Chen (2012) argues that the foundation to sustainability rests on virtue and morality. He further posits a list of ubiquitous virtues that converge across time, place, and intellectual traditions. Envisioning a trajectory for what we want the future to look like can contribute to our understanding of peace and sustainability. This vision is essential to motivate and guide action (Hicks, 2004; Meadows, Meadows & Randers, 1992).

The international community has historically focused on three pillars of sustainability: economic, environmental, and social (UNESCO, 2005) although many have argued that “culture” should be identified as the fourth pillar stating that culture ultimately shapes what we mean by development and it determines how we interact with people and the environment (Hawkes, 2001). Disagreements exist in the field of ESD as to whether culture is subsumed within the pillar of social sustainability. Debates were conducted at the Rio de Janeiro 2012 UN Conference on Sustainable Development although the agreement to include the fourth pillar is not yet resolved. The present vision of sustainable development refers to the following three definitions of the pillars as reported by The United Nations:

Society: an understanding of social institutions and their role in change and development, as well as the democratic and participatory systems which give opportunity for the expression of opinion, the selection of governments, the forging of consensus and the resolution of differences.

Environment: an awareness of the resources and fragility of the physical environment and the affects [*sic*] on it of human activity and decisions, with a commitment to factoring environmental concerns into social and economic policy development.

Economy: a sensitivity to the limits and potential of economic growth and their impact on society and on the environment, with a commitment to assess personal and societal levels of consumption out of concern for the environment and for social justice.
(United Nations, 2005, p. 14)

Given the abovementioned extension of the terms, the concept of “culture” may be implied in the terminology; however, culture as a prominent and integral component of sustainability is not

explicitly stated. The challenge for many marginalized groups of people has been the degradation of culture or, in the case of many parts of colonized Africa, widespread “deculturation” (Maathai, 2009). Culture is intimately and intrinsically linked with environmental conservation and peace education.

Conflicts and violence arising from issues related to identity and culture are increasing around the world. Amartya Sen (2006) argues, “The neglect of the plight of Africa today can have a similarly long-run effect on world peace in the future” (p. 144). Warning against classifying people “in terms of singular affiliations” (p. 76), Sen contends that the tendency to rely on a single categorization of the people of the world has led to a rise in global violence and terrorism. He further states, “The religious partitioning of the world produces a deeply misleading understanding of the people across the world and the diverse relations between them...” (p. 76). The sustainability of any culture is always endangered by insecurity and conflict, and for this reason, peace must be promoted for progress to occur (Stewart, 2011).

The links between culture and sustainability are difficult to disentangle because they intersect on a multitude of levels ranging from how we see ourselves as a part of our local society to how we identify and interact with the global community. Maathai (2009) notes, “Environmentalists and international institutions are also coming to realize culture’s centrality in the protection of biological diversity” (p. 177). Whether or not culture is recognized as a “fourth pillar” of sustainability or not, the importance of culture, identity, and diversity must be recognized as an essential and bridging theme consistent with the overall concept of sustainability. Recognizing culture as a compatible and equally important pillar would recognize the importance of indigenous knowledge and value systems combined with our collective need for a local and global sense of belonging.

The degradation of the earth and the competition to gain access over natural resources are often a catalyst for violence and conflict. Control over minerals, oil, timber, fishing and access to land and the sea fuel armed conflicts around the world. Involvement of world powers in the arms trade, restrictions to trade, inequitable laws, detrimental sanctions, and limited access to medicine and vaccines contribute to the deprivation and impoverishment of nations. Brown and Selvadurai (2011) state, “although there are many drivers of conflict, the three most prominent over the coming decades are likely to be changes in demographics, climate and economy” (p. 3). They further project that 90% of the population growth between now and 2050 will be in the “developing world” noting that there is also a clear “correlation between youth bulges and armed conflict” (p. 3). Culture and the three pillars of sustainability are inextricably linked to the aforementioned concept of peace and peace education and the overarching concept of positive peace and negative peace (Galtung, 1969). Living in balance with nature, respect for human rights and the absence of violence and war are contingent on a sustainable future.

International Frameworks and Principles

The International network for education in emergencies (INEE) is comprised of over 50 countries who contributed to the development of the INEE standards (2010). The development of the INEE Minimum Standards was a result of a multi-sector consultation process. These standards are built on foundations of the Convention of the Rights of the Child, the Dakar Education for All (EFA) framework (2011), the Millennium Development Goals, and the Sphere Project’s Humanitarian Charter (INEE 2010). The INEE coordinates “efforts to mainstream critical issues

such as peace-building and gender equality into education programming in emergency, chronic crisis and early reconstruction contexts...” (Kirk 2011, p. 31).

