



Sustainability in Education Policy and Practice

CONTENTS

Introduction

WAKING UP TO LAND AND PLACE IN EDUCATION	99
RACHEL REGIER	

EXPERIENTIAL EDUCATION

Land, place, space	105
JANET McVITTIE	

LIFT UP YOUR EYES

Reflections on justice, privilege, and environmental education	119
JADA RENEE KOUSHIK	

WORLDVIEW, COSMOLOGY, AND EDUCATION **131**

A POEM BY ARON KNUDSON AND RACHEL REGIER

A CALL TO ACTION

Waking up from slumber communities	137
MONIQUE BLOM AND DIANNE MILLER	

THE SEED PROGRAM

Teaching sustainability through wellness, food studies, and horticulture	137
RACHEL REGIER	

THE MAKING OF SPECIAL AGENT PEN GUIN **159**

A PHOTO JOURNAL BY ALANA KRUG-MACLEOD

FREE FOR ALL

A cross-Canada analysis of resources for teaching sustainability in education	175
ADAM THOMAS YOUNG	



RACHEL REGIER

Introduction

Waking Up to Land and Place in Education

In June 2016, the Sustainability Education Research Institute (SERI) based out of the University of Saskatchewan, hosted a conference in conjunction with its flagship program the Sustainability and Education Policy Network (SEPN). “Connecting Education and Environment: Mobilizing Sustainability in Education Policy, Practice, and Research” drew attention to five strands of research: Indigenous Education, K-12 Education, Higher Education, Educational Theory, and Community Education. Each strand featured sessions with local educators, activists, and students, as well as internationally renowned scholars and policy makers. Educators were encouraged to think outside the box, and use their practice to promote positive change in our schools and communities.

The following seven pieces highlight educational experiences, thoughts, and dreams of students, professors, and teachers connected to SERI, expanding on some of the discussions explored at the conference.

Three articles present a call to educational practitioners and activists to notice the disparity between the balance of natural systems and the destructive nature of our manufactured structures. In a narrative essay, Jada Koushik unpacks her experience of coming to terms with environmental justice issues she has faced while growing up. Janet

OUR SCHOOLS/OUR SELVES

McVittie describes sessions that were used to help educators see the natural physical surroundings of the University of Saskatchewan with new awareness. Aron Knudsen and Rachel Regier work together to create a word image that calls for a change of narrative in education.

Four pieces describe examples of alternative teaching practices and resources, structured to promote new and ancient narratives and elicit active, creative responses from students. Monique Blom and Dianne Miller collaborate to provide examples of how creative abilities can be developed through the arts, and how this work can promote social change. Rachel Regier describes how she leads students in an integrated program that cultivates community, connection to the natural world, and student empowerment. Alana Krug-MacLeod is a recent high school graduate who uses a photo essay to recount her experiences participating in a variety of unique opportunities related to environmental education and activism. Adam Young provides readers with a survey of sustainability resources available to educational practitioners from across Canada.

Though each of the articles were written independent of each other, it is easy to see thematic trends across the work. Janet McVittie and Rachel Regier both point to the significance of taking time in a place, to listen to what lessons might exist all around us. This has also been referred to a “slow pedagogy of place”¹, drawing focus to the experience of the body in space and time, and validating lessons learned from within. In her contribution, Janet McVittie describes land as whole healthy ecosystems resulting from healthy relationships between Indigenous peoples and a geographic locale. She notes that the term place refers to “geographic locale with feelings and stories attached.” Sound land-based education acknowledges that “relationships to land are familial, intimate, intergenerational, and instructive,”² drawing attention to the effects of settler colonialism on people, culture, and land itself.

In recent years there has been a push to promote land and place based pedagogy in the University of Saskatchewan’s College of Education. The college now offers master’s programs on ‘Land Based Indigenous Education’ and ‘Critical Environmental Education’, and requires undergrad students to complete a course titled ‘Pedagogies of Place’. The work that went into this undergrad course and post graduate programs, and their existence in the college, have influenced

the common discourse and it can be seen that each contributor has taken up these ideas in their own work. Aron Knudsen questions whether school needs to take place within buildings, or if learning might more effectively educate a whole student, mind, body, and heart, when it takes place in a wild setting. Jada Koushik points out that attentiveness to place might also reveal stories of injustice that demand a response. In each of these cases, learning does not come from focus on a textbook or lecture, but rather an awareness of one's surroundings.

Across the submissions there is also a common thread of awakening. Dianne Miller and Monique Blom use this metaphor to encourage learners to pay "full attention to life,"³ and Aron Knudsen points out that people are waking up to a new story. In a world abounding in distraction, this 'awakeness' necessitates more than just consuming new experiences. It requires us to spend time in places in important ways and investigate why things have come to be as they are.⁴ The articles that follow challenge us to consider the Indigenous ontological and cosmological relationships that existed before lands were stolen or ceded. In doing so it is recognized that settler colonialism is not something that happened exclusively in the distant past, but takes place all around us here and now.⁵

The theme of awakening also speaks to the value of consideration of each learner's internal response to external places. In line with this idea, Jada Koushik calls us to "lift up our eyes" to social injustice, Janet McVittie asks her participants to "look, listen, smell, feel" a place to tune into what feelings and stories a place can evoke, and Rachel Regier encourages learners to ask questions and wait for responses from the natural world. Alana Krug McLeod plays with the idea of investigating possibilities around us, and Adam Young raises awareness of resources and examples of creative ideas that are springing up across the country as people are inspired to teach in new ways. Each of the articles in this cluster share a common request for the reader to notice how (and that) they are situated in place and time, and practice attentiveness to learning and opportunities that surround them every day.

In a time of global ecological and social strife, we question the role of education, and how to best inform our students for the future that awaits them. We acknowledge that schools have been used as a tool for colonialism in the past, and wonder how they might be

reimagined to work toward decolonization and Indigenous futurity⁶. These problems seem immense; however, perhaps solutions are in the stories of the ancestors of our places and in the lessons of the natural systems around us but require us to turn down the noise of the world to listen.

There are ways to live more justly and sustainably on the planet, but to do so will demand a change in our practices, a change in our values, and a change in our stories. David Orr speaks of “reeducating people in the art of living well where they are.”⁷ There are people who lived, and some who still live, in balance with natural laws of their land. We should continue to look to them for council as we consider what it means to live well on a changing planet. Students are eager to explore new narratives with us. How will we guide them?

We hope you enjoy this work coming out of Saskatchewan, and that our thoughts plant new ideas within you. It has been an enriching experience for SEPN to solidify its partnership with the CCPA on this project and we are grateful for the opportunity. If you are interested in learning more about SERI please visit us <http://www.seri.usask.ca>. You can read more about SEPN and our findings at www.sepn.ca.

RACHEL REGIER is a high school teacher with Saskatoon Public Schools, and a masters’ student with the Sustainability and Education Policy Network at the University of Saskatchewan. She is interested in alternative education methods that empower students to take on social and environmental issues.

ENDNOTES

1. Payne, P. & Wattchow, B. Phenomenological Deconstruction, Slow Pedagogy, and the Corporeal Turn in Wild Environmental/Outdoor Education. *Canadian Journal of Environmental Education*. Volume 14. 15-31.
2. Tuck, E., McKenzie M, & McCoy K. (2014) Land Education: Indigenous, post-colonialism and decolonizing perspectives on place and environmental education research. *Environmental Education Research*. 20:1. 9. DOI: 10.1080/13504622.2013.877708
3. Greene, M. (1978). *Landscapes of learning*. New York: Teachers’ College Press. 163.
4. Greenwood, D. & McKenzie, M. (2009). Context, Experience, and the Socioecological: Inquiries into Practice. *Canadian Journal of Environmental Education*. Volume 14. 12.
5. Tuck, E., McKenzie M, & McCoy K. (2014). Land Education: Indigenous, post-

colonialism and decolonizing perspectives on place and environmental education research. *Environmental Education Research*. 20:1. 1-23. DOI: 10.1080/13504622.2013.877708.

6. Ibid. 18.

7. Orr, D. (1992). *Ecological Literacy: Education and the transition to a postmodern world*. New York: State University of New York.

A STRONG UNION VOICE:



ONE OF ETFO'S SIX BUILDING BLOCKS FOR BUILDING BETTER SCHOOLS

Ontario public education benefits from a strong union voice advocating for better teaching and learning conditions.

Read the full ETFO education agenda at BuildingBetterSchools.ca



Elementary Teachers' Federation of Ontario
Fédération des enseignantes et des enseignants
de l'élémentaire de l'Ontario



JANET McVITTIE

Experiential Education

Land, place, space

Outdoor education is by necessity experiential, and deeply connected to land, place and space. We — myself (the author) and two colleagues — believe that land and place must include examination of the inseparable correlation between social and ecological justice. To teach about land, place, and space, through experiential learning, we designed a workshop for educators grounded in these concepts, using the University of Saskatchewan grounds as a living case study. This workshop was created as part of the “Connecting Education and the Environment Conference”, June, 2016, in Saskatoon, Saskatchewan. Rod Figueuroa, teacher for Greater Saskatoon Catholic Schools, and president of SaskOutdoors, Leah Japp, executive administrator for SaskOutdoors, and Janet McVittie, faculty, College of Education, University of Saskatchewan, designed and delivered the workshop together.

The workshop was divided into three experiences, where the teachers went out with engaging tasks, and returned to debrief about what they had experienced.

Definitions

Outdoor Education is education that takes place out of all buildings;

there is a general perception that outdoor education should involve a trip to a remote location, but often this is not necessary; many of Canada's cities have significant green spaces inside them. Priest defined *outdoor education* to include experiential education when he wrote: "Outdoor education is an experiential process of learning by doing which takes place primarily through exposure to the out-of-doors. In outdoor education, the emphasis for the subject of learning is placed on relationships, *relationships* concerning people and natural resources."¹

Experiential Education, on the other hand, does not have to take place outside of the classroom; it can take place anywhere that learners are learning by doing²: a student engaged in a science experiment, in the science lab, is engaged in experiential learning; a student building a table in practical and applied arts is engaged in experiential learning. Dewey originally outlined the main premises of experiential education, and based the necessity for education to be experiential with his statement: "there is an intimate and necessary relation between the processes of actual experience and education."³ He identified the teacher's role in experiential education to set up appropriately sequenced experiences, prepare students to learn from the experiences, and then find out what they learned and help them sort through what they learned, or plan for the next set of experiences. Building on this, the Association of Experiential Education defined experiential education as:

a philosophy that informs many methodologies in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values, and develop people's capacity to contribute to their communities.⁴

Finally: *environmental education* is education about the environment, where students learn ecological principles. Environmental education might be neither outdoors (in the environment), nor experiential.

The three forms of education (outdoor, experiential, and environmental), however, do naturally converge. Outdoor education is, necessarily, experiential. Often, outdoor education might also address ecological principles. Ideally, environmental education would be *about, in, and for* the environment⁵ with the "about" being

environmental education, the “*in*” being outdoor education, and the “*for*” being experiential and action oriented education.

The first experience: place

To begin the experience, we first set the stage with the story of this land.

The University of Saskatchewan is built on Treaty 6 Territory and traditional territory of many Indigenous peoples (Nêhiyaw and Métis among others). Although the tendency is to teach the history of Canada as having a beginning point, as if the land were empty and ready for development, this land was not empty, was never empty. The land included humans with rich cultures, and it included other species. While this information is familiar or at least available to Saskatchewan teachers, what might be less considered is that this land was managed by the people who lived here, in ways that ensured “all our relations” could live healthy lives. Humans did not overpopulate, they did not overharvest, and they lived in humility as part of a circle including the biotic and abiotic world. First Nations’ peoples who lived on the prairies tended not to trap beavers; they needed the water that the beaver held back. They would burn large parts of the prairies in the spring, controlling the amount of litter that could, later in the summer, lead to devastating prairie wild fires.

That the land here, on the Great Plains, is more or less flat would help one understand one’s importance: to stand up is to be seen, but it also serves to keep one humble, because the land, sky, and wind are immense and humans are puny. Humans are only one species and biotic species are only one factor included in “all our relations”. First Nations’ peoples had very sophisticated understandings of their role in the world.

European settlers brought different attitudes towards land. For them, there was communally-owned land, and there was privately-owned land. Many of the settlers were attracted here because they could own land, as their own private property; the settlers were often people who had been crowded off communal land when wealthy people “enclosed” it and thus made it “mine” and not “ours”.

This piece of land on which the university stands is high above the river below. Water, during spring melt or a rain storm, had to get down

there. The city of Saskatoon has put in streets, parking lots, buildings, and also pipes — storm sewers — to take run-off directly into the river, carrying pollutants off the impermeable land. Before, much of the water went into the ground. There were creeks that took the run-off to the river, gradually, interrupted by plants and rocks, and the water filtered

into the river. In the summer, camping would have been good on the hilltop, with summer breezes blowing away the mosquitoes. In the river and creek valleys, from spring to late fall, berries would crowd the bushes, and sunshine would dry the berries, so they could be mixed with the fat from bison (or bears), and meat, to make that elven-type food (lightweight, nourishing, tasty,

It is past time to recompense the land and the people who suffered under greedy regimes.

durable): pemmican. In the winter, camps would be made in the creek valleys, sheltered from the wind, close to sources of wood. On most winter days, people would work and play outside, trap for fresh meat, and gather wood. On a blizzard day, people could mostly stay inside the tipis, going out only for body functions or as more firewood was needed. Blizzards were a good time for telling stories.

First Nations and Métis peoples still live here. They live in houses now. Some of them still fish, hunt, pick berries, but so do many other people. The people who were here before are still here now; most have electricity in their homes, and most know how to use all the latest technologies; unfortunately, the tendency is that in terms of monetary wealth they are the poorest amongst us.

This is treaty land, we are all treaty people, and those of us who are not Indigenous are fortunate that Indigenous peoples signed treaties, indicating a willingness to share. Greed and selfishness, on the part of the white people who signed and then dishonoured the treaties, have damaged the land and Indigenous peoples. It is past time to recompense the land and the people who suffered under greedy regimes.

This story set the scene for learners to experience this place, Saskatoon, from the high eastern bank of the Saskatchewan River. After hearing this story, learners were invited to walk out on the native prairie flourishing along the riverbank, notice (perhaps) the berries or

tracks in the snow. They were invited to imagine what it would have been like to be living here with all the resources that were available. From this location, the teachers can see across the river to the downtown area, they can look towards the residential neighbourhoods on the east side; they can see that the water flows downstream, over a weir, and under the CP Rail bridge; they cannot see far upstream, but they can view the university grounds and buildings and several of Saskatoon's older bridges. There is an asphalt trail along most of the riverbank, part of the Meewasin Valley Authority's river trail system. The plants that grow here are mostly untended, and there are many native plants, as well as a few invasive species. This is a rich area for learning about social and ecological justice.

The learners are invited to walk slowly away from the group, and find as quiet a place as they can; they should settle in; they should look, listen, smell, feel this place. They should think: In what ways might this place be different if European settlers had taken time to look, listen, smell, feel in the same way? In what ways might this place have been different if Europeans had talked to First Nations and Métis peoples about the resources here, and learned how First Nations peoples survived and thrived here from time immemorial?

