

Restorative Education:

Nurturing Indigenous Young People with Executive Function Exceptionalities through Nature

A proposal for the Vancouver Foundation's Convene Grant for Participatory Action Research

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### Convene Grant Proposal

The purpose of a Vancouver Foundation Convene Grant is to support the gathering together of community members and partners to generate ideas and develop a project plan for a future participatory action research project that can then be submitted to funders such as the Vancouver Foundation through their Investigate grant cycle. The project plan to be created must include a detailed timeline, budget and articulation of formalized roles of those involved, as well as a step-by-step plan to investigate a well-articulated health-related research question, and then to share the research project's findings with the community so that it can take action on the health issue in the future.

A Convene grant application asks for project details through four subsections: (1) Project Summary, (2) Questions About the Challenge and Change You're Working On, (3) Questions About the Process You Will Undertake to Convene and (4) Public Statement. The first three of these subsections have several questions each, with strict maximums on the amount of characters allowed in the online form. This assignment will thus follow the format requested by the Vancouver Foundation's Convene Grant application process.

#### **(1) Project Summary**

**(a) Working title of project:** Restorative Education: Nurturing Indigenous Young People with (Executive Function) Exceptionalities through Nature

**(b) Indicate the anticipated start and end dates (month/year) for your project:**

- September 2016 – January 2019: background research for literature review and identifying potential participatory action research project partners
- January 2019 – June 2019 Use Convene grant to develop project plan and proposal for Investigate grant

- July 2019: submit LOI for Investigate grant
- September 2019: Investigate Research project starts

## **(2) Questions About the Challenge and Change You're Working On**

### ***(a) Systemic Issues and Root Causes (2998 out of 3,000 characters)***

Of all the terrible intergenerational effects of the Indian Residential School System, the prevalence of Fetal Alcohol Spectrum Disorder (FASD) within Indigenous communities is one of the most devastating and self-perpetuating. The lack of funding, understanding and compassion routinely demonstrated in our neocolonial health, government, research and education systems increases and entrenches the challenges faced by families and children struggling with FASD, especially for those from marginalized Indigenous backgrounds. The resulting cycle of the Aboriginal achievement gap, income disparity, and lowered life outcomes paves the way for substance use, addiction, teen pregnancy, and poor maternal health and support, all of which increases the likelihood of FASD in the next generation.

No other physical disability requires an admission of guilt from a specific person in order for a child to receive a medical diagnosis and therefor the educational supports and accommodations they are entitled to in our public education system. Yet this same system does not properly inform teachers or students of the deeper causes, consequences and realities of living and learning with FASD, ensuring we will fail to change the conditions that lead to this invisible brain damage. Instead, the whispered stigma of FASD puts soul-crushing blame solely and squarely on the shoulders of the very mothers who are the most impacted in the care of children who require so much more love and attention than their peers. In consideration of the intense stigma associated with the label of FASD, the need to respect the confidentiality of

children's medical diagnoses and the lack of useful information this particular diagnosis offers for educators, we wish to first specify then broaden our focus on this exceptionality.

Learners with Fetal Alcohol Spectrum Disorder (FASD), Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD) and Oppositional Defiant Disorder (ODD) all have a varying degree of challenges with what are known as 'Executive Functions' of the brain. Along with young people who have experienced trauma or neglect, kids with FASD, ASD, ADHD, and ODD struggle with Executive Functions such as planning and organizing, managing time, paying attention, remembering details, self-monitoring, avoiding doing or saying the wrong thing, reflecting and learning from previous experiences and transferring knowledge, skills and behaviour from one context to another. This means that preparing for and participating in field trips to novel environments with new instructors, where the rules may be different from their classroom, are particularly challenging for these learners. Yet according to Attention Restoration Theory, these are the very kids who benefit the most from the chance to restore their ability to focus on schoolwork by resting their gaze on inherently fascinating and interconnected life forms in natural environments.

All people enjoy many mental, emotional and physical health benefits from access to nature, but we think young Indigenous people with executive function exceptionalities may actually need hands-on, nature-based education in order to survive and thrive. Unfortunately, these kids are often excluded because their parents or teachers deem such field trips as "inappropriate" for them out of fear of their safety, potential behaviour in a new, more public environment or because they worry educators in such programs won't understand and accommodate their needs.

