Restorative Education:

Synthesizing Theories and Practices to Decolonize Learning

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Part One

Territorial Acknowledgment

I would like to acknowledge that I have written this project proposal on the shared, asserted, and treatied territory of the Lekwungen peoples, which includes the Songhees First Nation, the Esquimalt First Nation and other peoples who hold rights and responsibilities in and around the region that is also known as Victoria, BC, in Canada.

Out of respect for the Songhees Nation's currently expressed desire to protect their knowledge, culture and language from being appropriated and copyrighted in the ways they have repeatedly experienced by previous academics and public education institutions, I have purposefully refrained from including cultural knowledge in this project that is specific to the Songhees. Knowledge about the Lekwungen language, cosmology, seasonal round, place names, ethnobiology, philosophy about child development and pedagogies have been shared with me for the benefit of Songhees children as my students – not for my personal benefit as an academic - and it is not to be shared publicly with others who have not earned the right to this knowledge directly from Songhees knowledge keepers.

In the territorial acknowledgment section of my final project, I intend to acknowledge the First Nations communities who have shaped my educational experiences and the development of my practice of Restorative Education. I also plan to acknowledge the privilege of having generations of my family living, learning, working and caring for one another on the traditional territories of all of the specific First Peoples with whom we have resided. I acknowledge that as settlers, we have benefitted, often to

the express detriment of Indigenous peoples here, and I hope that my work will benefit the descendants of those who enabled my ancestors and myself to survive. May we together thrive in a more sustainable and just world.

Introduction

We live in a time where young people face new evidence of certain knowledge of an uncertain future on a daily basis. Youth are confronted with either news reports or the direct lived experience of a world divided by poverty and greed, where their ability to survive and thrive throughout their lives is called into question by the urgent challenges of climate change, resource depletion, migration and conflict. The social fabric of our communities is stretched thin by the lack of affordable housing, childcare, elder care, and accessible healthcare that is all proximal to secure employment with a living wage. Whether their families are juggling the need for two incomes or are headed by single parents struggling to make ends meet, many of our kids do not have the undivided attention of consistent caregivers at home. On top of this, our culturally diverse learners are struggling to develop their self-regulation skills in educational environments where the implementation of inclusion policies sometimes seems chaotic and under-supported.

As overwhelming as it can be for adults to acknowledge the current threats to personal, community and global sustainability, for children who are the first generation to experience a phenomenon Louv (2005) has termed "Nature Deficit Disorder," now more than ever is the time to come together to help our students cope with increasing anxiety, depression, obesity and addiction to screen time (Lissak, G., 2018). As educators, we must help our young people prepare for a vastly different world than the one we grew up in. The ways in which we were taught will not work for our students or our changing world. We need to replace approaches to

learning which enable exploitation of both the next generation and their home with educational strategies to help them heal and transcend the damage caused by conquest and colonization.

Indigenous learners, as survivors of cultural genocide and who continue to face neo-colonialism (Battiste, 2013; Deer, 2012), have a particular need for educators to take a different approach so that they can achieve academic success and become the leaders their communities need them to be. This is especially the case for Indigenous learners who struggle with executive function-related exceptionalities such as those associated with Attention Deficit Hyperactive Disorder (ADHD), Fetal Alcohol Spectrum Disorder (FASD), Autism Spectrum Disorder (ASD), Oppositional Defiance Disorder (ODD), Post Traumatic Stress Disorder (PTSD) and otherwise undiagnosed conditions including histories of trauma. In British Columbia, the kindergarten – grade 12 curriculum has recently been updated to provide students with "21st Century Learning" (BC Ministry of Education, 2019) to better address some of these needs, but educators are finding some aspects of it hard to implement – especially when it comes to incorporating the perspectives, histories and knowledges of First Peoples here in Canada.

The intent of this project is to identify and synthesize educational practices that are "restorative" for young people and their planet, so that we can help them learn alongside of us how to become the leaders our world needs right now. While there are many types of educational approaches that each try to address one aspect of the many challenges facing our current generation of school-aged young people, there is no one easily identified, holistic framework to identify and understand how these practices interrelate and can build upon one another. Although Indigenous pedagogies offer solutions to these quandaries, non-Indigenous educators who wish to serve as allies need to be very careful to offer their students culturally-appropriate education, not education that appropriates and mutilates the cultures they are trying to support or share.

This project seeks to address these challenges by defining "Restorative Education" and introducing educators to a cohesive and flexible set of principles, practices and curricula with instructional examples that will help us implement some of the biggest changes in the new B.C. curriculum, such as the new focus on Personalized Learning, Aboriginal Perspectives and Knowledge, Ecology and Environment, Historical Wrongs, and Flexible Learning Environments (see Curriculum Orientation Guide). Coincidently, Restorative Education shares these priorities and is offered as a holistic approach so that it can be shared, tried and tested to see if it can also help other practitioners improve equity and sustainability through both the way we educate and the content we teach our young people.