Standards are organized into five domains (INEE, 2010):

- Foundational standards that are to be included at all phases of a project cycle
- Accessible and safe learning environments and linking to other sectors (health, water, sanitation)
- Culturally appropriate curricula, teaching, learning, assessment and professional development
- Teachers and other education personnel (including, administration, and management)
- Education policy and coordination (through policies and implementation)

Integrated into this document are links to other standards such as, gender equity, disability and vulnerability, HIV/AIDS, community support and children’s rights (INEE, 2010). Underscoring the five standards is the recognition that providers of education must ensure access to all individuals and groups particularly those who are considered more vulnerable because of the result of conflict or displacement. The INEE (2010) states, “The lack of access to education for particular ethnic, linguistic, geographic or age groups can create or maintain tensions that may contribute to conflict” (p. 56).

The INEE standards provided an organizational framework to examine how best to provide education in post-conflict environments and the areas on which to focus efforts for development. Using the framework as an overarching model for the design of the research widened the scope of questions and promoted inquiry that examined and explored more than just the provision of education and psychosocial support within the school community. Beckerman (2005) argues for the need to pay more attention to adults who must be educated about peace because peace education that does not reach beyond the school walls “in the worst case scenario...allows for the replication of an unjust and unpeaceful world, but this time under the banner of repair, amendment and reform” (p. 240). With the multi-disciplinary framework and the five intersecting domains, the research expanded into the community, health sector, and the non-government organization agencies and it provided the researchers the opportunity to explore key topics or domains that had previously been delineated as key issues by the international community. This design provided a more holistic model to understand how and in what ways people and organizations were supporting children in post-conflict situations and how the various domains influenced or affected each other.

The INEE framework underscores the need for concrete policy, research and practice to address the needs of children living in conflict affected countries. More importantly, it is essential that teaching and learning be focused on promoting fundamental human rights and respect for diversity. Notable differences exist between international discourse, what is written as “policy”, and actual practice. A careful examination of the achievement of the Millennium Development Goals would illustrate that the international community is a long way from being successful in achieving many of its well-intentioned goals. Research that informs and transforms practice is essential to meet the needs of children living in conflict and post-conflict environments. Furthermore, teaching and learning extends outside of the classroom into all other ecological systems. Bronfenbrenner (1999) conceptualizes the ecological environment “as a set of nested systems ranging from the ‘micro’ to the ‘macro’” (p. 11). Bronfenbrenner’s model provides insight into what systems need to be involved,

and what interventions need to occur, in order to support children in post-conflict situations (Stewart, 2012).

With consideration of the standards put forth by the INEE and the theoretical underpinnings of Bronfenbrenner's (Bronfenbrenner, 2001; Bronfenbrenner & Morris, 1999) ecological framework, the research program discussed in the following section extends outside of the school and into the communities and organizations where there were people who were actively engaged with helping children who were affected by conflict. Not only did this widen the scope of the data collection, but it also illustrated the collective importance of all ecological systems in supporting the needs of conflict-affected children. More importantly, the sustainability of programs and the implementation of the peacemaking strategies were incumbent on the collective efforts of people across all ecological systems using diverse, yet effective, strategies to support children. Where resources and personnel were limited, a breakdown or deficiency in the ecological system was prevalent which further complicated teaching and learning. The research program conducted in Uganda served to illustrate the symbiotic nature of sustainability and peace and it demonstrated how interconnected the various strategies and skills were between the two fields and their various related co-disciplines. To illustrate the aforementioned assertion, it is first necessary to understand the context of Uganda and the effects that conflict has had on the people of northern Uganda.

The Context of Uganda

Uganda's history is riddled with civil war, violence, and ongoing conflict. Generations of children have grown up in a state of crisis (Global Security, 2008). As of July 2011, Uganda's population was estimated at over 34,000,000 and approximately half of these are children under the age of fourteen. The use of child soldiers in the most recent conflict with the Lord's Resistance Army (LRA) has left a legacy of trauma, broken families, and displaced people. Although the majority of "returned children" have attempted to settle back into their communities, anecdotal evidence suggests that there may still be in excess of 500 children who are still held captive by rebels in neighbouring countries. Peace talks have been conducted with both Joseph Kony, the leader of the LRA, and Uganda's President, Yoweri Museveni, but a peace agreement has remained unsigned.

Since the peace talks in 2005, the majority of northern Ugandans have returned back to their communities (UNICEF, 2008). Schools, community leaders, and family members are now faced with a tremendous challenge to meet the educational and psychosocial needs of the children who have been affected by conflict (Betancourt, Agnew-Blais, Gilman, Williams, & Ellise, 2010; Ezati, et al., 2011; Murphy, Stark, Wessells, Boothby, & Ager, 2011; Sommers, 2006; Wessells, 2006). Numerous barriers and challenges exist for community reintegration and for the forgiveness and acceptance of the children who were involved in the violence (Murphy et al., 2011). With an unstable political context, many of the citizens of northern Uganda remain hopeful, yet cautious, about long-term peace and stability for the region.