Setting up the experience first is essential for students to learn from this solo time experience. Although this is an example of a stationary solo, it is not about "me"; it is not about a separate individual doing some navel gazing. This solo is about learners attending to the land that surrounds them, to develop a richer understanding of that place, to develop feelings and stories for that place. This is as Priest⁶ indicated outdoor education *should* be, it is about relationships, between humans and natural resources (in this case, between humans and other species and environmental factors). This solo is a time to develop relationships to land and to place. The story told prior to the solo gives some context for the place, and directs the learners towards what they might think about while on their own. This is experiential education, as defined by the Association for Experiential Education⁷, where the learners reflect, while in direct experience, to increase knowledge, skills, and clarify values.

When learners return to the large group, after their solos, more sense can be made of the experience. After all have had an opportunity to describe what happened for them, revelations explored, un-

derstanding expanded, the teacher can move into examining three different terms: space, place, and land. These help to illustrate the very different world views — those which the settlers brought with them, and those which the Indigenous peoples had.

The second experience: Land, place, and space

To set up the second experience, we introduced the three terms of land, place, and space. The first term, “land”, is about healthy ecosystems. Many Indigenous writers⁸ have taken up the term to address the healthy sustainable relationships that Indigenous peoples had with this geographic locale, including arguing that “sovereignty” for Indigenous peoples is an epistemology, a way of being, one that encompasses relationships including those with the land. Tuck argued:

In North America, settler colonialism operates through a triad of relationships, between the (white [but not always]) settlers, the Indigenous inhabitants, and chattel slaves who are removed from their homelands to work stolen land. At the crux of these relationships is land, highly valued and disputed. For settlers to live on and profit from land, they must eliminate Indigenous peoples, and extinguish their historical, epistemological, philosophical, moral and political claims to land. Land, in being settled, becomes property.⁹

In this paper, the term “land” is an ecocentric concept. Land education means coming to understand Indigenous cosmologies. Land *is*; it has value and rights; it cannot be owned. The concept “land” means we must attend to the needs of all our relations. Healthy land includes healthy air, soil, water, and biodiversity; for Indigenous peoples, this is an important part of their world view — we live together, in humility, with other species and the land; we are no better nor more valuable than any of our relations; land means relationships.

The second term, “place”, is about a geographic locale with feelings and stories attached to it. Place includes “both an embodiment and a practice of place”¹⁰ Place is an anthropocentric concept. It is about human feelings, human stories. The concept “place” means that we must remember the stories, continue to create the stories, so that we develop healthy emotional attachments to this geographic locale. If

we care *about* this place, we will care *for* this place.¹¹ Learners must first attach to place, but the next step must be to examine social and ecological issues in their place, so as to begin to decolonize and then re-inhabit their place.¹² Calderon argued “If as place-based education models purport, we are to teach through schooling how to promote models of sustainability and community, we also need to understand how sustainability and community cannot be achieved if the communities Indigenous to place are not central in this formulation.”¹³ Humanity does not move forward by destroying others.

The third term, “space”, turns land and place into a piece of geography that is ready for development, as “spatial structural forces in modern capitalist society.”¹⁴ Although Soja situated the spatial/territorial battle in urban areas, the battle for possession of land is integral to socio-economic class everywhere. In this paper, I use the term “space” to refer to the concept that a geographic locale is looked upon for its status and/or monetary value. Space is a locale that can be used to make money. There is no emotional attachment to the actual locale — any location that will make more money will be chosen — and, there is little to no concern for beauty, or for “other”, or for sustaining healthy (especially ecological) relationships. While visiting Manhattan, I saw the concept of space taken up in ways I had never before conceived of — the buildings were high, maximizing the value to be gained from Manhattan real estate; the sides of buildings had electrified bill boards; the key card that let me into my hotel room had pizza advertised on it.

One person’s place is very often another person’s space. It is the tension between these that results in political conflict, even wars. But, where is land in all this? Do humans ever value the land, in and of itself? Or is land only important as place, or space? There are countries in which land has constitutional rights. But without the funds to hire constitutional lawyers, does the land have these rights protected?

Canadian land rights can be demonstrated through the ongoing negotiations regarding water. Alberta is entitled to retain no more than half the water of the Saskatchewan river basins, as that water flows east. Similarly, Saskatchewan can hold back no more than 50% of the water it has from the same river systems. That means that Manitoba and Saskatchewan split 50% of the water, each getting 25% of it; Alberta gets 50%. But what water will flow into Hudson’s Bay? What

water does the land have rights to? In this deal, the land (and the ocean) has no right to the water. And it is the land that nourishes all our relations, including our human relations. Without water, the land can nourish no living things. A research question sometimes posed to K-12 students is whether corporations have the right to take water, bottle it, and sell it to humans. The question is actually bigger than

Students could be pushed to consider whether the land and other species also have rights, beyond what we humans accord to them.

what teachers and students usually take up: the question of community versus private ownership. Students could be pushed to consider whether the land and other species also have rights, beyond what we humans accord to them. Do we cherish the “other”?

On the banks of the river, in Saskatoon, the teachers in the workshop can see the water flowing east towards Manitoba. They

can look upstream and see Saskatoon’s water treatment plant, which takes water from the river so that the city can water its lawns, flush its toilets. The provincial government has just legislated that Saskatoon provide water to outlying towns; people on acreages truck water (water from corporations) to fill their wells to water their lawns. Much farther upstream, too far to be seen from the city, there is Lake Diefenbaker and the Gardiner Dam, built for hydroelectricity. The dam holds back a significant amount of water, preventing the once common annual spring floods. Those annual spring floods would have allowed water to flow over ice berms on the river bank, flooding the low-lying area on the land side (it is so easy to show an ice berm, so hard to describe it!). This water would not have escaped easily back to the river, but would have remained there almost every summer, almost all summer long, providing nurseries for frogs, salamanders, mosquitoes, dragon flies, ducks. These nurseries provided food for larger species, including humans. No more. The dam retains water in the lake, and, at the same time, allows water to flow more directly downstream to Manitoba because of the elimination of the behind-berm nurseries.

After this story, teachers are charged with a second solo: a walking solo. They are to examine this locale for aspects that make them think

of land, place, and space. In what ways are other factors — biotic and abiotic — valued? In what ways is this value demonstrated? In what ways is this locale a place for them — what feelings and stories does this place evoke in them? And as they walk, do they see evidence of this locale being used as space, ripe for development, for making money?

After returning to the group, during discussion, a final concept is developed: are humans natural?

The third experience: Nature

What does it mean to be natural, what does “nature” mean? Are humans natural? Are human creations and cultures? Once, on a canoe trip, we searched for a good campsite and finally found a lovely island, with easy landing for the canoes, a large rock kitchen area, and soft ground with tree-sheltered places for tents. Unfortunately, the whole of the soft ground was one huge ant hill. There was no place on soft earth for our tents. Ants are natural, but if these ants continued to multiply, they would soon have eaten all their trees, and the whole population would collapse. Ants, and their hills, usually are part of healthy ecosystems. Ants aerate the soil, and participate in the breakdown of organic matter for plants to take up. Are humans similar to these ants? Are we also natural, with our problem being that we have not limited our activity, our selfishness and greed? Suppose that we were to build our places, but not create the cancerous blight on the planet that we have. In what ways are human-built objects contributing to the ecosystem in positive ways? Or, in what ways have humans built objects to compensate the ecosystem for the loss of the resources that were once there? For example, I have put bird feeders in my yard, to compensate for the urban destruction of their food plants.

If our students see themselves as separate from nature, they will not as easily recognize the ecological roles humans take up. This might lead them to continue on negative paths, as if their destruction of land and place is not also destroying them. And, they might consider that nature is someplace special, where there should be no people. This would be a place they can retreat to, a place that is set aside as a special preserve. As well, believing themselves as separate from nature will mitigate their ability to recognize the role that Indigenous peoples played in managing the northern Great Plains.

The participants again go for a walk, this time in pairs or trios, looking for, observing, and discussing built features. They were to consider in what ways a built feature contributed to ecosystem health and, in other ways, to ecosystem destruction. They returned to describe what it was they had learned about humans as part of nature, in some ways being like the ants on their tiny island, a population out of control and destroying the life forms they relied on, but in other ways, contributing to other species survival.

Experiential education

Experiential education depends on experiences that relate to what is being learned. Consider learning about a tree in a lecture theatre: one is having an experience, but the experience is unrelated to the learning. Thus, for education to be experiential, the experience must involve physical involvement with what is being learned.

Heidegger, in wondering why two people could have completely different experiences after the same event, determined that there were two parts to any experience — the *nuomenon*, and the *phenomenon*.¹⁵ The *nuomenon* is the thing in itself, with no need for a being to be present. The *phenomenon* involves the experiencing being as well. Something happens (*nuomenon*). Someone is there to feel, see, hear, taste, the experience (*phenomenon*). For Heidegger, it was the thinking about the *nuomenon* — the thing itself — that made the experience unique to each individual. James explained this by noting that experiencing individuals always bring meanings, values, and intentions into the experience.¹⁶ This is a third aspect of experience: there is the *nuomenon* (1), there is the experiencing being (2), and there are the intentions, values, meanings of the experiencing being (3). But in his work on the subject, Kolb¹⁷ seemed to be getting at a fourth aspect: milieu (4). Both the human-built and the natural environment are integral to learning, and learning, in this sense, is therefore always social. The teacher must create room for learners to imagine the world differently, or must introduce different ways of imagining the world to the learners.

Knowing that the experience is not just the thing in itself, that learners have intentions, values, and meanings that they take into their experiences, the teacher must get to know the students, and set them

up to have learning experiences — educative experiences. What does the teacher want the student to learn from the experience? Preparing the students with intention is integral. What are they to think about when they are alone? What must they do? Are they going to take their smart phones, their head sets and music, their books and crayons with them? If not, how will the teacher communicate why leaving these items behind is important to the learning? If so, how will the teacher want these used? Creating a context for the students to learn prior to them setting out to have their experience is integral to the learning.

The students must have an experience. They are experiencing beings, but as Heidegger pointed out, each individual might return from the same “thing in itself” having had a very different experience. Heidegger concluded that it was the *thinking* that made an experience, made a phenomenon out of a nuomenon.¹⁸ James would have concluded that it was the meanings, values, and intentions of the experiencing being that made it so.¹⁹ The teacher must work with the students, to understand what each one got out of the experience. The different experiences should all be valued, should all be considered, and the teacher should support individual students in their meaning making.

However, the teacher is responsible for ensuring new imaginaries are considered. As students describe what they learned, the teacher must pull out some threads, and help the students to braid them with others, to make sense of them. And then, the teacher must introduce new potential ways of considering the experience, new ways of imagining the meaning of their experiences.

Conclusion

When children connect with their places, they usually do so in unproblematic ways. They can learn to love their place, but they connect to it as they have come to know it. They do not necessarily consider the social justice issues, even when the social justice goes against them. Children who have been shifted off land that they did not know was communal property, or that was not owned — those children do not consider the injustice of that unless that is introduced to them.

During the thousands of years that First Nations’ peoples lived here, the land and other species existed, thrived, lived in relationship. In a

short two hundred years after European settlement, with different attitudes towards ownership, the land has lost its health, species have been extinguished, and a near genocide of First Nations' peoples has occurred. To imagine a world where we humans do not own the land, where we humans are part of the circle of life and live in humility — that is a narrative that teachers *must* introduce to their students.

This can happen best in the context of experiential education, outdoors, examining concepts of land as land, place, and space.

The imaginaries that we attempted to introduce to teachers through a day-long experience on the Saskatoon river bank was to bring in very different ways of considering human relationships to land, to place, to space. All the teachers who participated were from white “settler” backgrounds, but were all wanting to learn more about the land and the place, and all are taking up decolonization in their teaching practices. We hope that, through experiential education, we were able to introduce new imaginaries for them to explore with their students.

JANET MCVITTIE is a faculty member in the Department of Educational Foundations, University of Saskatchewan. Her research interests relate to social and ecological justice; and taking children outdoors into the community and nearby nature, and using inquiry and experiential learning.

ENDNOTES

1. Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *Journal of Environmental Education*, 17(3), 13.
2. Adkins, C, & Simmons, B. (2003). Outdoor, experiential & environmental education: Converging of diverging approaches? ERIC Digest.
3. Dewey, J. (1938). *Experience and Education*. New York: Touchstone. 20.
4. Association for Experiential Education (2014). What is EE? Retrieved April 8, 2014, from <http://www.aee.org/about/whatIsEE>.
5. Donaldson, G. & Donaldson, L. (1958). Outdoor education: A definition. *Journal of Physical Education, Recreation & Dance*, 29(5), 17-63.
6. Priest, S. (1986). Redefining outdoor education: A matter of many relationships. *Journal of Environmental Education*, 17(3), 13-15.

7. Association for Experiential Education (2014). What is EE? Retrieved April 8, 2014, from <http://www.aee.org/about/whatsEE>.
8. See, for example, Calderon, D. (2014). Speaking back to manifest destinies: A land education-based approach to critical curriculum inquiry. *Environmental Education Research*, 20(1), 25. Deloria, V. (2001). *American Indian metaphysics*. In V. Deloria Jr. & D. Wildcat, *Power and Place: Indian Education in America*, pp. 1-6. Fulcrum Publishing.
- Tuck, E. (2009). Re-visioning action: Participatory action research and Indigenous theories of change, *Urban Review*, 41, 47-65. Tuck, E. & Gaztambide-Fernandez, R.A. (2013). Curriculum, replacement, and settler futurity, *Journal of Curriculum Theorizing*.
9. 29(1), 74. Tuck, E. & Gaztambide-Fernandez, R.A. (2013). Curriculum, replacement, and settler futurity, *Journal of Curriculum Theorizing*, 29(1), 74.
10. Calderon, D. (2014). Speaking back to manifest destinies: A land education-based approach to critical curriculum inquiry. *Environmental Education Research*, 20(1), 25.
11. For a richer discussion of place, see Gruenewald, D. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3-12. Sobel, D. (1996). *Beyond ecophobia: Reclaiming the heart in nature education*. Great Barrington, MA: The Orion Society, Nature Literacy Series, Number 1. Gruenewald, D. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3-12.
13. Calderon, D. (2014). Speaking back to manifest destinies: A land education-based approach to critical curriculum inquiry. *Environmental Education Research*, 20(1), 26.
14. Soja, E.W. (1989). *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London: Verso Press. 76.
15. Heidegger, M. (2002). My way to phenomenology. In D. Moran, and T. Mooney, [Eds]. *The Phenomenology Reader*, pp. 251-256. New York: Routledge.
16. Kolb, D. (2014). *Experiential learning: Experience as the source of learning and development*, 2nd Edition. Upper Saddle River, NJ: Pearson Education.
17. Kolb, D. (2014). *Experiential learning: Experience as the source of learning and development*, 2nd Edition. Upper Saddle River, NJ: Pearson Education.
18. Heidegger, M. (2002). My way to phenomenology. In D. Moran, and T. Mooney, [Eds]. *The Phenomenology Reader*, pp. 251-256. New York: Routledge.
19. Kolb, D. (2014). *Experiential learning: Experience as the source of learning and development*, 2nd Edition. Upper Saddle River, NJ: Pearson Education.