Significance of the Project

Shelley Moore's vision of inclusive education is that if educators imitate master bowlers who 'bowl for the outside pins' or aim to meet the needs of both learners who require the most support and those who require the most challenge, instead of just focusing on the students in the middle, we will 'get a strike' and reach every child in our education system (SSHRC-CRSH, 2016). However, we are far from achieving this dream. In North America, studies have found it is still common for people to hold prejudices against and socially distance themselves from individuals with any mental illness or psychiatric disorders (Bell et al., 2016). This applies to students with brain-based exceptionalities that impact their executive function such as "inhibition, thinking flexibility, planning, cause and effect, judgement and organization" which often result in an inability to "recognise consequences, learn from past experiences or generalise possible outcomes from one behaviour to another." (Millar et al., 2017, p. 5). While executive function-related exceptionalities such as ADHD, ASD and ODD are not commonly associated with any one cause, the stigma faced by those who live with FASD is even more discriminatory

– especially for Indigenous families, whose lives continue to be destroyed by current and intergenerational impacts of colonial policies such as compulsory colonial school systems.

Regardless of cause, if left undiagnosed and untreated, an individual with FASD can develop secondary characteristics and conditions such as ongoing challenges with school, interactions with law enforcement, and mental illness (Olson, 2016). Secondary disabilities can lead to frequent adverse life events and negative life outcomes (Streissguth et al., 2004) as well as high stress for caregivers and high social and economic costs for our society (Bobbitt et al., 2016; Olson, 2016). A study of student teachers found that very few of them knew much about FASD, let alone what they could do in an inclusive classroom to ensure students with FASD have their needs met and reach their potential (Pei, Job, Poth, O'Brien-Langer & Tang, 2015).

Restorative Education offers new and experienced teachers alike a way forward by embodying respectful, reciprocal, relevant and responsible educational values held in high esteem by many Indigenous communities (Kirkness, V. J. and Barnhardt, R., 2001). Research shows that Restorative Education that includes inclusive, interactive, inquiry-driven, place-based, and service learning practices can benefit not only Indigenous learners (Lloyd, A. & Gray, T., 2014), those with FASD (Edmonds, K. and Crichton, S., 2008), or those with executive function related exceptionalities, but all young people (Sandifer et al., 2015).

Personal Location

I am a new teacher with over twenty years of experience as an environmental and social justice educator, who has married into a constellation of First Nations families full of gifted educators and leaders. As such, I have a keen interest in revitalizing place-based education so that we can help to reduce the Aboriginal Achievement Gap and its resulting cycles of poverty and inequality. By sharing what I have learned, I hope our child, along with her peers, will

benefit from the kind of educational experiences I have enjoyed and facilitated, and not have to face the systemic racism and exclusion her father has had to navigate.

Last year I started teaching grade 6,7, and 8 students at a diverse middle school located on the traditional territory of the Songhees and Esquimalt First Nations, in what is also known as Victoria, BC. Along with serving as a special education teacher or "Inclusive Education Facilitator," I have had the privilege of teaching an "exploratory" course to middle school students called "Sustainability" (which we have come to define as *the ability to survive and thrive over time*).

I do not seek to speak on behalf of Indigenous peoples, or 'help' them as an 'expert' outsider. Instead, I hope to decolonize the practice of teachers and environmental educators, which are two communities of people I do claim membership in. I would like to become a better ally for Indigenous renaissance and resurgence and a better model of settler reconciliation by designing and teaching my exploratory course on Sustainability in a manner that is culturally appropriate and inclusive for all of my students. I am working to reflect upon and integrate my experiential learnings this past year with both my previous experiences as an educator and with my understanding of the literature on inclusive education, Indigenous education, multicultural, outdoor, environmental and technology-based education. I hope to explain and justify my teaching approach to myself, my colleagues, my students, their caregivers and our community.

Background of the Project

My most influential learning opportunities have been experiential and outdoors, whether through my formal schooling or programs run by non-profit organizations. Throughout my time working in the non-profit, for profit, public, and government sectors trying to provide similar educational opportunities, I have been developing an approach to nature-based education that I

think of as "Restorative Education" or RE. Restorative Education goes beyond the traditional

practices of outdoor and environmental education to encompass equitous, place and project-

based service learning that allows all students to further develop their personal, social,

communication, creative and critical thinking skills, from whatever level they are currently at,

and through learning activities that are personally interesting and relevant for each of them.

The name "Restorative Education" has been derived primarily because I like to root

learning in ecological restoration activities such as removing invasive species, and planting,

caring for, and using native plants in sustainable ways. The name has also been inspired by the

Restorative Justice movement and Attention Restoration theory, as well as the aim of the Truth

and Reconciliation Commission (TRC) to work towards "establishing and maintaining a

mutually respectful relationship between Aboriginal and non-Aboriginal peoples in this country"

(Truth and Reconciliation Commission of Canada, 2015, p. 6). A major finding from the TRC

final report is that "reconciliation between Aboriginal and non-Aboriginal Canadians, from an

Aboriginal perspective, also requires reconciliation with the natural world" (Truth and

Reconciliation Commission of Canada, 2015, p. 18).

Every organization I have worked with has at least attempted to build relationships with

local First Nations communities and include Indigenous people and perspectives in their

decision-making. However, all such efforts have been hampered by a profound lack of

understanding and trust engendered in large part by our public education system. I wish to bring

educators together to discuss whether my conception of Restorative Education may offer a

response to the TRC's call for schools to commit to "Building student capacity for intercultural

understanding, empathy, and mutual respect." (Truth and Reconciliation Commission of Canada,

2015, p. 290). I hope to honour and support Indigenous students, Knowledge Keepers and ways

of knowing, not appropriate their teachings or culture. I therefor propose to define, refine, and share my own pedagogy of allyship – Restorative Education – through a slideshow and pdf.