In 2005, a research partnership was struck between the University of Winnipeg, Faculty of Education and Makerere University, Faculty of Education. Having conducted research with war-affected children now living in Canada, Stewart was contacted by faculty members at Makerere, who were also struggling with similar issues concerning children affected by war who were living in northern Uganda. Both institutions were looking to revise current practices of teacher training to better respond to children who have been affected by war and armed conflict. Collaborating

together, a research program was conducted in northern Uganda from 2008-2011. The research related to an examination into the educational and psychosocial needs of children and youth from northern Uganda. Theoretical and conceptual frameworks and a more detailed description of the research design, methodology and findings are found in (McBrien, Ezati & Stewart, 2014; Stewart, Kuly, Ezati, McBrien, in press).

As a brief overview, two pilot studies were conducted in 2008 and 2009, followed by a more involved research project conducted in December 2010 (Stewart, et al., in press). Interviews and focus groups were conducted with 282 participants including teachers, school administrators, counsellors, ministry representatives, parents, youth members from the Concerned Children and Youth Association, and faculty members from Gulu University, Makerere University, and Kigali Institute of Education. Findings from this study revealed numerous systemic and pedagogically-based challenges for providing an educational program; however, there were numerous programs and interventions that had been implemented throughout the country that were noted to be very effective in helping children in post-conflict situations.

The educational and psychosocial needs of children and youth in post-conflict northern Uganda are far-reaching and it is essential that the strategies to support them be diverse, creative, and inclusive of all ecological systems. Many participants noted that the children and youth grew up in a culture of war and they have never lived in a peaceful society. Compounding these issues is the fact that they also need support through normal life developmental stages. In particular, several adults noted that many of the youth were orphaned and needed both financial assistance and life skills to get through the stages of adolescence. One participant notes:

They have a number of needs. One they need psychosocial support... basic psychosocial support besides education. They need education, they need to go to school. And they need conflict resolution skills between themselves and others. It doesn't mean that that is the end of conflicts that they will encounter in life. There are other conflicts that will always come so they need conflict resolution skills. They need peace building. They need general life skills. General life skills like issues of health and well-being.

Intersections between Peace Education and Education for Sustainable Development

Peace education and peacemaking skills were noted as an integral and essential need to help rebuild the country after decades of civil war. Expressive arts therapies, psychosocial counselling, school-based support groups, community network alliances, forgiveness and reconciliation ceremonies, and youth advocacy groups were some of the effective strategies that participants indicated were useful in assisting children who were affected by war (McBrien, et al., 2014, Stewart, et al., in press). Teachers and school personnel noted that an all-encompassing curriculum that focused on peace education and conflict resolution was essential to help rebuild communities and to teach children how to live together peacefully for a sustainable future. "Peace education" was a term that emerged to encapsulate a variety of strategies to help children. These strategies include: dramatic arts, guidance and counselling, storytelling, peer support, advocacy, human rights awareness, conflict resolution, stress management, anger management, self-expression, community support and environmental responsibility. As Noddings (2012) argues, schools must move beyond "narrowly defined disciplines and begin to address great universal aims such as happiness, existential meaning,

what it means to be a moral person, and our role as individuals and members of various groups in promoting peace” (p. 154). Instead of compartmentalizing concepts and issues, educators need to be aware of their responsibility to promote Peace Education and Education for Sustainable Development throughout all curricular areas if there is to be marked change in the trajectories of the world’s people. The transformation of teaching and learning to support Peace and Sustainability will be a driving force in closing the gap between the Global South and the Global North.

In addition to the need for a comprehensive peace education program, teachers, parents, and school leaders did not feel that they were provided with the necessary skills and training to adequately help the children who had suffered loss, trauma, and displacement and, in some cases, torture, violence and abuse. In addition to this, teachers and support workers from non-government organizations felt that their training in universities or colleges had not adequately prepared them to deal with the issues surfacing in their classrooms and organizations. Students discussed the need for more training so that teachers would be more understanding and supportive of their needs. Parents and community members very frequently discussed the need for more psychosocial support and more teacher skill development to support the needs of conflict-affected students.