THE WORLD
IS BRIGHTER WHEN WE
INCLUDE
EVERYONE



The
Manitoba
Teachers'
Society

 [facebook.com/
manibateachers](https://facebook.com/manibateachers)

 [twitter.com/
mbteachers](https://twitter.com/mbteachers)

www.mbteach.org



JADA RENEE KOUSHIK

Lift Up Your Eyes

Reflections on justice, privilege, and environmental education

“We are only as blind as we want to be.”

~ MAYA ANGELOU

When I first began my doctoral studies in the School of Environment and Sustainability (SENS), a professor told me that I was privileged. Privileged to be at the University of Saskatchewan, privileged to be a graduate student, privileged to simply be in the room.

As an African American woman, I felt viscerally opposed to this conferred label, as my childhood had provided me with an intimate understanding of the injustices surrounding racism, sexism, and oppression. However, over the past two years I have come to realize (and check) my privilege, and understand that the economic and educational privileges bestowed upon me are sometimes as impactful as race and social class. Sometimes.

My research focuses on the influence of place on sustainability and education policy and practice, but, like many other PhD students, I often feel my focus drifting in unforeseen directions. I frequently entertain thoughts of combining issues of privilege, social justice, and anti-racism education into my current environmentally-focused research proposal. Fortunately, I am surrounded by positive (but

OUR SCHOOLS/OUR SELVES

realistic) people who encourage me to pursue my dreams in a timely fashion while filing away some of those tangential ideas for my first academic appointment.

However, issues of injustice continue to plague me, so this narrative attempts to combine some of my understandings of justice and privilege, while connecting them to my current studies dealing with environmental and sustainability education.

There's no place like home

Home is where the heart is... or so the saying goes. As an undergraduate and graduate student I traversed America in the hopes of gaining a well-rounded education, and now as a doctoral student in Canada I can honestly say that home is truly where the heart is. No matter how dangerous it is depicted in the media, nor the health disparities and increasing rates of unemployment, Detroit is a home that I will always come back to. However, Detroit is a city steeped in the legacy of racism, violence, poverty, and oppression, and this history has much to do with the current woes of the city.

Unlike many of the other kids in my neighbourhood, my mother had a well-paying job working for the Chrysler Corporation and was able to send me to an affluent private school in the suburbs. However, as an urban youth I felt displaced in the suburb of Grosse Pointe, and I was ill-equipped to grapple with the complexities of class and race relations that I experienced as one of the few black youth in a predominately white school. I later attended the University of Michigan, and Ann Arbor definitely became my heart's second home. But I was still plagued by questions of inclusion, identity, and justice. These misgivings, along with issues of environment and equity, have led me to pursue doctoral studies at the University of Saskatchewan.

Which brings me back to where I began, to a place that is my heart and breaks my heart at the same time: the Motor City, Motown, Hockeytown, The D.

Pollution troubles

The following picture was taken a few miles from my childhood home, and it captures a march to unite community members against

numerous examples of injustice, including air and water pollution. The sign that the kid is holding up that says ‘most polluted zip code 48217’ references a study done by the University of Michigan in response to the industrialization of that neighbourhood. As a child, I frequently held my nose when we drove by that area because it always had a foul smell, especially in the warmer months. Residents of Detroit and beyond jokingly refer to the area as Stinky River Rouge, but I now realize that the injustices that have taken place in that neighbourhood are no laughing matter.

Photo credit: Sierra Club/Twitter



Industry, including coal burning, tar sands crude oil refining, steel production, and salt mining surrounds the residents living in the 48217 zip code of Detroit. The pollution from these combined sources results in approximately 1.6 million pounds of hazardous chemicals released into the community each year.¹ It is no wonder that a repulsive smell assails motorists as they drive past the area, and I shudder to think that residents of this area are greeted with this smell every morning, noon, and night. Moreover, the chemical releases result in serious health issues for residents: Wayne County, which houses this infamous zip code, has the highest number of pediatric asthma cases in the state of Michigan.²

Also, zip code 48217 and the three zip codes that surround it have significantly higher rates of newly diagnosed cases of lung cancers than the rest of Michigan, according to a Michigan Department of Community Health (MDCH) report.³ I worked as an epidemiologist for

OUR SCHOOLS/OUR SELVES

about six years at the MDCH, and I experienced how those dealing with health divisions and disparities were further victimized by the impacts of decreased budgets, staff downsizing, and limited resources across the state. How and why are multiple chemical industries allowed to encroach on a neighbourhood and affect it so negatively, and how long will residents need to march in order for their voices to be heard?

As if growing up near the 48217 zip code was not enough, I moved to New Orleans to pursue a master's degree in public and environmental health and found myself up close and personal with Cancer Alley. This industrial monstrosity is an 85 mile stretch of the Mississippi River from Baton Rouge to New Orleans. Despite hosting over 125 industrial facilities, unemployment is high in many communities near Cancer Alley and most residents do not have a college education⁴ — flying in the face of industries claiming that they will train residents and increase employment rates in the communities that host their toxic facilities.



Photo credit: William Gamson (Global Justice Game)

The inhabitants of Cancer Alley are primarily African-American, live at a low socioeconomic status (SES), and experience higher than average rates of cancer (e.g., lung, rectal), asthma and other respiratory problems, reproductive difficulties, skin inflammation and rashes, and

premature death. Although Cancer Alley continues to be a legendary toxic zone, the efforts of Louisiana residents to stand up against major corporations to ensure a healthy environment for their family and friends is an important social justice movement.⁶ It is both inspiring and disappointing to know that they have been organizing to limit the siting of toxic facilities in their neighbourhoods for about 30 years. As a graduate student discovering New Orleans and the nearby regions, I frequently encountered individuals who had never travelled outside of New Orleans and/or Louisiana, and were extremely proud of that fact. I remember thinking, *How can you know anything about the world if you limit yourself to one state? One city? One common mindset?* But there is something to be said about the love and respect that you have for the city in which you were born and raised, and have chosen to inhabit for your entire life. They know the river, they know the people, and they are willing to fight for as long as necessary to reclaim the land and challenge the environmental inequities that they experience on a daily basis.

These stories of community resilience and enduring struggles for justice are echoed around the world, and they each contribute to a universal quest for environmental justice.

Environmental justice and power

Witnessing inequities and injustices in Detroit and New Orleans inspired me to pursue graduate school to explore the concept of environmental justice more intimately. I moved to the picturesque city of Ann Arbor to study at the University of Michigan School of Natural Resources and Environment (SNRE), where I was embraced by scholars who were fighting the good fight against discriminatory environmental practices. One such fighter was my supervisor Dr. Bunyan Bryant, who used various media such as books, articles in scholarly journals, conference presentations, and poetry to communicate the impacts of environmental hazards on low socioeconomic status (SES) communities. In his evocative poem, "The Image," Bryant illuminates the ill health effects in communities of color that result from environmental injustices:

OUR SCHOOLS/OUR SELVES

*Kids with itchy skin and watering eyes,
Beneath the weight of polluted skies.
Of lead, zinc, cadmium, PCBs, and arsenic too,
Makes clear skies hard to view.
Of xylene, ethylene, benzene, and chlorine,
While men in dark suits commute in limousine.
Landfills and incinerators abound,
As if we had the only land in town.⁷*

The platform for environmental justice emerged in the 1960s with the Civil Rights movement, as Black communities joined together to end racial discrimination and segregation. As a term, environmental justice is used to identify how environmental hazards occur in patterns that disproportionately affect some groups rather than others, which means that environmental benefits are also disproportionately enjoyed.⁸ People of colour, Indigenous peoples, poorer or less educated communities, and new immigrants are exposed to more than their fair share of environmental degradation, and have less access to positive environmental attributes, such as parks and green spaces. In 1987, the United Church of Christ's Commission for Racial Justice published the first national study on environmental racism, titled *Toxic Wastes and Race in the United States*. The study provided data that linked waste facility sites to demographics, demonstrating a strong and clear pattern of environmental injustice and racism.

The term environmental racism is used in reference "to any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities because of their race or color."⁹ Along with environmental justice and racism, a number of additional terms have been introduced, including eco justice¹⁰ and just sustainabilities.¹¹ Moreover, the range of issues examined has substantially broadened and more recent work considers who is welcomed and/or feels safe in non-urban places based on gender, sexuality, race, ability, or other social categories.¹²

When exploring themes surrounding justice, it is important to understand how power operates in our society. The term *power* has been used in critical scholarship to discuss the ways in which Western society has tended to maintain power differentials between groups.¹³ The word *hegemony* is another way to describe unequal power relations,

which refers to the cultural, economic, ideological, and social influence exerted by a dominant group over another group of people.¹⁴ For example, in North America, dominant society tends to operate on the basis of certain dualisms, or classifications, in which one side is given more power and privilege than the other side. Some common examples of these hegemonic dualisms include white over black, men over women, settler over Indigenous, and so forth.

In addition to the relative privilege and oppression caused by the valuing of one group over another, these dualisms also assume that everyone fits into one category or another; erasing other forms of diversity.¹⁵ An assortment of work in

environment and education has addressed these kinds of problematic hegemonic power relations and their impacts on various communities, and increasing numbers of environmental education programs are explicitly engaging with power relations. These environmental education endeavours include programs addressing urban justice and environmental issues, Indigenous land education, food sovereignty, north-south climate justice, or other approaches that acknowledge and address how individuals and communities have unequal privileges and repercussions in relation to environmental issues.¹⁶

(Re)Connecting justice to environmental education

Environmental educators have a unique role of instilling a sense of environmental justice in their students and communities. By empowering youth who live in areas of injustice, the seeds can be sown to develop strong communities of resistance and planning. Approaches to environmental education used primarily in various, often non-urban settings, have been utilized to shape approaches to urban environmental education.¹⁷ However, issues that have been traditionally referred to as 'urban' are interwoven with environmental issues, including considerations of race, gender, class, ability, sexuality,

Current urban and non-urban environmental education materials could and should be adapted to include environmental justice concerns and remedies

and anthropocentrism. I believe that current urban and non-urban environmental education materials could and should be adapted to include environmental justice concerns and remedies.

Kushmerick, Young, and Stein¹⁸ assessed popular environmental education curricula and revealed a disconnect — an artificial separation — between environmental education and environmental justice. I believe that our social structures are inherently interconnected with the environment, and that it is limiting (and short-sighted) to separate social issues from the land. Fortunately, the researchers noted many

lessons in these curricula that could be easily adapted for the inclusion of an environmental justice focus, such as incorporating the experiences of marginalized communities into units on environmental health, as well as including sustainable futures (intergenerational equity) and energy production from wastes (socio-demographic and spatial distributional inequity) lessons and learn-

Environmental education would benefit from decolonization and the incorporation of Indigenous philosophies and perspectives when examining our understandings of the environment.

ing objectives.¹⁹ I recently read an online statement: *Privilege is your history being taught as a required course, while my history is offered as an elective.* This assertion resonates with me, and points to the need to decolonize environmental education and centre voices that have been historically oppressed.

Environmental educators have explored the impacts of climate change, unsustainable natural resource use, loss of biodiversity and ecosystem destruction, along with neoliberal ideologies that value profit over our collective environmental future.²⁰ However, there is also a need for educators to “acknowledge the truths of colonization of Indigenous peoples and their Lands in order to heal the painfully damaged relationship between Indigenous and non-Indigenous peoples.”²¹ To that end, environmental education would benefit from decolonization and the incorporation of Indigenous philosophies and perspectives when examining our understandings of the environment.

Informed by Indigenous perspectives, decolonization seeks to negate the violence of colonialism, both real and symbolic.²² Decolonization is a long-term process involving the cultural, linguistic and psychological divesting of colonial boundaries,²³ and scholars have noted that the goal of decolonization is “to thwart colonial apparatuses, recover Indigenous land and life, and shape a new structure and future for all life.”²⁴

Environmental education and Indigenous scholars have noted that decolonizing and Indigenous approaches to education can offer promising directions for (urban) environmental education, especially when engaging with environmental justice issues.²⁵ Indigenous theories and practice understand the land as encompassing all of the earth, including urban considerations, while colonial settler narratives view the land as property.²⁶ These two competing views can be questioned and disrupted, as students discover the connections between land and unjust treatment of Indigenous communities.²⁷ This offers a meaningful opportunity for environmental educators and students (amongst others) to utilize the experiences afforded by land education to question educational practices and theories that construct Indigenous communities as abnormal while normalizing settler occupation of the land.²⁸

Conclusion

Recently, I spoke with a family member about writing this narrative, and described to her the types of social and environmental issues that I was trying to unpack. She said that my paper sounded interesting, but quickly added, *I don't know why those people don't just move? If my kids were getting sick, or if my water was contaminated, I would move in a heartbeat.* I remember, many many moons ago, having a similar response to issues surrounding environmental justice, *Why don't they move? Buy a new house? Find a better neighbourhood with better schools and more opportunities?* Now, I have a better understanding of issues surrounding justice and injustice, privilege and oppression, as well as the resultant environmental and social winners and losers. Those people cannot move... we cannot move. There is no real separation between *them* and *us*, only artificial borders and city-sanctioned zip codes. Without capital, property, economic and social privilege, a voice... *Where do we go?*

OUR SCHOOLS/OUR SELVES

Environmental educators and students must critically (re)examine the industrial, technological, and moral impacts of capitalism (i.e., the relentless drive for growth and progress) on our urban and non-urban environments.²⁹ Justice can link the environmental to the social, as the solution to environmental injustice is not a continual relocation of toxic wastes and pollution to different neighbourhoods. Instead, they should become we, and our strides toward environmental sustainability should courageously take a stand against injustice, by lifting up our eyes... together.

JADA RENEE KOUSHIK is a PhD Candidate at the University of Saskatchewan in the School of Environment and Sustainability. Her research with the Sustainability Education Policy Network explores to what extent local influences (e.g. cultural considerations, place/land, policy environment) affect the development and enactment of sustainability in education practice and policy.