Overview of the Proposal

   Part 1: Introduction

By seeking to build relationships to meet the needs of those who have been targeted for exploitation through colonization and colonial education practices, Restorative Education has the potential to restore ecological, economic, social, and personal resiliency. RE offers hope that we can come together and rise to address sustainability challenges such as climate chaos, systemic poverty and political polarization.

   Part 2: Literature Review

Introduction: What is Restorative Education and what gap does it fill? This literature review will compile, evaluate, translate and integrate research on "restorative" educational practices for an educator audience. The review will include an analysis of educational approaches that are not restorative and detail some of the harms associated with reproducing colonial and exclusionary practices. The main sections will include:

1) Benefits of Nature-based Education
2) Exclusion of Indigenous Youth with Exceptionalities from Nature
3) Colonial Education and the Aboriginal Education Achievement Gap
4) Decolonizing and Indigenizing Education through place-based learning
5) The privileges and pitfalls of Environmental and Multi-cultural Education
6) Technology in the outdoor classroom: teaching youth to use tech as tools, not toys
7) Inclusion of Learners with Executive Function-related Exceptionalities

Summary: A well-defined and clearly described introduction to Restorative Education offers the would-be ally educator a non-colonial framework for making their learning spaces inclusive, engaging and effective for all learners – especially Indigenous students with executive function related exceptionalities such as ADHD, ASD, FASD, ODD and histories of trauma.

Part 3: Project Plan

This is a proposal to create a resource that can be used to introduce educators to the concept, principles, practices and curricula of Restorative Education. It will define and describe this educational approach in a format that is easily understood, with examples of teaching resources and materials, lesson plans, activity instructions, and sample hand-outs that can be incorporated in part or as a whole in a wide variety of educational contexts. It will identify key research in support of this approach, as well as tips and tools to help educators implement RE.

Description of proposed project.

The Educator's Introduction to Restorative Education will take the form of a series of image-rich, succinct slides which can be shared in both presentation and pdf document formats. The slides will be designed to be shown at professional development workshops for educators and the compressed pdf version will enable ease of access and shareability through download and email. The slideshow / pdf will outline and include:

i) *Definitions of Restorative Education (RE):*

RE is an inclusive, interactive, inquiry-driven, place-based approach to facilitating service learning that fosters a resurgence of personal, community and global resiliency. RE helps heal, re-connect and empower human and non-human individuals to create more sustainable communities in an equitable manner.

ii) *Introduction to key Restorative Education Principles:*

RE upholds the "4 R's" put forward by Kirkness, V. J. and R. Barnhardt (2001) to enable the academic success of First Nations students. Restorative Education is Respectful, Relevant, Reciprocal and Responsible.

iii) *Introduction to five key types of Restorative Education Practices:*

Each of the five main types of Restorative Education practices will be introduced with a slide that refers to four more specific and related practices. These 20 practices will be explained with one slide each, with either diagrams or photographs that root the descriptions with imagery:

(1) Inclusive

 (a) Universal Designs for Learning (cartoon: Giangreco, 2002)

 (b) Relationship-based and Responsive learning (eg: RTI, Indigenous)

 (c) Learner-centered and Child-honouring (eg: DI, Indigenous, Raffi)

 (d) Trauma and FASD informed lens (eg: 8 Keys, Linda MacNeal)

(2) Interactive

 (a) Hands-on, activity-based, Field Trips, Multi-day programs (GCA, LIFE)

 (b) Exercise Interventions, Physical/kinetic learning (eg: Rugby Academy)

 (c) Game or play-based (eg: Indigenous language bingo, Zombie Apocalypse)

 (d) Digital games and media production (eg: Coyote Science, G4C, memes)

(3) Inquiry-driven

 (a) Cycle of Inquiry (eg: IB)

 (b) Case-based learning (SHS interactivities, CYH pop ed, theatre of oppressed)

 (c) Project-based (eg: Action-Planning worksheet)

 (d) Observational Learning and Modelling (photograph of educator Levi Wilson)

(4) Place-based

 (a) Nature-based (eg: Indigenous, LIFE & SYC programs, Galiano Conservancy)

 (b) Outdoor, Adventure-based (eg: Indigenous, LIFE, SYC, Outward Bound)

 (c) Community speakers, Barefoot Mapping (eg: Islands in the Salish Sea Atlas)

 (d) Digital foraging / scavenger hunts (eg: AMES: salishharvest.com, geocaching)

        (5) Service learning

           (a) Fundraising, volunteering, and fostering awareness (eg: Me to We)

           (b) Community-building (eg: Wildwood, Eco-sense, Reynolds High, Galiano)

           (c) Action-Planning (eg: Dreamseed & the Campbell Bay Music Festival)

           (d) Ecological restoration (eg: Conservancy, GOERT, Cheryl Rice camas keeper)

iv) *An introduction to key Restorative Education Curricula:*

           (a) Indigenous teachings (local cosmologies, seasonal round, languages, storywork)

           (b) Social justice / critical theory/ multicultural /anti-oppression education

           (c) Sustainability/ food security/ climate change / pollution / ecological restoration

           (d) Leadership and social-emotional development/Action planning/ career exploration

           (e) Consensus based decision-making/ facilitation training/ (self) advocacy skills

           (f) Media literacy/ technological literacy / consumer vs. producer identity

v) *Research in support of the need for Restorative Education.*

           (a) The literature which reveals problems with colonial, exclusionary practices

           (b) The literature which supports key restorative education practices

vi) *Tools for Teachers to help implement Restorative Education*

           (a) A chart of how Restorative Education embodies the new B.C. curricula

           (b) Sample Lesson plans with brief origin narrative about each lesson

           (c) Helpful "Hooks" and hands-on projects: Videos, tech, games, art, toys, tools

           (d) Suggestions for Classroom set-up, resources & supplies to have on hand

(e) Tips (advice to ensure best practices) and Traps (problematic default

practices)

vii) *Summary*

The Educators' Introduction to Restorative Education will be a slide-based presentation and pdf that outlines the definition, principles, practices, curricula, research, and educator resources that will support the adoption of this cohesive and flexible approach to inclusive, culturally-appropriate, place-based education.