Creative solutions were needed to address dynamic tensions, complex histories, and multifarious relationships between people, amongst communities and across nations. Creativity, art, self-expression, and the exploration of cultural heritage are pathways for exploring identity and for understanding others. Music, dance, drama, storytelling and art were frequently noted as being helpful forms of expression. The various forms of communication occurred in different contexts and in numerous ways, but they were all connected to the process of healing after war (Stewart, et al., in press). Storytelling, in particular, provided a means to reorder previously held ideas and to expose assumptions allowing people who had previously been separated by differences in geography, culture, religion or ethnicity to come together in ways that other forms could not. The story was also as a tool for educating, supporting, and understanding and it became a catalyst to resist violence and transform oppressive structures and inequalities (Stewart, et al., in press). Cultural exploration and personal expression and understanding were an integral part of peacebuilding in post-conflict settings. Education that focused on development, rebuilding, environmental respect, and community solidarity were noted as means for building a prosperous and self-sufficient future. Focusing attention away from international aid to small micro-finance loans to enable young adults to build their own capacity to provide for themselves was frequently mentioned as a path towards a successful and sustainable future.

In an effort to construct a framework for addressing the educational and psychosocial needs of children living in post-conflict environments, Stewart constructed lists of the suggested strategies and learning activities that were noted as being helpful from both the aforementioned literature review and the research program in Uganda (See Figure 1 below). Recognizing the symbiotic relationship between Peace Education and Education for Sustainable Development, the two intersecting and connecting fields were positioned at the center of the framework. Without categorizing disciplines or strategies to the respective fields, two lists of related disciplines and topics were constructed. From this perspective or orientation, a conceptual framework emerged and demonstrated the interconnectivity between the two fields. Without meaning to be an exclusive list of concepts and strategies, and recognizing that both fields continue to evolve and change, the framework offers a multidisciplinary model for providing support. Using the strategies noted in the figure, a research program focused on teaching and learning was created and implemented in northern Uganda.

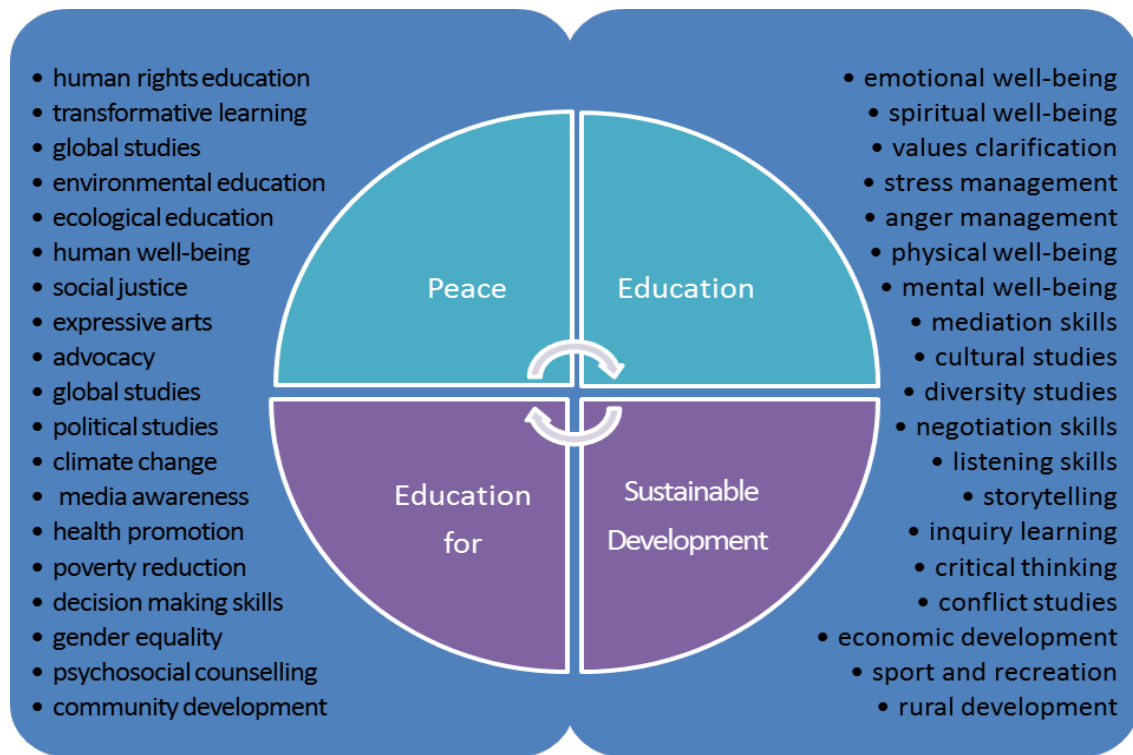


Figure 1. A Framework Illustrating the Confluence of Concepts and the Intersections between Peace Education and Education for Sustainable Development.