ENDNOTES

1. Lam, T. (2010). 48217: Life in Michigan's most polluted ZIP code. *Detroit Free Press*. Retrieved October, 4, 2014.
2. Ibid.
3. Ibid.
4. Allen, B. L. (2003). *Uneasy alchemy: citizens and experts in Louisiana's chemical corridor disputes*. Cambridge, MA: MIT Press. Bang, M., Curley, L., Kessel, A., Marin, A., 5. Suzukovich III, E.S. and Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research*, 20(1), 37-55.
5. Singer, M. (2011). Down cancer alley: the lived experience of health and environmental suffering in Louisiana's Chemical Corridor. *Medical anthropology quarterly*, 25(2), 141-163.
6. Allen, B. L. (2003). *Uneasy alchemy: citizens and experts in Louisiana's chemical corridor disputes*. Cambridge, MA: MIT Press. Bang, M., Curley, L., Kessel, A., Marin, A., Suzukovich III, E.S. and Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research*, 20(1), 37-55.
7. Bryant, B. (n.d.). The image. Retrieved from <http://www.personal.umich.edu/~bbryant/Poems.html>.
8. Bullard, R. D. (1990). *Dumping in Dixie*. Boulder, CO: Westview Press and United

- Church of Christ Commission for Racial Justice. (1987). *Toxic wastes and race in the United States: A national report on the racial and socio-economic characteristics of communities with hazardous waste sites*. NY: United Church of Christ Commission for Racial Justice.
9. Bullard, R. D. (2001). Environmental justice in the 21st century: Race still matters. *Phylon* (1960-), 49(3/4), 160.
10. Bowers, C. A. (2001). *Educating for eco-justice and community*. Athens, GA: University of Georgia Press.
11. Agyeman, J. (2003). *Just sustainabilities: Development in an unequal world*. Cambridge, MA: MIT Press.
12. McKenzie, M., Koushik, J. R., Haluza-DeLay, R., Chin, B., & Corwin, J. (2017, in press). Chapter 10: Environmental Justice. In Russ, A. and Krasny, M. (Eds.), *Urban environmental education review*. Ithaca, New York: Cornell University Press.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. Tidball, K. G., & Krasny, M. E. (2011). Urban environmental education from a social-ecological perspective: Conceptual framework for civic ecology education. *Cities and the Environment (CATE)*, 3(1), 11.
18. Kushmerick, A., Young, L., & Stein, S.E. (2007). Environmental justice content in mainstream US, 6-12 environmental education guides. *Environmental Education Research*, 13 (3), 385-408.
19. Ibid.
20. Korteweg, L. & Russell, C. (2012). Decolonizing + Indigenizing = Moving Environmental Education Towards Reconciliation. In *Canadian Journal of Environmental Education*. Indigenizing and Decolonizing Environmental Education, 17, 5-14.
21. Ibid., 5.
22. Tuck, E. & McKenzie, M. (2015). *Place in Research: Theory, Methodology, and Methods*. New York, NY: Routledge.
23. Smith, L.T. (1999). *Decolonizing Methodologies: Research and Indigenous Peoples*. London: Zed Books Ltd.
24. Tuck, E. & McKenzie, M. (2015). *Place in Research: Theory, Methodology, and Methods*. New York, NY: Routledge.
25. Tuck, E., McKenzie, M., & McCoy, K. (2014). Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research. *Environmental Education Research*, 20(1), 1-23.
26. Ibid.

OUR SCHOOLS/OUR SELVES

27. McKenzie, M., Koushik, J. R., Haluza-DeLay, R., Chin, B., & Corwin, J. (2017, in press). Chapter 10: Environmental Justice. In Russ, A. and Krasny, M. (Eds.), *Urban environmental education review*. Ithaca, New York: Cornell University Press.

28. Bang, M., Curley, L., Kessel, A., Marin, A., Suzukovich III, E.S., & Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research*, 20(1), 37-55 and McKenzie, M., Koushik, J. R., Haluza-DeLay, R., Chin, B., & Corwin, J. (2017, in press). Chapter 10: Environmental Justice. In Russ, A. and Krasny, M. (Eds.), *Urban environmental education review*. Ithaca, New York: Cornell University Press.

29. McKenzie, M., Koushik, J. R., Haluza-DeLay, R., Chin, B., & Corwin, J. (2017, in press). Chapter 10: Environmental Justice. In Russ, A. and Krasny, M. (Eds.), *Urban environmental education review*. Ithaca, New York: Cornell University Press.



**ARON KNUDSON AND
RACHEL REGIER**

Worldview, Cosmology, and Education

"The views of nature held by any people determine all its institutions"

~ RALPH WALDO EMERSON

We face a cosmology crisis. A crisis of Worldview.
Our institutions: political, economic, educational,
neoliberal, capitalist;
anthropocentric
to the core.
Based around humanity
as sole proprietors of this planet.
Earth as a machine, nature as material.
separate from us.
Disconnection.
Extraction.
Serving human
needs and wants without giving back.
Decimating the only planet that we know to be habitable,
and the only context in which we can survive.
We take what we need without reciprocity.

OUR SCHOOLS/OUR SELVES

We raise and slaughter in factories,
veil stars with smoke,
pull life from oceans,
topple rainforests.
As this human
economic machine,
this reckless neoliberal system,
moves like a chainsaw through the web of life.
We need a transformation of worldview.
to recognize the wisdom.
of original
order.

I sat on the floor of the library,
searching through dozens upon dozens of books
"It's 3:23 in the morning and I'm awake,
because my great great grandchildren
won't let me sleep
my great
great
grandchildren
ask me in dreams
what did you do while the planet was plundered?
what did you do when the earth was unraveling?
surely you did something when the seasons started failing?
as the mammals, reptiles, birds were all dying?
did you fill the streets with protest
when democracy was stolen?
what did you do
once
you
knew?"¹
Tears fall
for my own young family,
for my grandparents, my great grandparents,
For Indigenous peoples loss of land, language, traditions.
For loss of clean air, water, soil,
shattered ecosystems,

extinction.
A tragic inheritance.

The trouble has risen
from the inadequacies of our stories,
growing dissatisfaction with this system.
Youth are growing weary of the story,
to fall in line, follow suit.
That the purpose of life,
is to get a good job,
to pay the bills,
to buy
plastic houses,
unhealthy food,
unethical clothes.
Meeting the physical needs
but not the emotional or spiritual

Some are waking up,
Listening to the rhythms of the earth.
Envisioning communities that stand for justice,
We emerge as a new culture: a transformation generation,
embracing old and new ways to experience and know,
weaving old and new stories.
A familiar sense of
oneness,
Shifting
from Earth as machine,
to Earth as the body, and the body as the self.
A new cosmology demands a new story of education.
attentive to the teaching of the environment.
The buzz of the light ballasts,
a four-walled room,
off-white bricks,
no windows,
rows of
boxes
or

OUR SCHOOLS/OUR SELVES

Crickets chirping,
filling the dark of night,
in a forest of Northern Saskatchewan,
observing the dancing aurora borealis.

Everything we experience shapes our worldview
Growing up listening to Tupac, his thoughts shaped mine.
Watching the way people were treated, how people acted,
he heard people in power and critiqued the oppression.
“We gotta make a change...
It’s time
for us as a people
to start makin’ some changes.
Let’s change the way we eat, let’s change the way we live
and let’s change the way we treat each other.
You see the old way wasn’t working
so it’s on us to do
what we
gotta do,
to survive.”²

In education,
It is imperative
that we examine our narrative.
We work alongside youth surrounded by
community, families, culture, media,
shaping identities,
ever changing
worldview.
Cosmology,
the study of the universe
as a whole system — everything working together,
all aspects within, every bit as integral to the functioning of the whole.
What is the story of how our world came to be? How do we fit?
The most important lessons we can now teach
are those of critical thinking and action taking.
Intelligence of the mind,
body and heart.

connection,
love,
beauty,
compassion.

Students are an untapped source
of (renewable) energy,
enthusiasm,
creativity,
passion.

They must be empowered
to shape their own lives and their communities.

"If we attempt to see with our whole selves,
the results will be world-changing"³

If we can change our worldview,
we can change the world.

"building a movement
that connects social justice,
ecological justice and cosmology
using the power of stories,
the power of action,
the power of art,
and the power
of dream."⁴

ARON KNUDSEN is an Outdoor Education teacher at Tommy Douglas Collegiate but is currently on parental leave, loving the opportunity to take care of his two young kids. He is a member of the Critical Environment Education Cohort, finishing up his Master's degree at the University of Saskatchewan. Aron is a new member on the Board of SaskOutdoors.

RACHEL REGIER is a high school teacher with Saskatoon Public Schools, and a masters' student with the Sustainability and Education Policy Network at the University of Saskatchewan. She is interested in alternative education methods that empower students to take on social and environmental issues.

ENDNOTES

1. Dellinger, D. (2008, February 15). *Hieroglyphic Strairway*. Global Oneness Project. Retrieved from: <https://www.youtube.com/watch?v=XW63UUthwSg>.
2. Shakur, Tupac. (1992). *Changes*. [Produced by Deon Evans]. Interscope Records.
3. La Chapelle, D. (2001). *Navigating the Tides of Change: Stories from Science, the sacred and a wise planet*. Gabriola Island, BC: New Society Publishers.
4. Dellinger, D. (2015, May 9). *The Power of Story*. Findhorn New Story Community. Retrieved from: <https://www.youtube.com/watch?v=ppulyekWYKE>.



**MONIQUE BLOM AND
DIANNE MILLER**

A Call to Action

Waking up from slumber communities

Part one of this paper reports on a workshop conducted by the authors at the conference, “Connecting Education and Environment: Mobilizing Sustainability in Education Policy and Practice.” The purpose of our workshop was to consider how education and the environment are connected through the arts. As Jardine¹ bluntly pointed out, there is no curriculum without the earth. We are living in a time that demands intense creativity to halt and reverse the damage to the planet; yet we seldom turn our attention to our individual creative processes and their connections to the whole of creation. By immersing participants in an exercise of creative awareness, we hoped to open pathways to learning. Part two of the paper considers the broad ways education in the Arts can connect students to the environment through an awakening to their own creative processes in relation to the creative processes of everything surrounding them.

Creation

Monique Blom is a visual/performance artist and teacher educator in art education. Dianne Miller is a poet and teacher educator in the foundations of education. We believe that the purpose of education and art is to wake us up — wake us up to ourselves and to those

OUR SCHOOLS/OUR SELVES

around us, both human and other-than-human: "Waking up to life is what we were born for."² Maxine Greene framed the goal of education as wide-awakeness. She was speaking of a "full attention to life,"³ an intent consciousness of who else shares this space, who else makes this place. Drawing on Kierkegaard, Greene contended that efforts to make life easier induce slumber: "[t]o make things harder for people meant awakening them to their freedom."⁴ If our education doesn't wake us up to life, then we need to change it.

Intuitively we structured the workshop along liturgical lines. We began with an invocation by Alex Pierce to call on the participants' individual spirits and the land as teacher:

Now I should add the light here is heartbreakingly beautiful, the marshes green gold, the creek water clear; how there comes a desire simply to merge with it, to lie down, curl one's body into an earth shape, die with the leaves, bend into that lucent sky, become the vagabond, the wanderer, the invisible, the other, the lost child that every child is, the one before becoming, before they made us who we are, the voice that is the under-singing, the one we have forgotten.⁵

We invited participants to become the 'one forgotten', the child who wandered and wondered, the curious alive person they were before 'they made us who we are'. We asked participants to go outside, form small groups, and create a drawing. We placed constraints on what they could use to execute the task. They were given a sheet of paper, a drawing board, and had to draw something without touching the paper with their hands and without using pens, pencils, crayons, chalk, or any other drawing instrument.

Participants' initial reaction was utter disbelief. Many looked at us as though we were speaking a completely incomprehensible language, others' seized the opportunity and jumped in (some literally) with both feet. In several cases, the groups that formed each held a participant or two who came from both ends of the spectrum. This pairing of opposites tends to happen in workshops like this one; that is, a natural balance usually finds its way into the group dynamic. We were inviting them to problem-solve on an intuitive level and, in disrupting their known patterns, we hoped to offer a glimpse of liberation, an affirmation of their agency. By tailoring a learning experience with

a defined set of constraints, we were asking participants to create “anything but not something,”⁶ leaving space for the process to become one of true discovery. A space in which to awaken.

According to Blom,

Creativity is the capacity to generate novelty and to bring something new into existence ... However, human creativity is grounded in processes more fundamental than just the generation of new ideas and concepts. Human creativity is part of the more encompassing core process in the self-emergence of the universe and is the process in which each entity comes into existence. To create is to manifest thoughts into reality, to cause to exist, to bring into being, and to originate. Creative process is the journey of bringing something into being.⁷

During the sharing of the drawings and the de-briefing, we used a series of prompts to elicit from participants their reflections on what happened, what they noticed, how they felt, what was frustrating, and what occurred with ease. We asked how they found a way through an impossible task. For some the impossibility of the task was liberating; they felt a freedom to explore and experiment. The process became their focus, not the product. One group excitedly showed their blank piece of paper and invited us to delight in the greens of chlorophyll, the cobalt blue of evening skies, ochre tones from minerals inside mountains. Another group reported how quickly the ‘pressure to be creative’ (interestingly, not the pressure to create but to ‘be creative’) moved them to violence against nature, and they found themselves destroying plants in order to make marks on their paper. They noticed what they were doing and reflected on the wider significance of violence as an attempt to assuage inner anxieties. We watched participants shed their doubt and disbelief as they engaged in and then actively interpreted the experience, sharing rich, complex, and interrelated ideas as they reflected on their creative process(es).

Blom takes up the relational aspects of creativity:

The transformative power of creative process to create relational connections is the very experience that awakens the participant to the constant potentials of creativity...The student comes to actualize the many possibilities that this communion and creativity are constantly

OUR SCHOOLS/OUR SELVES

presenting and is inspired, if given the opportune conditions, to embrace the potential of a deeper connection with their environment.⁸

The experience of a project such as this is about *being in the world*, awakening to the environment and place in which we are situated. Stripped of the usual tools to get the job done, participants were brought to a brink, an edge, a threshold; they were challenged to open, to receive, to listen, to become in tune with the ways of knowing of the body, of the land, of the other, of the wild. To wake up. To create.

Education

Could we ever know each other in the slightest without the arts?

~ GABRIELLE ROY⁹

Creativity is the process which awakens participants to their surroundings, to beauty, to the continual processes of creation and recreation of this planet. The Arts provide a venue to experience this awakening, waking up to ourselves, each other, human and other-than-human, the environment and relational ways of coming to know. Education in the Arts provides students with venues and possibilities to break familiar patterns, to reveal the earth's continual creative processes, to speak to the wonder of life, to dialogue with the contested meanings of sustainability, to create something new.

How does education in the Arts speak to sustainability? If sustainability is fundamentally the ability to sustain the earth's processes of generation and regeneration, then education in the Arts lays the foundation for students to understand that our planet is a continuous cycle of phenomena that cannot be reduced to language and equation. Coming to know the world through colour, texture, movement; trying to interpret our experiences of the world through sound, reflection, line; learning to embody our knowing through performance, poetry, dance, and music — these are just a few of the ways in which the processes of creation and sustainability become known.

Education in the Arts asks people to come to know the environment through what is already an integral part of their being — their curiosity, their capacity to pay attention, their creativity. It invites students to notice the immensity of cloud, the intricacy of flower, the sentience of

trees. Through their own creative processes, students become aware of and begin to understand the creative energy that flows through the planet each and every day.

Education in the Arts can provide the foundation and frameworks for valuing process over product and becoming attuned to the natural processes of the earth. Awakening to these processes inspires desire within students for creative action. To give a concrete example of awakening to and through creative action, we turn to a project assigned in Monique's Art Education class.

This project is a 'Call to Action' that gives students a chance to make their dreams concrete, and asks them to follow through 'in real life' on the processes they imagine. As they take the necessary steps to put their projects into action on paper, they begin to awaken to their call. This assignment is no ordinary teacher education presentation of a unit plan. Monique asks them to dream big, to inspire action that goes beyond what they think is possible, to reach beyond... and, mostly, they do.