References

Appendixes

Part Two: Literature Review

What is Restorative Education and what gap does it fill? This literature review will compile, evaluate, translate and integrate research on "restorative" educational practices for an educator audience. It will include an analysis of educational approaches that are not restorative and detail some harms associated with reproducing colonial and exclusionary practices. It will also provide further sources and citations for arguments and claims made in this proposal, so that the final project is comprehensively and accurately referenced according to the APA style guide.

Benefits of Nature-based Education

It is becoming more well-known that access to nature benefits people physically, mentally and emotionally (Sandifer et al., 2015). When given access to nature, students are able to restore their fatigued cognitive capacity by taking a break from the demanding school environment and instead resting their gaze on the web of life around them, which easily engages their "soft" attention instead of demanding directed attention (Hartig, 2012). Children take more healthy risks and challenges in natural settings, building competence, self-esteem and personal resilience (Collado & Staats, 2016).

Executive Function research suggests that holistic interventions that include physical activity may be especially helpful in improving working memory (Kamijo et al., 2011), increasing attention and planning skills (Davis et al., 2011), closing the achievement gap for marginalized children (Diamond & Lee, 2011) and avoiding negative impacts on students' self-concept and self-esteem, as well as reducing the risk of frustration, anxiety and depression (Thompson, 2017). Therapeutic interventions through outdoor programs have been found to be effective in improving physical and mental health indicators, such as body composition and mood (Hoag et al., 2013; Tucker et al., 2015).

Exclusion of Indigenous Youth with Exceptionalities from Nature

One of the most critical goals of colonial policies and practices are to reduce Indigenous

Peoples' control, knowledge, use and sense of connection to their land. The Indian Act, Reserve

system, Indian Residential School system have all sought to exclude Indigenous peoples from

accessing and managing their lands and waters (Battiste, 2013). Treaties signed by First Nations

to ensure their continued rights to fish, hunt, harvest forest products and cultivate camas,

shellfish, berry patches and other permaculture resources have been consistently violated. Access

to parks is strictly controlled through fees and regulations that govern which human uses have

been legalized by provincial and federal governments, such as research, tourism and more

recently, even commercial logging, mining and pipelines. Yet these same regulations prohibit

trapping, harvesting single big cedar trees for canoes, narrow swathes of bark for weaving or

other non-timber forest products in a sustainable manner.

All people with exceptionalities are regularly and routinely excluded from nature and

nature-based education (Liddicoat et al., 2006), and this is also the case for Indigenous youth

with exceptionalities. Many environmental education service providers wish to be perceived as

inclusive, but have not had the expertise or resources to accomplish this goal adequately. Schools

do not seem to have the funding and personnel to offer accessible playgrounds, school gardens,

physical education or field trips in natural outdoor spaces.

There are many sources of exposure to nature that are taken for granted by people who do

not face the barriers experienced by young people with exceptionalities. For example, for those

with physical disabilities and sensory impairments, the most basic amenities may pose

insurmountable obstacles to participation, including stairs, ladders, boardwalks, and a lack of

handrails, wide enough trails or adult-sized change tables. Even for those who recognize and

wish to expand the health benefits of nature for young people, accessibility is often ignored

(Kruger et al., 2009).

A study of such facilities in the United States revealed that over half of those reviewed

did not have basic accessibility amenities or inclusive programs (Liddicoat et al., 2006). It was

found that there is a lack of resources and staff expertise which not only leads to the exclusion of

those with physical disabilities and developmental disabilities, but those with communication

impairments and challenging behaviour as well, such as youth with FASD, ASD, and ADHD. A

correlation was found between those service providers who felt that inclusion is important and

those who had made their programs more adaptable and facilities more accessible (Liddicoat et

al., 2006), so the good news is that simply by intending to make nature-based education more

inclusive, solutions can easily be found and implemented.

However, if parks and outdoor education providers charge user fees to make up for

cutbacks in government funding, they may additionally and disproportionately exclude at-risk

youth, culturally diverse learners (CDL) and especially Indigenous students who are may not

have access to extra disposable income for outdoor recreation.

Colonial Education and the Aboriginal Education Achievement Gap

For many, "colonial education" refers only to types of schooling that take place in

colonies, such as one room schoolhouses offered for the children of colonists, or perhaps the

system a colonized people's children are subjected to by force, such as the Indian Residential

School System in Canada. In either case, both forms seek to extend and consolidate foreign rule

and economic exploitation (Kelly, G. & Altbach, P., 1984) through training both settler and

Indigenous people to value and participate in colonial ways of knowing and being, and to look

down upon and reject Indigenous philosophies, knowledges, languages, decision-making practices and resource management systems.