*(b) Systemic Change (1496 out of 1,500 characters)*

*Why will researching this issue be meaningful? How do you foresee it enabling the community to act on the issue being researched? What's the degree of community support that exists for the research you're proposing? What are your ideas at this point on how this research project might position the community to influence or change the system's behaviours? How will this change be transformative, and why will it matter?*

Restorative education programs can give young people the opportunity to relax and engage in a positive experience of hands-on and reflective learning, enabling them to return to the classroom environment better able to focus on school tasks, avoid distractions, and suppress inappropriate behaviours. The challenge before us is to make sure nature –based programs are achieving this goal by being both inclusive and restorative. However, few environmental and nature-based education program providers have expertise in special education nor employ Indigenous education specialists on a regular basis. By researching, creating and testing tools to assess and improve the inclusivity and restorative nature of environmental education programs, this collaborative project will enable program providers, teachers, parents and students alike to advocate for and act to improve educational opportunities for all students, in a way that will specifically benefit Indigenous learners with FASD without further isolating and stigmatizing them.

The Galiano Conservancy Association has long mobilized community support to offer urban students the opportunity to explore an island where people co-exist with other species in a sustainable and healthy way. UNBC researcher and Shoreline Sustainability teacher, Emily Menzies, has worked with the GCA for the past seven years to decolonize and Indigenize their environmental education programs, alongside her Indigenous partner and fellow Shoreline teacher, Levi Wilson. At a recent Victoria School District professional development workshop

facilitated by Songhees Elders Butch and Bradley Dick, we were invited to share their Circle-based approach and support their teachings with our learners in common.

*(c) **Research and Evidence** (1495 out of 1,500 characters)*

*To what extent has this research question or the emerging issue been explored already? How might your research differ from or build upon other related work in this area? To what extent has this pressing issue been explored already? How might your initiative differ from or build upon other work related to this issue? The evidence could be formal research, statistics, white papers, information gathered through community networks or peer groups, knowledge of similar projects or work in a similar system, and so on.*

Research has been conducted on each of the separate issues that form the components of this project, but nothing that brings it all together, especially not one that uses a locally-sanctioned Indigenous research methodology. The included literature review details current research in terms of the connections between FASD, social determinants of health such as education level, neocolonial and Indigenous pedagogical approaches, benefits and costs of youth being excluded from nature, and exercise-based educational interventions that help middle-school students with executive function-related disorders such as FASD.

What is needed now is a summary of evidence and examples of practices that foster inclusion of young people with EF exceptionalities in nature-based education. We would like to chart the similarities and differences in learning difficulties and needs experienced by students with FASD, ADHD, ASD, ODD, and other EF challenges.

In addition, while we have found critiques of neocolonial research approaches and contrasting models of Indigenous research methodologies that are compatible with a participatory action research helpful, only Bradley and Butch Dick's unpublished approach has

been locally developed by coastal First Nations knowledge keepers. It is critical to gain resources in order to convene the parties interested in conducting a participatory action research project using appropriate Indigenous research methodologies to assess how inclusive, restorative and effective our nature-based education programs are for Shoreline's Indigenous students with EF challenges. This will allow us to improve our Sustainability Exploratory class, Big Canoe program and enable field trips to Galiano Island with the GCA.

*(d) Literature Review (document upload – 5 MB maximum)*

*Please attach and upload a literature review (2-page maximum) of the research that is related and pertinent to your project.*