The Mission (project description):

Become an Agent of Change: A Call to Action Art, Education, and Community Practice

This is your chance to change your world! Your call to action: imagine, design, and create a public art project that will revolutionize the way multidisciplinary art could be integrated into a specific community-based setting to propose critical interventions that inspire dialogue and catalyze social change between your students, and the greater Saskatchewan community.

Imagine how "art" can be the catalyst that opens the dialogue about a community's history, culture, and needs. Imagine how your students [K-12] can be directly involved in putting ideas generated with the community into practice. How will you work in collaboration with local artists and community to offer accessible multidisciplinary arts education to affect the greater good? How will this project change the way your students see the purpose of arts education? How will this project inspire belief in the greater good? What do you want to bring attention to? Why is this important for your students?

Projects have varied immensely from year to year, and have included designing a trans-disciplinary research facility that matches artists to the sensory needs of students with extreme exceptionalities; an afterschool theatre design company; a video game that digitally repopulates in Cree the landscape of Saskatchewan; LGBT and Transgender Galleries with outreach programs that service the communities that

need them the most; a Virtual Reality experience that explores poverty, education, and health care through the eyes of another; a 20-day experiential art program that takes place throughout various locales around Saskatchewan working with local artists and entrepreneurs. Each and every project has the capacity to envision and create a better world for our children to inhabit.

Each and every project has the capacity to envision and create a better world for our children to inhabit.

Upon the final presentation, teacher candidates realize that at least some of what they dream is achievable. Their desire has been awakened and cannot easily be extinguished. In dreaming the impossible they have taken the initial steps to make it possible and this first foray inspires confidence and a sense of responsibility to make their dream a reality. The class presentation also awakens them to the strength of collaboration as ideas spark other ideas and class participants offer suggestions, point to necessary community resources, and give constructive feedback.

Over the years that Monique has given variations of this assignment, she has watched with humility and wonder as students rise to the occasion. When given this call to action, this possibility to dream, this purpose to work towards the greater good, teacher candidates typically engage in a process similar to that of the participants in our workshop: they experience disrupted patterns, discomfort, dis-ease, uncertainty, and even chaos. In working to make sense of the assignment, they become curious (and sometimes furious), and find ways to embody the discomfort, turn chaos into order, re-pattern the patterns. Led by a sense of wonder and wide-awakeness, they discover new possibilities, and redefine known parameters. Reassembling unknowns back into knowns, they imagine new realities and build the confidence to create

them. They experience hope, shift perspectives, and most importantly come to believe in themselves as agents of change. In many ways their process mirrors the processes of the earth's generation, disintegration, and regeneration.

Reflections

Creativity is interconnectivity. Education in the Arts offers its participants new ways of seeing and listening, as well as the tools and skills to feel, connect, and comprehend their actual lived experiences within their given environments. Too often in public education the natural world is simply treated as a backdrop: a space for recess, a place of play distinct from the real work of learning. How can we expect any student to connect with or care about sustaining the earth, when we continue to teach them with tools that demand only observation and not direct participation? How can a student care about a world that exists as a set of disconnected systems? Education in the Arts demands that students engage actively with the phenomena of living, to wake up.

Dianne and I crafted an experience for the SERI conference that was meant to lead participants to a greater connection to their environments through creativity. Our experiences in this workshop changed both our art and pedagogical practices. We believe wholeheartedly that the participants' experience of transformation and awakening, even if on a small scale, has the capacity to bring about positive social change. Bearing witness to that transformation set in motion a transformation in ourselves which, in turn, is transforming our current students' experiences. If artists, researchers, educators, and policy makers continue to disrupt current patterns in everyday teaching/learning/and doing, we believe that we can awaken to the world around us, claim responsibility for our own liberation, and create.

Multidisciplinary artist and arts educator, **MONIQUE BLOM** lives and works in the wild woods of Saskatchewan, Canada. She has exhibited nationally and internationally. Monique currently teaches Art Education at the University of Saskatchewan.

OUR SCHOOLS/OUR SELVES

DIANNE MILLER teaches in the Department of Educational Foundations, College of Education, University of Saskatchewan. Her poetry has appeared in *Grain*, *CV2*, and *Room* as well as other venues. She is currently doing research on how place-based education is taken up in teacher education programs in Canada.

ENDNOTES

1. Jardine, D. (1998). "To dwell with a boundless heart": The integrated curriculum and the recovery of the earth. In D. Jardine (Ed.), *To dwell with a boundless heart: Essays in curriculum theory, hermeneutics, and the ecological imagination* (pp. 69-84), New York, NY: Peter Lang.
2. Faulds, D. (n.d). Walk slowly. Retrieved from the Mindful Living Program website: <http://www.mindfullivingprograms.com/poetry.php>.
3. Greene, M. (1978). *Landscapes of learning*. New York: Teachers' College Press. 163.
4. Ibid. 162.
5. Pierce, E. A. (2011). *Vox humana*. London, ON: Brick Books. Front matter.
6. Blom, M. (2010). *The transformative power of creative process in learning: Defining a path to relational connections with the environment* (Master's project, University of Saskatchewan, Saskatoon, Canada). 29. Retrieved from <http://www.moniqueblom.ca/>.
7. Ibid. 12.
8. Ibid. 18.
9. The quotation by Gabrielle Roy is found on the Canadian \$20 bank note from the Canadian Journey Series. It is from her 1961 novel, *The Hidden Mountain* AKA *La montagne secrète*.



RACHEL REGIER

The Seed Program

Teaching sustainability through wellness, food studies, and horticulture

A foundational objective of education is to equip students with the skills and ideals to be active participants in the future that awaits them. To meet this goal in our changing world, educators must examine their traditional practices and consider alternatives. The development of alternatives to traditional education is not new.¹ However, the predominant tenets of public schools have remained relatively unchanged since they were instituted. Curricula are updated over time; however, students are taught much more than curriculum at school. The medium is the message², and the structure in which students are taught, from the design of the physical classroom to the method of instruction, informs them how they fit into society and their present and future role as citizens.

We cannot truly teach sustainability education in a system that enforces an unsustainable status quo.³ A sincere effort to teach for a sustainable future requires careful analysis of the whole structure of education, since all education is environmental education.⁴ Working sustainability tidbits into the current system may in fact do more harm than good by clearing the conscience of students and teachers, and minimizing the problem, while contributing to social structures and grand narratives that are the root of the issue.

The Seed program, based at Aden Bowman Collegiate in Saskatoon,

OUR SCHOOLS/OUR SELVES

Saskatchewan attempts to teach for sustainable development by combining the curriculum of Wellness 10, and a Practical and Applied Arts survey of Horticulture 10 and Food Studies 10 (Sask. Evergreen Curriculum). Drawing on curriculum with strong lifestyle and practical components allows the program to focus on lifestyle and personal choices. This provides opportunities for students to meet curricular goals while experimenting with alternatives to the current consumerist society. The ultimate goal throughout the program is to teach lessons for a healthier life, and world. The Seed program is built on a foundation of education for environmental, social, and economic sustainability, and strives to build a strong learning community, connect with our greater natural and social community, and take on authentic student-centered projects.



Wellness 10 – Saskatchewan Curriculum “Wellness Wheel”

Building a learning community

The Seed class is a learning community because students often complete tasks cooperatively, and learn as much from one another as they do from the teacher or any reference material. Being a member of a diverse community is a valuable learning opportunity for many students. Some are already members of communities elsewhere in their lives, but many are not. Some students feel a strong sense of

community at school already, but many don't. Because students are required to engage in a variety of groups and face a wide array of challenges together, they seem to be able to find ways to appreciate all members of the group, in spite of (and sometimes as a result of) their differences.

Some core lessons and a structured framework have been developed to communicate key themes and guide student exploration and experience. "Good design uses nature as a standard and so requires ecological intelligence ... a broad and intimate familiarity with how nature works"⁵ The Seed community attempts to mimic nature in a few key ways. First, the students are often reminded that diversity within the group is a strength. On a retreat, early in the semester students participate in an activity that requires them to find a tree that they have only previously identified while blindfolded.⁶ Through attentiveness to the unique characteristics of their chosen tree, they are often able to pick it out. We discuss the idea that each of the trees' differences allow them to be utilized by other creatures in a variety of ways, and encourage more possibilities for a wide variety of life. Similarly, if an outsider was to quickly glance at the class of students their individual characteristics may not be noticeable, but their individual strengths and weaknesses translate to a community that can take on a wider range of challenge.

Another way the Seed community seeks to imitate a natural community is by functioning on a weekly cycle.⁷ Every Friday, Seed students are assigned community jobs in groups of three or four. Each job is different, but they all are essential to the maintenance and nurture of the community. For example, some students are responsible for planning a weekly meeting every Monday to set goals and track progress, while others plan a physical activity for the following Wednesday. Another community job is to prepare a meal to be shared by the class on Friday. Sharing meals has been seen to have a profound impact on class cohesion and sense of connection. In preparation for the class, work tables are pushed together to form one long banquet table. Conversation during the meal is informal and unstructured. Making time for informal moments that celebrate togetherness build a foundation of trust and security. Students are more able to learn and engage with new challenges when they feel socially safe, included, and like their offerings are valued by their

OUR SCHOOLS/OUR SELVES

classmates. Community jobs are a practical example of each student having a role and adding value to the class.



Connecting with the broader community

The Seed class attempts to reach out to the community outside the school whenever possible. In doing so, students are taught they are a meaningful part of the world outside the school. Combining curricula allows the Seed program participants to engage with one another for over two hours every day, instead of one. This extension of time allows for more opportunities logistically, making it more worthwhile to leave the school building and engage with a variety of places and people. Throughout the term, students visit a variety of facilities to take part in a sampling of physical activities and to witness first hand examples of local food production, greenhouses, and an urban farm. Engaging in learning activities in a wide variety of environments helps to build bridges between school learning and what is actually happening in the local community

Near the beginning of the term, some extra time is borrowed from other classes to take part in an overnight cycling trip to a local retreat centre. Taking this time to practice attentiveness to the outside world

has significant influence on the building of the class community, and a connection with the natural world that students refer back to for the rest of the semester. Though the retreat centre is not more than 25km away, cycling has the effect of slowing the trip down to a pace that allows the group to make note of the transition from city to prairie. Once we have accomplished the communal goal of reaching our destination, there is a marked difference in the sense of togetherness of the group. Students often mention how working together as a group enabled them to accomplish something they would have never dreamed of doing on their own.

Once we are removed from the city by time and space we focus on activities that attempt to teach “with the environment”.⁸ Students are challenged to spend several hours on a solo activity, engaging exclusively with the more-than-human nature.⁹ To encourage them to take time to be attentive to what they can “learn from the land”¹⁰ they complete an assignment to carry out an interview with an element of their surroundings. In the past students have interviewed trees, snowflakes, other animals, and the wind. The responses to their questions often range from comical to wise, and are rich in analogy. Most often, students interpret a sense of peace and purpose from their interviewee, and it is common for the responses to have interesting critiques of humanity.¹¹ When the interviews are reflected on it is acknowledged that this act is “... testimony to the gift we humans can give to the world through our attentiveness.”¹² Listening to the natural world reminds us that we are not there to simply consume a nature experience, but rather to learn to cultivate a reciprocal relationality with the place.

In the evening we cook our meal by campfire. The fire also provides a wonderful opportunity for two key activities: a talent show and storytelling. Though these may seem like simple pastimes, they are deliberately chosen elements of the nature immersion experience. The talent show requires every student to come up with something to offer the group, and contributions often range from silly to sentimental. In doing so, students are taking turns practicing vulnerability with one another, and being affirmed by the group. Storytelling is done through an activity in which students act out the creation stories of different cultures, including Indigenous stories, the predominant scientific story of evolution (written lyrically), and a European Christian

OUR SCHOOLS/OUR SELVES

traditional creation story. When each group is done, we discuss quotes from Thomas King's collection of essays in *The Truth about Stories* including "you have to be careful with the stories you tell. And you have to watch out for the stories that you are told." and "Stories are wondrous things. And they are dangerous."¹³ As the term progresses we develop our understanding as a class that our stories shape our identity, and set up structures of power in our society.¹⁴

Another important aspect of connecting with the broader community is for students to have the opportunity to interact with guests. As often as can be arranged, members of the community are welcomed into the class to share their area of expertise. Indigenous knowledge keepers are invited in to introduce teachings of a medicine wheel and reflections on food. Other guests include chefs, local artists, representatives of social justice groups, or experts on topics that the students are studying. Interaction with other adults in the community provides students the opportunity to see first-hand a variety of options may await them after high school. Through bringing together adults and youth, it has been noticed how few opportunities they typically have to engage with each other. Outside of their own families and teachers, many teens rarely speak with adults or seniors, and it is even rarer for them to share their stories. This transgenerational social breakdown likely has a significant impact on the students' understanding (or lack thereof) of their place in time, and their concepts of the cyclic nature of history.

Once a person begins high school it is also unlikely that they spend much time with younger children, unless they have young family members. This is unfortunate because these two groups have a great deal to offer one another in terms of social validation and attention. Young children help quell the insecurities of the teenagers and simultaneously the children receive attention that they crave from their older counterparts. To bring these groups together, Seed students complete a project where they must create a new game and take it to the physical education class of elementary students. This also provides the youth a relatively safe place to practice their leadership skills. It is not surprising to see a teenager who typically struggles with school excel at interacting with children.

Often youth are told about what life is like in the 'real world' as if they are not yet a part of something real going on all around them.

Connecting with people and the natural world outside of school contribute to a student's sense of place, time, and purpose. This validates them as an integrated part of the 'real world', and may help inspire and motivate them to take action.

Authentic Work

Students in the Seed program contribute to projects that are happening in the greater community. The Healthy Yards Video Project from the 2015 year was a project that students worked on in connection with the Saskatoon Food Bank and the City of Saskatoon. Students created educational videos on topics such as 'backyard beekeeping' and 'being water smart' to add to the City of Saskatoon informative website. Students have also learned about running their own small businesses by creating products to sell at the Saskatoon Farmers' Market. More recently, the Seed class planned an event showcasing a documentary and their own talents to raise awareness about social injustices in our current food system. Projects like these help connect students to real meaningful work outside the school, and enforce the message that, "knowledge carries with it the responsibility to see that it is well used in the world"¹⁵



The projects are designed so that each student has a specific role in their own group, and their group has a specific role in the class. This means that each student is responsible for something unique, and in this way, students each offer their own valuable piece of the puzzle. Students feel the work is purposeful, as their finished products do not

end on the desk of the teacher. They are shown that they are more than employees in the making, and more than citizens in the making, but rather that they are already citizens, who have something to offer society. "Certainly as democratic educators we have to work to find ways to teach and share knowledge in a manner that does not reinforce structures of domination."¹⁶ This refers to structures regarding race, gender, class, etc. but could also speak to the structures of domination within the school. A big part of this is stripping away the notion of youth as 'less than'. Young people should be reminded that "Being less than 18 doesn't make you less than human. Nor does it deprive you of a voice in the world unless you let it".¹⁷ In fact, people at this time in their lives can contribute unique perspectives, a willingness to take risks and try new things, and an enthusiastic passion for a cause in which they can engage.