Some believe colonization is a thing of the past, and that therefor so is colonial education. However, Frank Deer outlines that in addition to the concept of 'active' colonization, there are processes of internal colonization, post-colonization and neo-colonization (2012), all of which the Canadian state is currently involved in, and all of which cannot be perpetrated without specific colonial educational practices that are commonly implemented in our current education system. Colonial education systems have never been about facilitating the development of economic, political or personal success for adults who are proud, connected, active members of First Nations, as such adults would be able to understand and work effectively to resist the assimilation of their people into the Canadian nation-state, and would likely insist on keeping control of the specific lands and waters their communities are a part of and are entitled to through treaty rights and Canadian law, let alone Indigenous law (Battiste, 2012).

The Aboriginal Education Achievement Gap is a term that is used to refer to the consistent difference in high school and post-secondary graduation rates between Indigenous and non-Indigenous students. This difference is also apparent in the average standardized test scores achieved by these two groups of students at every age level. As education level has been correlated with key quality of life indicators such as employment, income, and health, the existence of this gap has significant ramifications for equity in our country. Many educators, policy-makers and the general public assume this difference is due to inherent deficiencies on the part of Indigenous students, their families, or their culture (Widdowson, 2013). Others identify this characterization is an extension of the very same western supremacist ideology that sanctioned residential schools in the first place (Lefebvre, M., 2017).

Research on attribution theory and confirmation bias has revealed that even teachers who are sympathetic and want to help Indigenous students succeed end up discriminating against them and impeding their academic success (Riley, T., & Ungerleider, C., 2012). We rarely take responsibility for our role in the academic failure of our Indigenous learners by reflecting upon and changing our practice to specifically benefit them. However, for those who wish to do so, there are some clear suggestions on how to go about this from a number of Indigenous education scholars from across Canada.

Decolonizing and Indigenizing Education through Place-based learning

According to Frank Deer, the solution to the Aboriginal Academic Achievement Gap is the decolonization of Eurocentric curricular content and pedagogical practices to increase academic achievement (2012), through "student-centered learning, relevant to strengths, needs and goals" and "place-based, culturally sensitive content congruent with local heritage and knowledge." Deer places equal importance on the need to "foster connection to traditional lands" and "affirm and practice traditional arts and languages" (Deer, 2012). As a settler ally, or "Indigenist" (Battiste, M., 2013; Rix et al, 2018) teacher and researcher, there is much I can do to decolonize my pedagogy.

In order to work towards this goal, in this literature review I would like to compare, contrast and integrate (as appropriate) local and non-local Indigenous perspectives and values brought forward and recommended through resources such as FNESC's First Peoples Principles of Learning (2008) and the BC Ministry of Education's *Aboriginal Worldviews & Perspectives in the classroom: Moving Forward* (2015). I would like to examine the relevance of Indigenous Theory (Smith, G.H., 2000 and Smith, L.T., 1999) and compare it to the work of noted Indigenous Pedagogy practitioners in BC such as Dr. Jan Hare, Dr. Jo-ann Archibald, Dr.

Jeanette Armstrong, Dr. Martin Brokenleg, Dr. Michelle Pidgeon, Dr. Trish Rosborough, Dr. Lorna Williams, Cease Wyss, Delores van der Way, and Della Rice as well as Indigenous Canadians from other regions such as Thomas King, Marie Battiste and Susan Dion.

I am curious to see if Saunders' Curriculum Model (2007) developed by and for Haudenosaunee students and educators might be helpful, along with the work of Kirkness and Barnhardt on the "4 R's" of First Nations Higher Education in 2001. I had added "Responsibility" alongside Saunders' values of "Respect, Relevance, and Reciprocative Learning" to express and embrace four "R's" in my classroom – only to find out these are the exact same "4 R's identified by Kirkness and Barnhardt (2001). In Saunders' circular curriculum model, these values are attained through practices of Co-authorship, Community Involvement, Holism and Lifelong Learning within Body, Mind, and Spirit. I would like to compare this educational approach with Medicine Wheel teachings and Coast Salish teachings to notice where there are similarities and differences, in order to support my Indigenous learners who are growing up in their home communities as well as those whose families are from other regions in Canada.

The privileges and pitfalls of Environmental and Multi-cultural Education

A truly inclusive outdoor experience needs to also see an expansion from the traditional environmental education model, in order to maximize the benefit for all youth. Anna Gahl Cole has justly criticized science-based environmental education for excluding cultural and community-based knowledge and enjoyment of outdoor spaces (Cole, 2007). She argued we need to view key components of environmental education through the lenses of the environmental justice movement, critical pedagogy, and place-based pedagogy. Cole pointed out that environmental literacy is culturally specific, not universal (2007).

Environmental education needs to be more culturally appropriate: inclusive of questions of how power, politics, culture, history, race, class, and gender shape our interaction with the land and foster collaborative, empowering action projects, stewardship and decision-making that improves students' communities. For youth with different abilities, as well as those who are at-risk or are culturally diverse learners, it is important for nature-based education to question the centrality and neutrality of science (Cole, 2007). An "objective" view separates nature and culture and reproduces the dominance of western ways of knowing over Indigenous and community-based experiential knowledge in epistemological hierarchies. Environmental education is not and should not be seen as just an add-on to science, just as multi-cultural education cannot be limited to a paragraph added on to an otherwise euro-centric take on social studies.