Findings from this study led to the development of lessons to assist students who have been affected by armed conflict. A teacher training program was taught to 100 head teachers in two districts in northern Uganda (Kitgum and Gulu). The team collaborated and developed a workshop that would provide teachers with training on how to use expressive arts strategies to assist children. Using the key themes identified in the study, we designed lessons and crafted activities to provide teachers with concrete and practical strategies to implement in their classrooms. Teachers were also provided with lessons on stress management, anger control techniques, and personal wellness. Using the findings from the study, we were able to develop a short training program to address the needs that were identified. A follow-up consultative session was held six months later to learn about how the lessons were implemented. While a short introductory workshop just touched on the vast array of needs in this area, it was a part of this research program that we felt was necessary as a means to provide follow-up to the study. Subsequent training programs and university level courses are currently being developed for future research.

Implementing a comprehensive peace education curriculum in a post-conflict environment will not be without its barriers, challenges, or struggles. Social, political and economic issues discussed in this chapter alluded to the difficulties of providing education or programs in post-conflict situations. Having said this, a study conducted by Rosen and Salomon (2011), on the durability of peace education programs in post-conflict environments, found that such programs were effective in influencing adolescents' attitudes and beliefs although they also noted that "significant, lasting effects of hearts and minds require sustained educational investment and a supporting social climate" (p.

145). Respect for local and indigenous ways of knowing and learning are imperative to contextualize teaching in a post-conflict environment (Thaman, 2010). In addition, it is important to maintain a close relationship with the local community and civil society to avoid isolation and misunderstanding (Cunningham, 2011). A multi-systemic, multidisciplinary comprehensive approach to teaching about peace and sustainability is the path that will promote understanding, facilitate action, and lead to transformation.

Conclusion

Considering the current state of the world's children, the continuing prevalence of armed conflict, and the degradation of the earth's resources, educators are confronted with a seemingly impossible task. Children and youth world-wide are denied basic human entitlements and significant deficits exist in providing access to education, nutrition, clean drinking water, health care and sanitation. Consequences of conflict, poverty and inequality directly influence access to education, which subsequently affects economic and social factors. The disparities between the Global North and the Global South continue to increase and issues of poverty, violence, and inequality persist. This current and increasingly fragile state of the world is unsustainable. Without the collective determination and focused efforts of individuals, families, communities, educators, policy-makers, and researchers from around the globe, a peaceful and sustainable world will not be achievable.

The international community has revealed a common vision for the world's future that includes non-violence, respect for human rights, social justice, equality, and sustainable living. It is essential that we identify ourselves as members of a global partnership and as individuals who are committed to the future well-being of the whole world. Respect for both the earth and the earth's people are fundamental values that are infused in policy documents and organizational frameworks throughout the world. The two complementing fields of Peace Education and Education for Sustainable Development, inclusive of all of the various co-disciplines, sub-themes, and strategies, offer a holistic approach that is necessary to facilitate new thinking, concrete action, and transformational change. Together these intersecting fields contribute to a framework that can provide multi-disciplinary strategies, pedagogical approaches, methods, and skills for teaching and learning about peace and sustainability. New thinking and concrete action is essential to create a democratic society that is just, participatory, sustainable and peaceful. Although resilient, the earth and its people face perilous consequences from inaction. This is the critical moment in time when humanity must make a choice about its future.

References

- Bajaj M. (Ed.). (2008). *Encyclopedia of peace education*. Charlotte, NC: Information Age.
- Bajaj, M. (2011). Human rights education: Ideology, location, and approaches. *Human Rights Quarterly*, 33, 481-508.
- Bajaj, M., & Chiu, B. (2009). Education for sustainable development as peace education. *Peace History Society and Peace and Justice Studies Association*, 34 (4), 441-455.
- Beckerman, Z. (2005). Are there children to educate for peace in conflict-ridden areas? A critical essay on peace and coexistence education. *Intercultural Education* 16(30), 235-45.