Authentic projects demand that a teacher forfeit some of the control that they may be accustomed to in their classroom. It can feel uncomfortable to trust teenage work styles and decisions in projects that will be made public. Teachers may struggle at first with shifting their role from expert to "professional amateur"¹⁸ but when students see that a project is truly in their hands it can be amazing to see them rise to the occasion. Students learn that information and resources are all around them, and there is often more than one right answer. Moreover, students grow in their ability to communicate through conflict, deal with stressful public deadlines, and look for alternatives when they feel they have hit a roadblock.

"Most employment situations will place demands on students to be critical thinkers, to self-direct some of their learning process on the job, and to be problem solvers... It is evident that employers value a skill set that is quite distinct from the ability to memorize facts and recognize information."¹⁹ To take it one step further, not only will employers be looking for this type of skill set, but a more sustainable future depends on people developing these abilities in order to lead our society down a new path. If the goal of school is to prepare students for their adult lives, classes should provide safe opportunities for youth to practice these essential communication and problem solving skills.

Gardening is another authentic learning activity that Seed students engage with in which nature is a "co-constructor"²⁰ of the learning:

"...a garden brings balance of teaching and learning that is at once practical and reflexive, local and global, and promotes education with heart, earth, and mind"²¹ Beyond this, a garden allows a student to learn and experience new things with all of their senses. In a generation of 'life hacks', horticulture teaches patience, and a type of mysterious wonder that is beyond human control. Nurturing plants provides another opportunity for students to engage in a relationship with a non-human natural entity. Students often name their plants, and keep track of their growth and development over time, and occasionally displaying emotional investment when their plants are damaged, sick, or when they die. Since the school year does not align well with Saskatchewan's growing season, the students experiment with plant cultivation in a classroom set up with two different hydroponics systems. Attempting to recreate a natural system indoors comes with its own complications, and students learn about the complexities of natural systems by trying to replicate them artificially, and occasionally failing.

Final thoughts

It can be argued that all good education is critical, and all critical education attends to the environment and sustainability issues. In fact, "any anti-hegemonic resistance movement that claims social justice, universal human rights, or global peace must contend forthrightly with the deteriorating ecological crisis at hand."²² It is the responsibility of a teacher to bring awareness to the surrounding environment in their lessons. The material surroundings of learners should not be neglected, but rather chosen deliberately to assist the learning.

Looking at it from the other side, all environmental education should also consider social and economic justice issues, as they contribute to one another. "Solutions to both environmental and justice problems require addressing social and political-economic factors, as well as ecological knowledge. These factors — congregating in a system of extraction, production, and consumption oriented around the maximization of capital accumulation — degrade environmental conditions at the same time that they contribute to social inequities."²³ Teachers who are motivated by the potential for education to have a positive influence on the future are often focused on one issue

to the detriment of seeing the big picture. "If there has ever been a moment to advance a plan to heal the planet that also heals our broken economies and shattered communities, this is it."²⁴ We are stronger when we can see that many of the issues we are facing in the world today are symptoms of a larger problem. True critical education not only looks to the underlying issue of problems in society, but also encourages students to seek solutions and create new narratives for a better future. "Necessary responses involve shifts in cultural structures of feeling through the building and strengthening of alternative shared narratives and practices."²⁵ School is the ideal place to experiment with new alternative stories and systems.

Educational alternatives "do not of themselves solve any of the problems of the actual or practical conduct and management of progressive schools. Rather, they set new problems which have to be worked out on the basis of a new philosophy of experience." There is no magic formula that will engage all students, and turn each graduate into a citizen ready to face any problem that society can throw at them. However, as professionals, teachers are responsible for keeping up with research as it progresses, and having it inform their practice. Certainly new problems will arise as new methods are experimented with, as in any other professional field, but it is the responsibility of educators to pursue new directions in response to the ecological, economic, and social problems that the world is currently facing.

Witnessing students create pictures and descriptions of their ideal school, one can see that the result is typically a drawing of a rather traditional looking school building, with some special features like solar panels, gardens, nearby parks, etc. Rarely are students able to imagine that school could potentially not involve a school building at all. They struggle to create a story that they have never before heard, especially when it contradicts what they have grown accustomed to. It is the goal of the Seed program not only to equip students with skills and knowledge that they will need for the world that awaits them, but also to help them develop personal narratives that motivate action for positive just change.

Education is "humanity's best hope and most effective means in the quest to achieve sustainable development"²⁷ as it has a significant impact on social norms and grand narratives. If schools are sincere in their goal to encourage students to be citizens prepared for their

future communities, nations, and world, continued attention should be drawn to the structure of education, and what is taught by not just the curriculum, but the methods, materials, and environment. In schools, we have the opportunity to model what we desire the future to be. It is, therefore, the responsibility of educators to imagine a more just and sustainable future, and use the power we have to create a better story for generations to come.



RACHEL REGIER is a high school teacher with Saskatoon Public Schools, and a masters' student with the Sustainability and Education Policy Network at the University of Saskatchewan. She is interested in alternative education methods that empower students to take on social and environmental issues.

ENDNOTES

1. John Dewey was proposing his education reforms nearly one hundred years ago, calling for more experiential, integrated, and community based education. Dewey, J. (1938). *Experience and Education*. New York : Macmillan.

OUR SCHOOLS/OUR SELVES

2. McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. Retrieved from <http://web.mit.edu/allanmc/www/mcluhan.mediummessage.pdf>.
3. "Nor do piecemeal steps however well intended, even partially resolve problems that have reached a universal, global and catastrophic character. If anything, partial 'solutions' serve merely as cosmetics to conceal the deep seated nature of the ecological crisis. They thereby deflect public attention and theoretical insight from an adequate understanding of the depth and scope of the necessary changes." Bookchin, M. (1982). *The Ecology of Freedom: The Emergence and Dissolution of Hierarchy*. Palo Alto, CA: Chesire Books.
4. "all education is environmental education. By what is included or excluded, students are taught that they are part of or apart from the natural world" Orr, D. (2004). *Earth in Mind: On Education, Environment, and the Human Prospect*. Washington, DC: First Island Press.
5. Orr, D. (2004). *Earth in Mind: On Education, Environment, and the Human Prospect*. p.106. Washington, DC: First Island Press.
6. Activity found in Cornell, J. (1989). *Sharing the Joy of Nature*. Nevada City, CA: Dawn Publications.
7. "The temporalities of everyday social life can be observed as being attuned to cyclical rhythms of more-than-human nature, like the tides, or the linear rhythms of modern capitalist societies" Lefebvre, H. (2004). *Rhythmanalysis: Space, time and everyday life*. London, England: Bloomsbury.
8. "One can teach about the environment, in the environment, for the environment, or with the environment... A good place to start is with the students themselves with the ways in which they, as natural entities, respond, for instance, to light, heat, smells, sounds, and so on... to celebrate with students the fact that we are living, breathing creatures with profound ties to the natural world" Russell & Bell. (1996). A Politicized Ethic of Care: Environmental Education from an Ecofeminist Perspective. *Women's Voices in Experiential Education*. (p. 176). Retrieved from <http://files.eric.ed.gov/fulltext/ED412046.pdf>.
9. "Our relationship with nature is not only about preserving land and water, but about preserving and growing the bonds between us" Louv, R. (2012). *The Nature Principle: Reconnecting with Life in a Virtual Age*.(p.139). Chapel Hill, NC: Algonquin Books of Chapel Hill.
10. Meyer, M.A. (2008). Indigenous and authentic: Hawaiian epistemology and the triangulation of meaning. In N.K. Denzin, Y.S. Lincoln, & Tuhiwai Smith (Eds.), *HANDBOOK OF CRITICAL AND INDIGENOUS METHODOLOGIES* (pp. 217 – 232). London, England: Sage.
11. In Williams writing "Ground Truthing" it is written, "If we listen to the land we will know what to do." Williams, T. T. (2004). Ground Truthing. In T. T. Williams, *The open space of democracy* (pp. 28-37). Barrington, MA: The Orion Society.
12. Cox A, & Albert, D. (2003). *The Healing Heart: Communities*. (p.172). Gabriola Island,

BC: New Society Publishers.

13. King, T. (2005). *The truth about stories: a native narrative*. Minneapolis: University of Minnesota Press.

14. "Cosmologies are integral to our self-identity, since they contextualize human existence in the broadest framework...they have been used as the basis for establishing power and legitimating social authority" Best, S. & Kellner, D. (2001). *The Postmodern Adventure: Science, Technology and Culture Studies at the Third Millennium*. (p. 134-135) New York: Guilford.

15. Orr, D. (2004). *Earth in Mind: On Education, Environment, and the Human Prospect*. (p. 13) Washington, DC: First Island Press.

16. Hooks, B. (2003). *Teaching Community: A Pedagogy of Hope*. New York, NY: Routledge.

17. Llewellyn, G. (1998). *The Teenage Liberation Handbook: How to quit school and get a real life and education*. (p.347) Eugene, Oregon: Lowry House Publishers.

18. Gustavson, L. (2007). *Influencing pedagogy through the creative practices of youth*. In M. Lamont Hill & L. Vasudevan (Eds.), *Media, learning, and sites of possibility* (pp. 81-114). New York: Peter Lang.

19. Godin, S. (2012). *Stop Stealing Dreams: what is school for*. [Web log post]. Do You Zoom, Inc. Retrieved from <http://www.sethgodin.com/sg/docs/stopstealingdreamsscreen.pdf>.

20. Fawcett, L. (2013). Three degrees of separation: Naturecultures in environmental education research. In R. B. Stevenson, M. Brody, J. Dillon, & A. E. J. Wals (Eds.), *International handbook of research on environmental education* (pp. 409-417). New York: Routledge.

21. Gaylie, V. (2009). *The Learning Garden: Ecology, Teaching, and Transformation*. New York, NY: Peter Lang Publishing.

22. Darder, (2010) *Preface. Critical Pedagogy, Ecoliteracy, and Planetary Crisis: The Ecopedagogy Movement*. New York, NY: Peter Lang Publishing.

23. Haluza-DeLay, R. (2013). Education for environmental justice. In R. B. Stevenson, M. Brody, J. Dillon, & A.E.J. Wals (Eds.), *International handbook of research on environmental education* (pp. 394-403). New York: Routledge.

24. Klein, N. (2014). *This changes everything: capitalism vs. the climate*. (p. 155). New York: Simon & Schuster.

25. McKenzie, M., & Bieler, A. (2016). *Critical education and sociomaterial practice: Narration, place, and the social*. New York: Peter Lang.

26. Dewey, J. (1938). *Experience and Education*. New York : Macmillan.

27. UNESCO (1997) *Environment and Society: Education and public awareness for sustainability*, Background Paper prepared for UNESCO International Conference, Thessaloniki, 7.

As the unified voice for
the advocacy and
support of all its
members, the
NSTU promotes
and advances the
teaching profession
and quality
public
education.



Nova Scotia
Teachers Union



ALANA KRUG-MacLEOD

The Making of Special Agent Pen Guin

A photo journal

Introduction

Sleuthing out opportunities that motivate youth can be a challenge, but sometimes one event leads to another. For me, the world of sustainability began in my home and local community with interests in ecology and animals, as well as community gardening and permaculture. These interests enabled me to participate in science and nature programs offered by the Saskatoon Public School District, and from there, to local sustainability competitions like *Caring for Our Watersheds*, while a student of the ScienceTrek program. Participating showed me I could write proposals and present at conferences, and that my ideas mattered. The thoughtful suggestion of one teacher introduced me to the Students on Ice (SOI) program in Antarctica. SOI connected me with artists, activists and educators from around the world, and eventually to almost every other program in which I engaged. In high school, having sustainability clubs was critical, as were teachers who expected students to enter science fair competitions and who valued contributions outside the school itself. In my experience, teachers were like the controllers at headquarters, sending me on missions that changed my life and allowing me to contribute in ways I would not have imagined possible. I've

OUR SCHOOLS/OUR SELVES

shared my experiences as widely as possible, within schools and in community settings, and I trust that teachers and students will continue to assure students that they can both gain and contribute though participating in unique programs. Following, in photo journal style, is the story of the making of Special Agent Pen Guin.

**FROM ADVENTURE TO ACTION:
INVESTIGATING SPECIAL AGENT RECRUITMENT**

<p>CSIS Official Identification Card</p>  <p style="text-align: center;">Agent Pen Guin Special Investigations, Environmental Espionage and International Reconnaissance <small>Issued: January 01, 2015</small></p>	<p>Attention: Agent Pen Guin</p> <p>Enclosed is your updated Canadian Sustainability Investigation Services ID card. Effective immediately, HQ is promoting a new campaign to counter dezinformatsiya. Based on your service record as a birdwatcher with diverse experience related to youth and environment, HQ wishes to enlist your service.</p> <p>Please consult the attached briefing papers outlining the various missions associated with this campaign. No window dressing required.</p> <p>Respectfully yours, Active Agent Controller</p>
---	---

Top-Level Directive:

Recruit the Next Generation of Environmental Agents



CATEGORY 1.0: SPECIALIZED SCHOOL-BASED OUTDOOR PROGRAMS

Objectives

- Experientially teach basic science, ecology
- Explore nature in various settings
- Develop skills for camping, living with nature
- Model eco-friendly behaviour
- Integrate scientific research with social issues and conservation strategies



Mission 1.1: ScienceTrek

- Complete a 10 month field-based science program
- Engage in diverse “hands on” experiences to enhance science and sustainability learning
- Participate in outdoor pursuits from ice climbing and skiing to canoeing and camping excursions
- Develop an understanding of the diversity and impact of science on human culture and the environment



CATEGORY 2.0: EDUCATIONAL EXPEDITIONS

Objectives

- Create deep connections with nature and among peers, scientists, educators, researchers, activists and artists
- Teach students and engage students to educate
- Provide confidence about capabilities and open future doors
- Motivate long term, active engagement on issues



Mission 2.1: Students on Ice

- Complete a two week educational expedition to Antarctica or the Arctic
- Join global representatives to learn about the importance of polar regions; find inspiration
- Post-expedition, catalyze initiatives that foster global sustainability
- Maintain connection with an international network that supports personal growth and community.