Technology in the outdoor classroom: teaching youth to use tech as tools, not toys

Research suggests that Indigenous students with FASD can flourish when given opportunities to use digital technology in assignments and projects that are relevant to their lives and appreciate opportunities for unstructured time to explore software and devices that are new to them (Edmonds, K. and Crichton, S., 2008). They feel empowered and more hopeful about the positive role education can have in their lives when supported in solving problems and advocating for themselves through digital technology. However, for students who have easy access to screen time at home, addiction to use of technology as entertainment can be a concern (Lissak, G., 2018). Students need structured learning opportunities in order to learn how to use, not abuse diverse forms of technology that enhance their communication, creative and critical thinking skills.

Inclusion of Learners with Executive Function-related Exceptionalities

Inclusive nature-based education can occur where the social and physical environment is arranged from the beginning based on the assumption that participants have diverse needs, abilities and interests (Reitveld, 2010). Thus, to improve the inclusivity of nature-based education, we can use strategies that work in the classroom, such as Universal Designs for Learning, Response to Intervention, and Differentiated Instruction (Ricker, 1996). As in all aspects of inclusive education, a universal design of educational content and space based on a social model of disability is preferable, whereby difference is assumed to be normal, abilities are acknowledged to span a spectrum, and disability is no longer seen primarily as a medical condition (Thompson & Timmons, 2017).

Educational programs with broad and infused inclusion offer best practices, where there are opportunities for students with disabilities to become friends and even leaders of students without exceptionalities, instead of being looked down upon or pitied by them (Thompson & Timmons, 2017). In "authentic inclusion," visionary leadership pushes and encourages all students to go beyond their comfort zones and participate in a variety and range of opportunities to share and discover new interests. By avoiding the common trap of an over-reliance on paraprofessionals, such an inclusion enables support staff to become resources for the whole class and student peers help each other instead of the new form of exclusion - using paraprofessionals as social buffers to isolate students with exceptionalities (Thompson & Timmons, 2017).

Fortunately there are resources available to help, including a comprehensive guide published quite a number of years ago which is still relevant and free to those who wish to make nature more accessible (Ricker, 1996). *Unlimited Classrooms: A Resource Guide for Inclusive*

Environmental Education offers an adaptation of environmental education philosophy,

communication styles, materials, activities, and community service projects, in order to better

include youth with physical, behavioural, and developmental disabilities. It features an extensive

annotated bibliography with resources on how to best include, integrate and advocate for

students with disabilities in outdoor education, recreation, camping, adventure programs, and

science lessons (Ricker, 1996).

Summary: the need for a definition of Restorative Education

Saunders and Hill found that education level is correlated with income and other social

determinants of health and that Indigenous students achieve higher education levels when taught

through decolonized, Indigenous pedagogies (2007). The causes and consequences of the

Aboriginal Achievement Gap are well-researched, if contentious (Deer, 2009), and evidence of

attribution theory at work in our neocolonial education system suggests that even teachers who

hope to help Indigenous students unwittingly discriminate against them (Riley & Ungerleider,

2012). Many sources compare Indigenous pedagogies with neocolonial teaching practices and

suggest Indigenous approaches to learning include nature as both teacher and classroom (Deer,

2009; Little Bear, 2012; BC Ministry of Education, 2015).

Yet teachers who wish to follow the new curriculum and incorporate Aboriginal ways of

knowing and being throughout their practice run the risk of perpetrating cultural appropriation

instead of ensuring culturally appropriate learning. A well-defined and clearly described

introduction to Restorative Education will offer the would-be ally educator with a non-colonial

framework for making their learning spaces inclusive and engaging for all learners.

Part Three: Project Plan

This is a proposal to create a resource that can be used to introduce educators to the concept, principles, practices and curricula of Restorative Education. It will define and describe this educational approach in a format that is easily understood, with pictures that show examples of teaching resources and materials, lesson plans, activity instructions, and sample hand-outs.

Description of Proposed Project

The Educator's Introduction to Restorative Education will take the form of a series of slides which can be shared in both presentation and pdf document formats. This image-rich set of slides will be designed to be shown at professional development workshops for educators as well as be able to be downloaded as a pdf from a website and emailed for ease of access and shareability. This format will allow for tailoring of presentations to particular forums and timeframes, as the number and order of slides can be easily re-arranged, depending on audience needs and interest. The slideshow / pdf will outline and include:

Definition of Restorative Education (RE)

RE is an inclusive, interactive, inquiry-driven, place-based approach to facilitating service learning that fosters a resurgence of personal, community and global resiliency. RE helps heal, re-connect and empower human and non-human individuals to create more sustainable communities in an equitable manner.

The Principles of Restorative Education

RE honours holistic Indigenous educational values through the 4 R's: Respect, Relevance, Reciprocity, and Responsibility (Kirkness & Barnhardt, 2001).

Respect is a concept that is very easy for students to understand on the surface, and yet it can also be taken to a very deep level. By asking learners to respect themselves, others, and the

environment, we begin to foster resilience at the personal, community and global levels. Beyond mere politeness, (often culturally-specific words and gestures that diverse students can find difficult to learn and use), respect enables empathy, understanding and action in a very tangible way. Diverse learners have very real and different learning needs which for some are set out in an IEP, but not all students with specific needs are designated, and confidential documents are not shared with all educators who work with a particular learner. This is why I offer students choices and options on a universal basis as well by inviting them to approach me to set up a special arrangement regarding alternative seating and independent work for when they need a break or have completed their classwork.