- Beckerman, Z., & Zembylas, M. (2012). *Teaching contested narratives: Identity and reconciliation in peace education and beyond*. New York, NY: Cambridge University Press.
- Betancourt, T. S., Agnew-Blais, J., Gilman, S. E., Williams, D. R., & Ellise, B. H. (2010). Past horrors, present struggles: the role of stigma in the association between war experiences and psychosocial adjustment among former child soldiers in Sierra Leone. *Social Science and Medicine*, 70(1), 17-26.
- Bickmore, K. (2008). Education for conflict resolution and peacebuilding in plural societies: Approaches from around the world. In K. Mundy, K. Bikmore, R. Hayhoe, R. M. Madden, & K. Madjidi (Eds.), *Comparative and international education* (pp. 249-272). Toronto, ON: Canadian Scholars Press.
- Boulding, E. (1988). *Building a global civic culture*. New York, NY: Teachers College Press.
- Boulding, E. (2000). *Cultures of peace: The hidden side of history*. Syracuse, NY: Syracuse University Press.
- Brantmeier, E. J., & Lin, J. (2008). Toward forging a positive, transformative paradigm for peace education. In J. Lin, E. Brantmeier & C. Bruhn (Eds.), *Transforming education for peace* (pp. xiii-xviii). Charlotte, NC: Information Age.
- Bronfenbrenner, U. (1999). Environments in developmental perspective: theoretical and operational models. In S. Friedman & T. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3-28). Washington, DC: American Psychological Association.
- Bronfenbrenner, U. (2001). The bioecological theory of human development. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social and behavioural sciences* (Vol. 10, pp. 6963-6970). New York: Elsevier.
- Bronfenbrenner, U., & Morris, P. (1999). The ecology of the developmental process. In W. Damon & R. Lerner (Eds.), *Handbook of child psychology* (5th ed.; pp.793-828). New York: John Wiley and Sons.
- Brown, G. K. (2011). The influence of education on violent conflict and peace inequality, opportunity and the management of diversity. *Prospects*, 41, 191-204.
- Brown, R., & Selvadurai, S. (2011). *Global conflict-future trends and challenges" towards 2030*. Wilton Park Conference Briefs [Electronic version]. Retrieved from <https://www.wiltonpark.org.uk>
- Brunk, C. G. (2012). Shaping a vision: The nature of peace studies. In C. P. Webel & J. Johanson (Eds.), *Peace and conflict studies: A reader* (pp. 10-24). New York, NY: Routledge.
- Cannon, S. G. (2011). *Think, care, act*. Charlotte, NC: Information Age.
- Chen, B. (2012). Moral and ethical foundations for sustainability: A multi-disciplinary approach. *Journal of Global Citizenship & Equity Education*, 2(2), 1-20.
- Cook, S. (2008). Give peace a chance: The diminution of peace in global education in The United States, United Kingdom, and Canada. *Canadian Journal of Education* 31(4), 889-913.
- Cunningham, J. (2011). Schools and peacebuilding in northern Uganda: Young people's perspective. In J. Paulson (Ed.), *Education conflict and development* (pp. 209-233). Oxford, UK: Symposium Books.
- Earth Charter International (2009). A guide for using earth charter in education. Retrieved from <http://www.earthcharterinaction.org/>
- EFA Global Monitoring Report. (2011). *The Hidden Crisis: Armed Conflict and Education*. Paris: UNESCO.
- Ezati, B. A., Ssempala, C., & Ssenkusu, P. (2011). Teacher's perceptions of the effects of young people's war experiences on teaching and learning in northern Uganda. In J. Paulson (Ed.), *Education conflict and development* (pp. 185-207). Oxford, UK: Symposium Books.

- Finley, L. L. (2011). *Building a peaceful society: Creative integration of peace education*. Charlotte, NC: Information Age.
- Galtung, J. (1969). Violence, peace and peace research. *Journal of Peace Research*, 6(3), 167-191.
- Global Security (2008). *Uganda civil war*. [Electronic version]. Retrieved from <http://www.globalsecurity.org/>
- Harris, I. & Morrison, M. L. (2013). *Peace education*. (3rd ed.). Jefferson, NC: McFarland and Company.
- Hawkes, J. (2001). *The fourth pillar of sustainability: Culture's essential role in public planning*. Melbourne, Australia: Cultural Development Network (Vic).
- Hicks, D. (2004). Teaching for tomorrow: How can futures studies contribute to peace education? *Journal of Peace Education*, 1(2), 165-178. doi:10.1080/1740020042000253721
- Holdren, J. P. (2008). Presidential address: Science and technology for sustainable well-being. *Science* 25 (219) no. 5862, 424-434. doi:10.1126/science.1153386
- Hung, R. (2007). Is ecological sustainability consonant or dissonant with human rights? Identifying theoretical issues in peace education. *Journal of Peace Education*, 4(1), 39-55.
- Inter-Agency Network for Education in Emergencies (INEE). *Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction*. (2010). Retrieved from <http://toolkit.ineesite.org/>
- Jenkins, T. (2008). A peace education response to modernism: Reclaiming the social and pedagogical purposes of academia. In J. Lin, E. Brantmeier, & C. Bruhn (Eds.), *Transforming education for peace* (pp. 265-279). Charlotte, NC: Information Age.
- Johnson, D. W., & Johnson, R.T. (2005). Essential components of peace education. *Theory into Practice*, 44(4), 280-292.
- Kester, K. (2012). Peace education primer. *Journal of Global Citizenship and Equity Education*, 2 (2), 60-74.
- Kirk, J. (2011). Education and fragile states. In K. Mundy & S. Dryden-Peterson (Eds.), *Educating children in conflict zones* (pp. 15-31). New York: Teachers College.
- Likhotal, A. (2007). Building a global culture of peace and sustainability. *Social Alternatives*, 26(3), 31-32.
- Lin, J., Brantmeier, E. J., & Bruhn, C. (2008). *Transforming education for peace*. Charlotte, NC: Information Age.
- Maathai, W. (2009). *The challenge for Africa*. New York: Anchor books.
- Machel, G. (2001). *The impact of war on children*. London: Hurst & Company.
- Marshall, M. G., & Cole, B. R. (2011). *Global report 2011: Conflict, governance, and state fragility*. Vienna, VA: Center for Systemic Peace.
- McBrien, J.L., Ezati, B., Stewart, J. (in press). Youth Purpose Among Former Child Soldiers in Uganda. *Journal of Adolescent Research*.
- McFarlane D. A., & Ogazon, A. G. (2011). The challenges of sustainability education. *Journal of Multidisciplinary Research*, 3(3), 81-107.
- Meadows, D. H., Meadows, D. L., & Randers, J. (1992). *Beyond the limits: Global collapse or a sustainable future*. London: Earthscan.
- Mundy, K., Bikmore, K., Hayhoe, R., Madden, M., Madjidi, K. (Eds.). (2008). *Comparative and international education*. Toronto, ON: Canadian Scholars Press.
- Mundy, K., & Dryden-Peterson, S. (Eds.). (2011). *Educating children in conflict zones*. New York: Teachers College Press.