CATEGORY 3.0: COMPETITIONS FUNDING YOUTH-INITIATED CONSERVATION PROJECTS

Objectives

- Capture creative ideas and harness youthful energy
- Provide youth with real world experience and skills in carrying ideas to fruition (developing and pitching proposals, researching, budgeting, raising funds, public speaking, etc.)
- Prove youth ideas matter
- Foster community engagement and future commitment



Mission 3.1: Caring for Our Watersheds

Develop a proposal that meets all criteria for an environmental education competition:

- Use creativity to envisage a solution to an existing environmental problem
- Research and explain a viable, innovative idea
- Propose a budget and seek implementation funding
- Learn from mentors, and partner with communities to create focused solutions to watershed issues



CATEGORY 4.0: SERVICE PROGRAMS PROMOTING VOLUNTEERISM AND CHALLENGE

Objectives

- Provide incentive and structured support for youth engagement
- Encourage sustained, meaningful volunteer action
- Foster exchange of ideas for worthwhile projects and viable approaches
- Build communities of youth with other-oriented, nature-inspired values



Mission 4.1: Duke of Edinburgh Challenge

- Undertake bronze, silver or gold level non-competitive development program that includes:
 - service, skill advancement and physical recreation
 - planning and execution of adventurous journeys and participation in an extended residential project
- <http://www.dukeofed.org/>



CATEGORY 5.0: NETWORKING VIA SOCIAL MEDIA, WEBSITES AND DOCUMENTARIES

Objectives

- Deepen and broaden awareness
- Capture youth attention through popular media
- Foster engagement with issues and people beyond immediate local regions
- Show the power of one individual when combined with many



Mission 5.1: Electronic Media Management

To infiltrate and influence through:

- on-line petitions
- awareness campaigns
- educational documentaries
- interactive websites
- social media groups and individual connections



CATEGORY 6.0: SCIENCE, VIDEO AND PHOTOGRAPHY COMPETITIONS AND SHOWCASES

Objectives

- Foster observation, research, and creativity; sharpen academic presentation skills
- Encourage global or inter-regional sharing to raise awareness about discoveries, approaches and issues, sparking new ideas
- Produce ground-breaking, original research
- Encourage cross-disciplinary or inter-disciplinary research
-

Mission 6.1: Get to Know

- Undertake surveillance in natural regions, explore outdoors, get to know wild neighbours and habitats, then create nature-inspired art
- Compete for gallery representation and prizes
- “Connect, Create, and Celebrate” www.get-to-know.org



Mission 6.2: Where Challenge

- Identify the non-renewable Earth resources in everyday objects, then explain why they are important in daily life, and why conserving them is important
- Compete for monetary prizes and awards
earthsciencescanada.com/where/

Mission 6.3: Virtual Science Fair

- Conduct experimental or literature-based science and technology research
- Create an interactive website to display experimental, research and design project results

Mission 6.4: Millennium Youth Camp

- Attend science camp for talented global youth passionate about natural sciences, mathematics and technology
- Collaborate on projects related to sustainable development
- Consult with academics and industry representatives who share expertise, innovations www.luma.fi/start-en/

CATEGORY 7.0: ENVIRONMENTAL SUMMITS AND EXPOSURE TOURS

Objectives

- Offer novelty, excitement and adventure that attracts youth
- Allow students to connect and collaborate
- Provide opportunities for youth to generate and share ideas
- Enable youth to support and inspire one another in long term
- Broaden horizons; increase understanding, awareness, and commitment

7.1 EF Tours Global Citizens Program

- Identify creative solution to environmental issue
- Join global citizens for an environmental education tour
- Volunteer on monitoring and sustainability projects
- Attend working environmental summit that addresses social issues, builds awareness of local-global connections and fosters responsibility for present and future.
- <http://boardingcall.eftours.ca/2012/10/25/global-citizen-scholarship/>



CATEGORY 8.0: ENVIRONMENT AND SUSTAINABILITY CLUBS

Objectives

- Combine action and education
- Promote positive peer-pressure
- Allow youth to meet others with similar interests and provide a means to expand the interests of peers

Mission 8.1: SWITCH Club

- Join students interested in inspiring change in their community
- Undertake recycling, food, and transportation projects related to the environment, human rights, and social change



OUR SCHOOLS/OUR SELVES

CATEGORY 9.0: TRAILS AND ZOOS

Objectives

- Facilitate exploration
- Allow for active pursuits within natural settings
- Build interest in and relationships with animals and habitats
- Educate through signs, interaction, and programming

Mission 9.1: Saskatoon Forestry Farm Park and Zoo

- Observe animals and participate in educational activities
- Learn about ecology and build memories that motivate conservation

Mission 9.2 Meewasin Valley Trail

- Explore the extensive trail system along the South Saskatchewan River
- Support actions that protect pristine wilderness and permit active exploration while educating about natural and cultural heritage

CATEGORY 10.0 ON-LINE VOLUNTEER PROGRAMS

Objectives

- Build expertise while contributing to baseline research
- Assist researchers with high volume analysis
- Allow for flexibility in location, duration and time of engagement
- Permit international research without travel costs or heavy carbon footprint



Mission10.1: Zooniverse Citizen Science

- Enroll in an online platform for collaborative volunteer research in fields ranging from astronomy to zoology
- Process raw data and contribute to real scientific discoveries



OUR SCHOOLS/OUR SELVES

TRAVEL,



ADVENTURE,



INTELLIGENCE.



LIVE THE DREAM!



ALANA KRUG-MacLEOD is currently an environmental biology student at the University of Saskatchewan and an avid James Bond fan. She is interested in all aspects of sustainability and continues to work in her community and globally to support biodiversity, social justice, and environmentally sound practice.



WHO WE ARE!



Toronto Education Workers (Local 4400)

is made up of approximately

12,000

EDUCATION WORKERS

who primarily work for the TDSB (Toronto District School Board).

At the TDSB alone, there are over

400

JOB CLASSIFICATIONS

and over

1,000

 WORK SITES.

EDUCATION MATTERS

Not all of our members are employees of the TDSB. Our newer members include employees who work for the Viamonde French School Board, the Bloorview School Authority and at various early education/daycare centres across the GTA.





ADAM THOMAS YOUNG

Free For All

A cross-Canada analysis of resources for teaching sustainability in education

Across Canada, prioritization of environmental and sustainability education (ESE) varies greatly, but sadly it is often treated as a side-project or abstract goal: it looks good on paper, but has little to no support for implementation or transformation in formal education. In many ways this type of education leads into a ‘free for all’ for various provincial and regional educational stakeholders to take up this important — yet often ignored — work.

There are many guides, units, and lesson plans (more so than ever before, thanks to the information age) that educators are encouraged to use to their classrooms in order to address gaps in the curriculum. This paper tries to make sense of them by examining the digital footprint and networking of resources across the country. This will hopefully offer new ideas and new directions in the age of resource sharing vs. resource creation. It should also prevent educators from reinventing the wheel, while helping identify for researchers and content-creators gaps that still exist.

A number of different organizations have taken on leadership roles in Canadian environmental education — often in completely different ways — resulting in a hodge-podge collection of resources, policies, and frameworks. We live in a country that relies strongly on non-governmental organizations (NGOs) non-profits and charities to

promote new educational approaches, but with precarious funding, this can be a detriment for long-term vision and funding supports for ESE. Instead for many NGOs “the focus is often largely on campaigning and awareness-raising rather than on learning, and therefore continues to be somewhat marginal to mainstream educational research.”¹

As a result, greater analysis of the content and scope of the various resources targeted at Canadian educators, and the relationship between different groups, is important. As views shift to more holistic understandings of environmental and sustainability education, we need to consider the affect of one-off funding results, which disappear as the money dries up. Are the NGOs creating substantive opportunities for deep learning, or another resource for a short-term funder’s interest? Do students subsequently end up more aware of a specific NGO, or of the actual issues that different groups are trying to address?

These are questions that were considered while using the Internet to amass a Pan-Canadian networking analysis of ESE resources for educators. This paper examines these resources through both regional and thematic lenses; identifies general trends were discovered throughout the resources determines their degree of accessibility and relevance to educators; discusses the most popular linked and connected resources across the country; and attempts to tease out the mobility of these resources between regions and partner organizations.

Findings

During the analysis, and beyond CMEC reports, a well-cited document (*Environmental Education in Canada: An Overview for Grantmakers* by the Canadian Environmental Grantmakers Network [CEGN] [2006]) identified a number of key themes in ESE resources: little sharing between regions, language/cultural barriers (specifically limited French first-language, immersion, English as an additional language), a lack of First Nations perspectives, little continuation once programs are created, and the challenge to discuss controversial topics such as climate change.² Readers will note that these same concerns reappear throughout this article; in fact, if anything this research serves as a 10th anniversary follow-up to the CEGN’s concerns. Clearly, many of

these gaps still exist, and will hopefully inspire new resource creators and compilers to address these gaps in future projects.

Scope

Depending on the website, sustainability education (SE) resources were usually under a general list/database of all teacher resources, or sorted under topic or subject themes — most commonly under science or social science banners, and rarely elsewhere. They were often connected to provincial subject-specific teaching groups, which usually only included sciences and social sciences, and few examples of ESE, with the notable exception being BC's Environmental Education Provincial Specialist Association. This 'siloing' of resources may act as a deterrent for some educators excited to explore these issues, and shows a traditional environmental education approach that connects environment only with science, and sometimes social science, while not considering more interdisciplinary approaches.

Other websites, such as the Saskatchewan Teachers' Federation's, sorted resources under more interdisciplinary subject categories such as global education, environmental education, and diversity and social justice — a nice recognition of a wider sustainability lens. This was consistent in other teachers' associations and government-created guides, which provided a much more interdisciplinary approach to accessing information.

Teachers' professional organizations had common strategies used to share information and support. Some, including Manitoba, British Columbia, and Saskatchewan, have an environmental- or sustainability education-specific group (see Table 3 in this article for an overview of these organizations). In some ways this highlights the lack of priority placed on environmental education, which might make it difficult for teachers outside these circles to come across resources for their own classes.

In the territories, few to no environmental education (EE) resources were cited; the same with counterparts in Alberta, PEI, New Brunswick, and Quebec — a province that has "environmental awareness and consumer rights" as one of the Broad Areas of Learning that is meant to be incorporated throughout the curriculum (the consumerist language surrounding that is for another discussion). Teachers in

these regions may find it more challenging to connect these types of resources to provincial curriculum if these connections have not already been established. It was disappointing to see clear national or regional initiatives (such as a regional eco-certification programs or LSF's *Resources for Rethinking*) recommended — but then relegated to a generic list of links with no environmental identification.

However, fellow teachers, fear not: there are some stronger national resources³ out there that had good traction across ministries, teacher unions and specialist organizations. For example, many provincial or territorial environment ministries linked to resources such as Project Webfoot from Ducks Unlimited Canada, and Project Wild from the Canadian Wildlife Federation, both strong biodiversity resources. Learning for a Sustainable Future's database *Resources for Rethinking* (R4R), Earth Day Canada's EcoKids program, and the David Suzuki Foundation (DSF) were cited numerous times on both professional association pages and environmental education networks. These organizations offer a more universal approach to K-12 resources to share across our vast geographical regions of the country; they're a good starting point for educators looking for a broad range of environmental topics and approaches.

Interprovincial sharing of resources was not uncommon, particularly in areas with geographic and economic ties. In Atlantic Canada, a number of organizations cited the work of the Sierra Club's Atlantic Chapter and their programming that was geared towards each individual province in that region. The Atlantic provinces already have a common Atlantic Canada Curriculum which came across in the shared Sierra Club's programming on water resources and coastal and forest ecosystems. On the Pacific coast, the BC chapter of the Sierra Club also had educator resources available online. Across Western Canada there were references to SEEDS Connections, in particular its GREEN Schools certification program and other leadership programming.

Another key provincial sharing example is the work of Toronto's York University-LSF partnership Sustainability and Education Academy (SEDA). They collaborated on Manitoba's *Guide to Sustainable Schools*, providing an example of clear mobility across provinces. Common languages also played a role in resource availability. French-speaking organizations' resources (Ontario to New Brunswick) were commonly shared, given significant French populations in both provinces;

however, the general lack of regional French-language resources outside of Quebec, especially given the growth of French immersion, is noticeable. Another key gap is with English as a second language (ESL) learners, where — aside from a well-developed resource on the worlds' wetlands by Ducks Unlimited targeted to ESL — there were rarely lessons/content that acknowledged their unique situation of these learners.

One of the strongest examples of both regional sharing and movement is in the Northern territories where the respective environment ministries played a crucial role in setting up teacher professional development and training for a number of environmental education resources. As with territorial curriculum documents, resources that originated in other territories or Western Canada provinces were also shared. They were connected to wildlife-centered resources from BC, as well as fisheries and waterways-focused groups (some as far away as Atlantic Canada) under topics of Atlantic/Arctic ocean diversity and seal industry. The northern environment ministries offered workshops on national initiatives such as the Canadian Wildlife Federation's Project Wild and Below Zero, two programs that require a mandatory workshop to access their extensive resources for teachers. Arctic Canada also has its own collective environmental education group EE North, and Taiga Net, a web network that includes neighbouring Alaska. At the time of this research, WWF was working with Nunavut on arctic themes of climate change, pollution and waters under the WWF's Schools for a Living Planet banner, and to include glossary terms in indigenous languages (WWF, 2014). As in Atlantic Canada, teachers with an interest in ESE may want to look to their provincial neighbours to take advantage of pooled resources and other available services.

The frequency of national players

Determining the length of reach allows us to understand the online popularity of many national organizations and the resources they provide (see Table 2) The most commonly cited website was — perhaps unsurprisingly — a compilation: *Resources for Rethinking*, a searchable database of sustainability materials for educators, cites over 800 websites and books, labeled with grade levels, themes, and

jurisdiction. In some cases, it was one of the few or even the only EE-resource website cited by teacher organizations.

While many of the websites listed in *Resources for Rethinking* included numerous multidisciplinary and interdisciplinary lessons, finding these connections required more work sifting through links for educators. For example, a resource search by jurisdiction often results in large numbers of the same general documents — some or many with scant actual regional emphasis or relevance. An added frustration is that children's literature resources are listed in results but are not free to download. So, while national in scope, *Resources for Rethinking* is an ambitious compilation that regionally-minded educators might have trouble navigating and finding adequate results.

While direct physical access to the centrally-located national museums may be difficult for many, some of the museums offered resource databases online that connected with both onsite and virtual resources. Various regional resources were included that fell under the online category, most through the Virtual Museum of Canada. Beyond the interactive approach, many also included accompanying lesson plans, resource guides, and activities for teachers to make full use of the rich history. While some of the databases (such as the recently-opened Canadian Museum for Human Rights) still included very few resources with less clear connections, the Virtual Museum of Canada servers may have helped keep many websites alive via central website hosting. These are worth a look for educators seeking more factual and extensive content on a wide range of environmental/social justice topics.

Content

Strong focus on environmental education

More holistic views of environmental education encourage a move away from learning facts, and toward engaging directly with nature and coming to terms with its value. However many resources generally have a stronger focus on scientific concepts and information, with less focus on the connections these can be made to greater society. Provincial environment ministries had a variety of approaches to SE resources, with many focused on energy use, biodiversity, and more traditional EE approaches, with informative briefs on the natural world

and kid-friendly language. While many resources and ideas promote a strong advocacy stance that match their organization's missions and values (teaching *for* sustainability), others emphasized more scientific background knowledge than some educators may feel comfortable teaching (teaching about sustainability), or than may seem relevant to their subject disciplines in comparison with other basic curriculum expectations.

As the responsibility for climate change has shifted from the national to the provincial (largely due to a lack of federal initiative), the handful of climate change resources that were cited in the research were often provided by the provincial and territorial ministries or departments of environment.