Reciprocity: Relational approaches, where a teacher takes on the role of a "guide on the side" instead of the "sage on the stage," (King, A., 1993) offer the opportunity for educators to learn from and alongside learners and make decisions about their learning with them instead of for them. This can be uncomfortable and it can seem to take more time for both educators and learners who are more familiar with hierarchical and exclusionary modes of classroom management and instruction. However, it can save a lot of time and energy not having to be the expert and authority on all matters, and enable substantive, inquiry-driven learning for all.

Relevance: It is vital that as educators, *we meet learners where they are at*. Once I have introduced myself to students and ensured they are comfortable and their basic needs have been met through establishing ground rules, I set to work to get to know them. I ask them about their learning preferences and interests, their passions and concerns, their strengths and needs. By approaching students from a strengths-based, not deficit-based perspective, I can use self, peer, and reciprocal types of formative assessment to better design and engage my students in

subsequent learning activities and support their lines of inquiry, while also helping me foster

learner engagement and intrinsic motivation.

        Responsibility: We do not leave students where they are, however – we work with them

to map out their next learning step within their zone of proximal development. For example, just

because a learner believes their only passion, strength and need is to play Fortnite and they are

not really concerned about spending 8 hours a night doing so instead of sleeping, does not mean

we then encourage them to play this game in class as well. However, I believe that by tapping

into their passion for gaming by offering them a chance to develop and play their own

(educational) games for school credit, we can support development of their reflective capacity,

critical thinking and communication skills while shaping their interests into a direction that will

lead to greater resilience at their personal, community and global level.

Restorative Education Practices

        Each slide will feature pictured examples from my experiences working with a variety of

educational organizations. Each of the five main types of Restorative Education practices will be

introduced with a slide that refers to four more specific and related practices. These 20 practices

will be explained with one slide each, with either diagrams or photographs that root the

descriptions with imagery.

        Inclusive: by building relationships with learners and their caregivers, educators can use

Universal Designs for Learning (UDL), Response to Intervention (RTI and Direct Instruction

(DI) strategies to ensure that educational approaches are responsive and learner-centered.

Indigenous leaners and those challenged by exceptionalities such as Fetal Alcohol Spectrum

Disorder (FASD), Autism Spectrum Disorder (ASD), Attention Deficit Hyperactive Disorder

(ADHD) and Oppositional Defiance Disorder (ODD) and Post Traumatic Stress Disorder

(PTSD) are particularly misunderstood and underserviced by non-inclusive and colonial

education approaches, but these students may benefit from Trauma and FASD informed lenses.

Children's singer Raffi points out that Child-honouring educational strategies are not

exclusive to Indigenous peoples from this part of the world and in fact benefit all of our learners.

Building in regular opportunities to use alternative seating, engage in cognitive behaviour

analysis, social emotional learning, or mindfulness activities such as music, colouring, or

"tangling" using Rick Roberts and Maria Thomas' approach can likewise help all of us cope with

anxieties and frustrations rife in our modern world (About the Zentangle Method). Including

Educational Assistants in a co-teaching model (as appropriate) helps to destigmatize students

they are assigned to work with as otherwise these students can be socially excluded, and it is too

much work to differentiate learning opportunities all on your own! The slides created to describe

"inclusive" educational practices will focus on:

(a) Universal Designs for Learning (cartoon: Giangreco, 2002)

(b) Relationship-based and Responsive learning (eg: RTI, Indigenous)

(c) Learner-centered and Child-honouring (eg: DI, Indigenous, Raffi)

(d) Trauma and FASD informed lens (eg: 8 Keys, Linda McNeal)

Interactive: Key education and child development theorists ranging from Piaget to

Banduras insist that humans (and non-humans!) learn best through interacting with our world.

Thus hands-on, activity-based lessons, that make use of props, puppets, manipulatives, devices,

and tools are important to invest time and energy in, as are field trips and multi-day programs

away from the school. Sometimes programs away from the school grounds are not inclusive to

learners who come from extremely connected extended families who are not particularly

comfortable sending their children away, however - for obvious reasons, if you think about how

recently the last Residential School was closed – in 1996. When planning field trips, why not offer opportunities for students to bring their siblings and caregivers? Family-based education can be especially helpful when parents themselves are young and have not had successful experiences in formal education, or when caregivers are elderly grandparents who are not able to offer such experiences on their own.

Exercise-based interventions can facilitate academic readiness with physical or kinetic learning. Game or play-based learning may or may not be physical, but it is how children best learn to engage in learning from an early age. Digital games and media production offer the latest extension of interactive learning, and the passion with which young people engage in these activities may inspire real world learning benefits that may far outweigh the harm typically associated with video games and addiction to screen time. The slides created to describe "interactive" educational practices will focus on:

(e) Hands-on, activity-based, Field Trips, Multi-day programs (GCA, LIFE)

(f) Exercise Interventions, Physical/kinetic learning (eg: Rugby Academy)

(g) Game or play-based (eg: Indigenous language bingo, Survival)

(h) Digital games and media production (eg: Coyote Science, G4C, memes, Reelyouth, GIFTS)

Inquiry-driven: there are numerous models of the Cycle of Inquiry ranging from those used in International Baccalaureate (IB) schools to ones that focus on the scientific method. If coupled with options for learning by observation and modelling by Indigenous knowledge keepers, inquiry-based learning may offer Indigenous and non-Indigenous students alike opportunities to engage in case-based, popular education "interactivities" and project-based

learning, based on their own interests and questions. The slides created to describe "inquiry-driven" educational practices will focus on:

(i) Cycle of Inquiry (eg: IB)

(j) Case-based learning (SHS interactivities, CYH pop ed, theatre of oppressed)

(k) Project-based (eg: Action-Planning worksheet)

(l) Observational Learning and Modelling (photograph of educator Levi Wilson)

Place-based: nature-based or environmental education offers learners opportunities to observe, take note and enjoy their place in a wide and wonderful web of life that can restore our ability to focus and learn. However, place-based learning can offer so much more than just the conservation message, which is not always inclusive for learners who have not often had their needs met, let alone their wants fulfilled. Outdoor or even adventure-based activities energize learners and increase their self-confidence and ability to work as a team. By bringing in guest speakers from their local community, or taking students out to conduct "barefoot mapping" of the ecological and social "assets" in their area, students can develop a rooted sense of place that builds their sense of identity, connection to others, and (re)contextualizes their knowledge. Brofenbrenner's ecological systems theory can be helpful when imagining and locating learners within their physical, social and geopolitical communities. Using digital cameras and other devices to engage learners in "Digital foraging" or "geocaching" offers otherwise alienated learners a way to stimulate place-based learning at higher levels of Bloom's taxonomy. The slides created to describe "place-based" educational practices will focus on:

(m) Nature-based (eg: Indigenous, LIFE & SYC programs, Galiano Conservancy)

(n) Outdoor, Adventure-based (eg: Indigenous, LIFE, SYC, Outward Bound)

(o) Community speakers, Barefoot Mapping (eg: Islands in the Salish Sea Atlas)

(p) Digital foraging / scavenger hunts (eg: AMES: salishharvest.com, geocaching)

Service learning: students really seem to enjoy getting their hands dirty and making a visible, positive difference through ecological restoration projects such as removing invasive species such as English Ivy, Scotch Broom and Himalayan Blackberry, and planting native plants in their place. Joining existing projects can build learner knowledge, confidence and important real-world skills through fundraising, volunteering, and participating in outreach activities. However, service learning offers options for deeper levels of engagement and agency as well. When introduced to the steps of visioning, planning, mapping and implementing their own action projects, based on their own passions and concerns, young people can become personally empowered to take their rightful place in community and capacity-building initiatives. The slides created to describe "service learning" educational practices will focus on:

(q)   Fundraising, volunteering, and fostering awareness (eg: Me to We)

(r)   Community-building (eg: Wildwood, Eco-sense, Reynolds High, Galiano)

(s)   Action-Planning (eg: Dreamseed & the Campbell Bay Music Festival)

(t)   Ecological restoration (eg: Conservancy, GOERT, Cheryl Rice camas keeper)

Restorative Education Curricula

These slides will provide options for educators from a wide variety of backgrounds to see where and how their expertise and area of instruction might intersect with a range of inter-disciplinary content that can help restore the resilience of people and our planet in an equitable way. The most important and challenging aspect of RE curricula is that every subject needs to be decolonized, as well as Indigenized whenever possible. The basis of all of our curricular assumptions is that a colonial view is the default, universal position. We forget that even the concept of dividing and categorizing knowledge into subject areas is a western assumption, one

that not even all colonial educators agree with – many prefer interdisciplinary approaches to

curriculum, such as teaching "Humanities" instead of making an often arbitrary division between

language arts and social studies.

In addition, some Restorative Education practices require educating the students in

curricular content at the same time. Learners need to have a chance to explore concepts of

individual needs and preferences as compared to the collective good so they can responsibly

considering equity, autonomy and choice. These slides will focus on:

(u) Local Indigenous knowledges (storywork, place names, ethnobiology etc)

(v) Social justice / colonial history/ multicultural / anti-oppression education

(w) Sustainability/ green technology/ community economic development

(x) Leadership development/ Action planning/ career exploration

(y) Consensus based decision-making/ facilitation training/ (self) advocacy

(z) Media literacy/ consumer vs. producer identity / social marketing

Research in support of the need for Restorative Education

(1) The literature which reveals problems with non-restorative education practices

(2) The literature which supports key restorative education practices

Tools for Teachers to help implement Restorative Education

(1) A chart of how Restorative Education embodies the new B.C. curricula

(2) Sample Lesson plans with brief origin narrative about each lesson

(3) Helpful "Hooks" and hands-on projects: Videos, tech, games, art, toys, tools

(4) Suggestions for Classroom set-up, resources & supplies to have on hand

(5) Tips (advice to ensure best practices) and Traps (problematic default practices)

Summary

The Educators' Introduction to Restorative Education will be a slide-based presentation and pdf that outlines the principles, practices and curricula of Restorative Education, along with a summary of evidence that this cohesive and flexible approach is needed to help teachers provide inclusive, place-based, culturally-appropriate education that will help to close the Aboriginal Education Achievement Gap. Tools, resources and suggestions from a certified teacher who has years of experience as a non-profit provider of environmental and social justice education will help educators wanting to implement RE make an easier transition to this approach.

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Appendices

Appendix 1

    Glossary of Terms

UDL: Universal Designs for Learning

ADHD: Attention Deficit Hyperactivity Disorder

ASD: Autism Spectrum Disorder

FASD: Fetal Alcohol Spectrum Disorder

DI: Differentiated Instruction

RTI: Response to Intervention

LIFE: Leadership initiative For Earth

SYC: Sierra Youth Coalition

IB: International Baccalaureate