- Murphy, M., Stark, L., Wessells, M., Boothby, N., & Ager, A. (2011). Fortifying barriers: Sexual violence as an obstacle to girls' school participation in northern Uganda. In J. Paulson (Ed.), *Education conflict and development* (pp. 167-184). Oxford, UK: Symposium Books.
- Noddings, N. (2012). *Peace education: How we come to love and hate war*. New York: Cambridge University Press.
- Nussbaum, M. (2008). Democratic citizenship and the narrative imagination. In J. Wiens & D. Coulter (Eds.), *Why do we educate? Renewing the conversation* (pp. 143-157). Boston, MA: National Society for the Study of Education.
- Nussbaum, M. (2010). *Not for profit: Why democracy needs the humanities*. Princeton, NJ: Princeton University Press.
- Nussbaum, M. (2011). *Creating capabilities: The human development approach*. Cambridge, MA: Harvard University Press.
- Oxford, R. L., & Lin, J. (2012). *Transformative eco-education for human and planetary survival*. Charlotte, NC: Information Age.
- Paulson, J. (2011). *Education, conflict and development*. Oxford, UK: Symposium Books.
- Rappleye, J. (2011). Different presumptions about progress, divergent prescriptions for peace: connections between conflict, development and education in Nepal. In J. Paulson (Ed.), *Education, conflict and development* (pp. 59-98). Southampton, UK: Symposium Books.
- Reardon, B. (1988). *Comprehensive peace education: Educating for global responsibility*. New York: Teachers College Press.
- Rosen, Y., & Salomon, G. (2011). Durability of peace education effects in the shadow of conflict. *Social Psychology of Education, 14*, 135-147.
- Sen, A. (1999). *Development as freedom*. New York, NY: Anchor Books.
- Sen, A. (2006). *Identity and violence: The illusion of destiny*. New York: W. W. Norton & Company.
- Sommers, M. (2002). *Children, education and war: Reaching Education for All (EFA) objectives in countries affected by war*. Uppsala University. Retrieved from <http://worldbank.org/>
- Stewart, J. (2011). *Supporting refugee Children: Strategies for educators*. Toronto, ON: University of Toronto Press.
- Stewart, J. (2012). Transforming schools and strengthening leadership to support the educational and psychosocial needs of war-affected children living in Canada. *Diaspora Indigenous Minority Education, 6*(3), 172-189.
- Stewart, J., Kuly, M., Ezati, B., & McBrien, J. L. (in press). The importance of storytelling in post-conflict states. In L. Finley, J. Connors & B. Wien (Eds.), *Teaching peace through popular culture*. Charlotte, NC: Information Age.
- Thaman, K. H. (2010). Teacher capacities for working towards peace and sustainable development. *International Journal of Sustainability in Higher Education, 11*(4), 353-364. doi:10.1108/14676371011077577
- Toh, S. H. (2002). Peace building and peace education: local experiences, global reflections. *Prospects, 23*(1), 87-93.
- Toh S. H. (2010). Peace education, ESD, and the Earth Charter: Interconnections and synergies. *Journal of Education for Sustainable Development 4*(2), 167-180. doi:10.1177/097340821000400203
- UNESCO (2005). *Four Pillars of sustainability*. Retrieved from <http://www.unesco.org/>
- UNESCO (2012). *Shaping the education of tomorrow: 2012 Report on the UN Decade of Education for Sustainable Development Abridged*. Paris, France: Author.
- UNESCO (2013). *Education: Peace and human security*. Retrieved from <http://www.unesco.org/>