Quebec's Ministry of Sustainable Development, Environment and the Fight against Climate Change include a site with interactive lessons for youth who can follow "Les aventures de Rafale". In Newfoundland and Labrador, the ministry has an updated website devoted to climate change entitled *Turn Back the Tide*, which includes information on an energy saving challenge, lesson plans, and guest

It's exciting to see a greater human rights emphasis in many resources, especially noted in the teachers' associations' and federations' websites.

speaker opportunities. Newfoundland and Labrador has also argued for cooperation between the provincial and federal governments in incorporating education for sustainable development across a number of ministries to help address these issues and that the federal government "should take the lead".⁴ Yet despite the longtime lack of leadership from the federal government on this file, only a handful of provinces appear to be taking steps for climate change education.

That said, it's exciting to see a greater human rights emphasis in many resources, especially noted in the teachers' associations' and federations' websites. A number of organizations have included EE topics under a greater banner of social justice. The Elementary Teachers' Federation of Ontario (ETFO) has also produced a number of guides and resources intended for the younger years. These include *Natural Curiosity*, which centres on inquiry-based SE/EE, and *Social Justice*

OUR SCHOOLS/OUR SELVES

Begins with Me, which centers on social justice issues and includes the environment as one of the monthly themes. At the secondary level, the Ontario's Secondary School Teachers' Federation (OSSTF) has created *Common Threads* publications. Their program is built upon experiences and travels of federation members who have created a number of resources on various themes under extensive resource/lesson guides. Many of the guides have included environmental themes under topics such as consumerism, Indigenous ways of knowing, and sustainable communities.

Incorporation under social science themes

Many provincial ministries of education had few resources for educators beyond curriculum guides, with notable (previously mentioned) exceptions. To connect with provincial ministry guidelines, however, curriculum connections were sometimes included within some resources to help incorporate them more easily into the classroom. In a few provinces, this included eco-challenge campaigns (at both the national and provincial level). Many of these centred upon reducing one's carbon footprint through actions such as waste reduction weeks or events, commuter challenges, and action projects. Key national projects cited included Earth Rangers, the Great Canadian Shoreline Cleanup, and the earlier-mentioned Green Streets program. Provincial programming on this issue was extremely common, whether they were created by ministries, governmental agencies, or through public/private corporations (notably provincial energy providers).

Innovation in interdisciplinary resources

Many resources focused on traditional field-classroom blended activities and scenarios under common science and social studies themes. However, others found more creative and innovative ways of teaching for sustainability that provide important context for a move to interdisciplinary approaches to EE teaching, notably in the arts. Integration of environmental education into the arts was referenced in both BC and Manitoba whose capital cities have separate theatre troupes that focus on sustainability: Dream Rider Theatre in Vancouver, and Green-Kids in Winnipeg. More visual arts education-centered resources in-

cluded Art in the Park lessons from Get to Know, a group co-founded by painter Robert Bateman in BC that hosts the Unconference exposition each year of student work on the environment.

Other creative areas may have more funding for work that accompanies '21st Century Learning,' with a number of online technology websites geared towards SE. This includes greenlearning.ca with topic- and subject-specific interactive programs, and Taking IT Global (TIG), with a stronger global education and action project focus. CurioCity was another comprehensive interactive site, though its primary focus is on Science, Technology, Engineering and Math (STEM) education. Another unique and under-cited resource included *A Kid's Guide to Building Great Communities* from the Canadian Institute of Planners.

The range of First Nations, Metis and Inuit (FNMI) resources available would most certainly require its own survey to provide a comprehensive picture. FNMI-centred resources were examined in this overview if they had overlying SE or environmental education labels; however, this was not usually the case. Connecting the environment to Indigenous epistemologies and stewardship of the land were found in some resources, but often the environmental component of this was disregarded. More FNMI-centred curriculum connections are available in Western Canada and the Arctic, making incorporation into the classroom more of a key component, with a focus on looking at Indigenous epistemologies. The complementary work of both of these themes has resulted in some wonderful regional resources, including a number of in-house teacher resource guides with lessons such as from the Ministry of Education in Alberta, and even a video game on the life of the Cree people in the Treaty 9 region of Northern Ontario, entitled *On the Path of the Elders*.

Conclusion

Canadian educators looking for sustainability education resources beyond curriculum documents have a wealth of options, though a greater discussion of accessibility to these resources is important. Perhaps this is why LSF's *Resources for Rethinking* was the most frequently cited resource within the link pages, as it is a "resource of resources".

But what might an expansive database of SE resources across Canada look like? How many teachers are using these programs, and how do they decide what is worth taking up or not? Perhaps the inclusion or exclusion of curriculum connections, of word-of-mouth, or even website aesthetics and accessibility may play a significant role, alongside the usual barriers of time and financial support. These questions require further consideration, which is perhaps already being taken up by the plethora of NGOs that are creating these guides in the first place, developing curriculum connections and attempting different degrees of collaboration via online and face-to-face platforms for their action projects to be utilized. Free resources that are relevant to learning objectives and encourage learning inside and outside the school (but do not necessarily require a school trip) are perhaps most practical and applicable. However, the more in-depth searching to find some of the resources may deter some educators from reaching those best appropriate to their situation.

While this research notes where resources are coming from, it doesn't provide a greater discussion on competing influences or those who might be funding these resources: as a result, we do not know if educators are at risk of becoming victims of opposing messaging.⁵ We must also be aware of corporate messaging and the influence sponsors might have.⁶

Another concern is the definition of sustainability, or how conceptions of environmental education are still being relegated to social science and the natural sciences, which creates another problem. As many of these resources consider some form of action research or collaboration, the challenge to take up sustainability as a whole-school/community approach is important.

While there is more an EE and less an ESE theme within a number of the available resources, a blurring of the definitions is beginning to emerge with a number of social justice resources that make environment a key component, and vice versa. There often was an underlying goal of youth empowerment via scaffolding the lesson plans, projects, and campaigns, the majority of which focused on student involvement and creativity to find solutions. Educators in this discussion will need to consider the degree of student creativity being used, and the extent to which that learning is constructive or prescriptive.

When educators are provided with so many different resources, they must consider the degree of choice in the projects with which they proceed, taking care to ensure students are in a position to exercise their own agency. As educators we need to discuss the controversial and complex and there may not always be quick solutions to the problems we collectively face. Part of delving into the complex will no doubt touch upon behaviors, ethics, and actions. Currently there are few strong examples of resources that contribute to an in-depth and challenging climate change discussion, or a serious look at natural resources use in a country whose economy relies heavily on their extraction in a global economy.

We must support our students to understand and challenge the societal roots of environmental problems, including displacing of people and species for human infrastructure, Canada's settler-colonial history, and the languages of modernity such as progressivism, capitalism, and industrialism.⁷ These complex and engaging themes should be in all environment and sustainability education resources. Creating room to grow these resources will make environmental education in this country stronger and more inclusive, while ensuring our conversations are richer and much more rewarding.

With a new generation of teachers looking to the web for guidance in lessons and resources it's important we know what is out there, and who is providing what. Ideally this type of overview will help educators to think critically about what is available to them, and the possibility to find better resources to help them — quite literally — take their students outside.

Appendix 1

Methods

Using Internet searches for key terms, this research was carried out for each province, territory, and nationally. The focus was on education-labeled resources for teachers and/or students, including lesson plans, curriculum guides, resource guides, etc. under applicable organization websites, but also through resource and link headings. This included searching in each province or territory both ministries of environment and education, provincial environmental education net-

works, teachers' unions or federations, as well as major museums and science centers. All documents analyzed included an environmental and/or sustainability focus. With a few months of searching, data was analyzed to look for connections/sharing of resources (access), and themes and approaches (content). An extensive map of the project that was created using the online concept-mapping tool Popplet and includes links to the web addresses of resources discussed here. To access the full concept map on Popplet, head to <http://popplet.com/app/#/2088831>.

Appendix 2

Table 1.

Outdoor & Environmental Education Organizations Networks across Canada
BC Environmental Educators Provincial Specialist Association (EEPSA) eepsa.org
Columbia Basin Environmental Education Network (BEEN) cbeen.org
YT Environmental Education Association of the Yukon (EEAY)
AB Global Environmental and Outdoor Education Council (GEOEC) geoec.org
NWT/NU Ecology North ecologynorth.ca
SK Sask Outdoors (formerly Outdoor and EE Association) saskoutdoors.org
MB Manitoba Eco-Network mbeconetwork.org
ON Environmental Education Ontario eeon.org
Council of Outdoor Educators of Ontario (COEO) coeo.org
QC L'Association québécoise pour la promotion de l'éducation relative à l'environnement (AQPERE) aqpere.qc.ca
Environnement jeunesse (ENJEU) enjeu.qc.ca
NB New Brunswick Environmental Network (NBEN) nben.ca
NS Clean Foundation clean.ns.ca
PEI Environmental Education Coalition of PEI ecopei.ca
NLD Newfoundland and Labrador Environmental Educators nlee.ca

Table 2.

Most Commonly Cited Canadian Resources & Number of Times Cited in Data	
Learning for a Sustainable Future: Resources for Rethinking	13
Canadian Wildlife Federation: Project Wild	9
Sierra Club of Canada (national site & regional chapters)	6
Earth Day Canada: EcoKids	8
David Suzuki Foundation	7
Green Teacher Magazine	7
World Wildlife Fund: Schools for a Living Planet	5
Ducks Unlimited Canada: Project Webfoot	5
SEEDS Connections: Green Schools	4
GreenLearning Canada	4
Canadian Teachers Federation: ImagineAction	4
Environment Canada resources (old & new: science.gc.ca)	4
Canadian Geographic Education	4

Table 3.

Teacher Professional Organization Online Involvement in SE/EE Resources

Organization	Includes links to SE/EE resources	Teacher Database of Resources that includes SE/EE supports	Specialist Groups with themes included	In-house created publications/resources
British Columbia Teachers' Federation (BCTF)	√	√	√ Science, EEPsA, Eco-Justice Action Group	-
Alberta Teachers' Association (ATA)	√	√	-	-
Saskatchewan Teachers' Federation (STF)	√	-	√ Social Justice Social Studies	
Manitoba Teachers' Society (MTS)	√	?	√ Science	
Elementary Teachers' Federation of Ontario (ETFO)	√	-	√ Global; Login required	√

OUR SCHOOLS/OUR SELVES

Organization	Includes links to SE/EE resources	Teacher Database of Resources that includes SE/EE supports	Specialist Groups with themes included	In-house created publications/resources
Ontario Secondary School Teachers' Federation (OSSTF)	-	√	√ Science, Geography, Social Studies Outdoor Ed	√
Quebec Provincial Association of Teachers (QPAT)	√	-	√ Science	
L'Association des enseignant(e)s francophones du Nouveau-Brunswick (AEFNB)	√	-	-	√ conference workshop presentation
New Brunswick Teachers' Association (NBTA)	√ 1-2			
Nova Scotia Teachers Union (NSTU)	-	-	√ Science Social Science	
Prince Edward Island Teachers' Federation (PEITF)	-	-	-	-
Newfoundland & Labrador Teachers' Association (NLTA)	√ 1-2	-	√ Science/Math	-
Yukon Teachers' Association (YTA)	√ 1-2			
Northwest Territories Teachers' Association (NWTTA)	-	-	-	-
Nunavut Teachers' Association (NTA)	√	Login required, Unknown	Unknown	-

ADAM YOUNG is a M.Ed student at the University of Saskatchewan and former researcher with the Sustainability & Education Policy Network. His work has focused on connecting research with practitioners, especially on green school certification programs

ENDNOTES

1. Blum, N., Nazir, S.B., Goh, K.C., & Pedretti, E. (2013) Balancing the tensions and meeting the conceptual challenges of education for sustainable development and climate change, *Environmental Education Research*, 19(2), 213.
2. Canadian Environmental Grantmakers Network (2006). *Environmental Education in Canada: An Overview for Grantmakers*. Toronto. 6.
3. Sadly this list also included the — now defunct — extensive Green Streets Canada website. A former gem in the Canadian landscape, Green Streets lost significant national funding in 2010 and currently provides grants for urban forestry projects.
4. Council of Ministers of Education of Canada. (2014). Canada's response to UNESCO questionnaires on the UN decade of education for sustainable development, 2005-2014: Education for sustainable development after 2014 and UN decade of ESD final report. Toronto. 67–68.
5. Hart, Jickling and Kool (1999). Starting points: Questions of quality in environmental education. *Canadian Journal of Environmental Education*, 4(1), 116.
6. Ibid.
7. Martusewicz, R.A., Edmunston, J., & Lupinacci, J. (2011). *Ecojustice education: Toward diverse, democratic, and sustainable communities*. New York: Routledge.



Unions Matter

to your whole community

Unions give everyone a fair shot

Unions raise everybody's wages

Unions reduce income inequality

Unions boost the local economy

Unions increase voter participation

Unions promote diversity

Unions secure dignified retirement

Unions Matter

For one of our "Unions Matter" lapel pins, send your name, address, and email to unionsmatter@nupge.ca.


NUPGE
CANADA

UNION PHOTO

$$\frac{d}{dx} \frac{1}{a^n} = \frac{-n}{a^n} \int \frac{dx}{x^n (x^n + a^n)^{r-1}} = \frac{1}{a^n}$$



**Committed to
protecting the quality
of education in
Ontario universities**

OCUFA

Ontario Confederation of University Faculty Associations
Union des Associations des Professeurs des Universités de l'Ontario

www.ocufa.on.ca



Photo credit: Helesia Duke

Standing Rock protest at the Forrestal Building, United States Department of Energy on Friday, January 20th (Inauguration Day), Washington DC.



SEPN

The Sustainability and
Education Policy Network

RESEARCH. CONNECT. MOBILIZE.

SEPN is an international network of researchers and organizations advancing sustainability in education policy and practice. SEPN is examining the relationships between sustainability education policies and practices in education to support the transition to more environmentally sustainable societies.



"The challenges of climate change and sustainability require an informed and motivated citizenry. Community mobilization of research-based responses supports the transition to more environmentally sustainable societies through education."

-Dr. Marcia McKenzie, Principal Investigator



www.sepn.ca ♦ sepn.info@usask.ca ♦  




Social Sciences and
Humanities Research
Council of Canada

Canada

Conseil de recherches
en sciences humaines
du Canada



UNIVERSITY OF SASKATCHEWAN
Sustainability Education
Research Institute
COLLEGE OF EDUCATION
SER.USASK.CA



How is climate change and sustainability being taught, practiced and promoted in educational institutions across the country? To help answer that question, *Our Schools/Our Selves* profiles some of the work of the Sustainability Education Research Institute (SERI) at the University of Saskatchewan, and its flagship program, the Sustainability and Education Policy Network (sepn.ca). This collection is sure to be invaluable to educators and students keen to address this topic as workers, as students, as unionists, as activists, and as community members. *Our Schools/Our Selves* is a quarterly journal on education published by the Canadian Centre for Policy Alternatives (CCPA).

To subscribe to *Our Schools/Our Selves*, contact:
Canadian Centre for Policy Alternatives @250ne Community
500-251 Bank St., Ottawa, ON, K2P 1X3
Tel: 613.563.1341 Fax: 613.233.1458
ccpa@policyalternatives.ca
www.policyalternatives.ca



CCPA

CANADIAN CENTRE
for POLICY ALTERNATIVES
CENTRE CANADIEN
de POLITIQUES ALTERNATIVES