- UNHCR (2012). Displacement: The new 21st century challenge. *Global trends 2012*. Retrieved from <http://unhcr.org/>
- UNICEF (2008). *Country profiles: Uganda* [Electronic version]. Retrieved from <http://www.unicef.org/>
- UNICEF (2009). *Machel study 10-year strategic review: Children and conflict in a changing world*. New York, NY: Author.
- UNICEF (2013). *Basic education and gender equality: Education and Peacebuilding*. Retrieved from <http://www.unicef.org/>
- United Nations (1987). Our common future. Retrieved from http://conspect.nl/pdf/Our_Common_Future-Brundtland_Report_1987.pdf
- United Nations (2005). *United Nations Decade for Sustainable Development 2005-2014: Draft International Implementation Scheme*. Retrieved from <http://unesdoc.unesco.org/>
- United Nations General Assembly Security Council (15 May, 2013). *Children and armed conflict*. United Nations.
- Weber, C. (2006). *Nurturing the peacemakers in our students*. Portsmouth, NH: Heinemann.
- Wessells, M. G. (2006). *Child soldiers: From violence to protection*. Cambridge, MA: Harvard University Press.
- Zembylas, M., & Ferriera, A (2009). Identity formation and affective spaces in conflict ridden societies: Inventing heterotopic possibilities. *Journal of Peace Education*, 6(1), 1-18.

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Ithinto Mechisowin (Food from the Land) Committee

The Ithinto Mechisowin Program grew out of the O-Pipon-Na-Piwin Cree Nation (OPCN)'s desire to return to traditional ways and improve food security, which was lost due to the hydro flooding and displacement. The community champions and the authors of this chapter believed that the country foods program was the way to fulfill and unite these two goals. Community elders and food champions proposed to collaborate with the University of Manitoba to materialize their vision. The University of Manitoba partnered with the community champions to explore how this dream could be made a reality, under the wing of OPCN's Tommy Thomas Memorial Health Complex and Community Care. The community school, the Aboriginal Diabetes Initiative program, the community Band/local government, the Fishermen's Association, and the Trappers Association provided in kind support for the program from its initial stage. The program is regularly training community youth on traditional food harvesting activities. Elders and food champions supervise food harvesting and preparing workshops. Harvested and prepared food (fish, wild meat, traditional medicines and berries) is distributed to elders, low-income families and diabetic patients in the community every weekly. Ithinto Mechisowin is a program that is owned and run by the community as part of the health and community care service. Ithinto Mechisowin program was planned and developed as part of Asfia Gulrukh Kamal's doctoral research. Dr. Shirley Thompson from the University of Manitoba is supervising the study.

Ji

Xia Ji was born and grew up in Taixing, China. As an undergraduate student at the West China University of Medical Sciences (now part of Si Chuan University), she was fortunate to be involved in the *Keepers of the Waters* projects in Chengdu and Tibet in China in the mid-90s to carry out a series of community-based education events about water and river pollution. Subsequently Xia worked for the *Living Water Garden* project in Chengdu – the first inner city ecological park in the world with a thematic focus on water and devoted to water quality restoration and environmental education. These civic engagement experiences led her to graduate studies in Environmental Learning and Leadership and later on in Education, Curriculum and Instruction at the University of Minnesota (St Paul / Minneapolis) in the United States. Currently, Xia is an Associate Professor at the Faculty of Education, a Research Associate with the Institute for Energy, Environment and Sustainable Communities, and a President Teaching and Learning Scholar at the University of Regina, Canada. She integrates her teaching, research, and community service in the areas of science and environmental education, sustainability education, partnering between science and indigenous ways of knowing, civic discourse, teacher education, and curriculum development. She can be reached at Xia.Ji@uregina.ca

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Linklater

Tansi, my name is Rene Linklater from the O-Pipon-Na-Piwin Cree Nation (OPCN)/South Indian Lake, and I am of Cree decent. I have recently returned to my community to explore decolonization theory and practice. We (Cree) are a nation not just a culture, and we have the right to exercise this concept. Through practicing sustainable traditional ways of life we can better reach sustainable well-being that recognizes who we are as a people. Through the Ithinto Mechisowin program we are able to explore our cultural way of life ensuring that our traditional way of life is exercised for generations; hence nurturing our culture that allows us to define ourselves. Currently I am working as a Health Director at the Tommy Thomas Memorial Health Complex at OPCN. I am also Vice Chair and program evaluator of the Ithinto Mechisowin Program and can be reached at linklaterr@gmail.com

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