In colonized communities that continue to face ongoing oppression or the intergenerational effects of marginalizing policies, such as Indigenous communities in South Africa and Canada, rates of FASD are higher than the non-Indigenous population (May et al., 2009). In addition, for communities where high numbers of parents use alcohol and cigarettes to self-medicate in the year prior to pregnancy, it is more likely that mothers will continue to use these highly addictive, teratogenic substances during pregnancy as well, both prior to and after pregnancy recognition – especially if pregnancy was unintentional (McDonald et al., 2014). 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 pre-service student teachers found that very few of them knew much about FASD, and even fewer of those knew what they could and should 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). Research suggests 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 (Saunders & Hill, 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). It is becoming more well-known that access to nature benefits people physically, mentally and emotionally (Sandifer et al., 2015) although it is not often discussed that people with exceptionalities are regularly and routinely excluded from nature and nature-based education (Liddicoat et al., 2006). 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, 1997). When given access to nature, students are able to restore their fatigued capacity for directed attention 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). In addition, children take more healthy risks and challenges in natural settings, building competence, self-esteem and personal resilience (Collado & Staats, 2016).

Throughout the convening process of this participatory action research project, we hope to follow Stoecker’s advice that PAR researchers need to be able to take on the role of animator, community organizer, popular educator, and/or participatory researcher, depending on the current needs, desires, abilities and level of organization of our community (2012). In our hope to avoid using data collection and analysis strategies that reproduce power imbalances one way or another (Mayan, 2009), we plan to embrace Indigenous research methodologies (Kovach, 2009). Fyre Jean Graveline advocates for researchers to "recognize and resist oppressive Eurocentric attitudes and practices currently shaping research norms" and instead "creatively combine Aboriginal teachings with qualitative design" (2000, p. 361). In working with Butch and Bradley Dick to co-facilitate their more egalitarian Circle-based approach for both teaching and research, we hope to use a locally-sanctioned, circle-based methodology so that we can follow Graveline's cautious recommendations to "embrace first voice" (2000, p. 363) and recognize the "socially mediated nature of knowledge" (2000, p. 367).

### **(3) Questions About the Process You Will Undertake to Convene**

#### ***(a) Process (2986 of 3,000 characters)***

*Where are you currently in the design and development process? What have you done to move your ideas forward, and what activities do you still need to do? Summarize the development process that you will undertake to develop this idea into a fully-formed, viable research project plan. Tell us what you would like to do to transition your idea into a viable project plan.*

Preliminary discussions between the UNBC researcher and GCA staff and volunteers focused on using mixed methodologies to create an electronic survey for teachers and parents involved in class field trips to Galiano. We hoped to work together to reach out and (re)connect with First Nations youth programs, other community and environmental education service providers, teachers, parents, and students who have been involved in our programs in the past in order to evaluate and improve the inclusivity and restorative nature of ecological education programs available in B.C.

We developed a draft research question focused on “How can nature-based education providers ensure all students, especially Indigenous students with EF exceptionalities, are included and experience the full benefit of Restorative Education programs? To answer this question, we determined that firstly, we wish to find out what does or can make restorative education program outreach and pre-program materials inviting for parents and teachers of children with exceptionalities, and ensure they feel confident in bringing their learners on these programs. Next, we need to find out if there is a respectful and efficient way organizations such as the Galiano Conservancy can gain information from teachers, parents and young people themselves in order to understand and meet each exceptional learner’s needs. Thirdly, we need to assess to what extent the education program facilitators understand and can cater to such students through their instructional approaches, and whether any improvements can be made to hiring and training practices. Fourthly, it would be helpful to know if program locations, topics, components and materials meet the needs of Indigenous and exceptional students, and whether any improvements can be made. Finally we’d like to know if there is any ethical, easy, inexpensive way we can assess the actual learning and benefits that program participants enjoy in

a way that lets us compare whether students with EF challenges gain more, less, the same, or different types of benefits than neuro-typical participants do.

Once Emily and Levi were hired to teach at an urban school within a predominantly Indigenous community who are equally interested in this question, it seemed like an even better fit to focus on qualitatively developing our research questions and process directly with diverse members of our new community to evaluate both our school's and the GCA's nature-based programs, co-creating the survey in the process. With support from a Convene grant, we plan to follow up on the invitation to work further with Brad and Butch Dick, to co-facilitate Circles with our students, staff, parents, and the wider Songhees, Esquimalt and Galiano communities to generate questions and theme answers. So far, an inquiry inspired by Butch and Brad Dick is: How can Shoreline staff use the Lekwungen values of Thi'itsen (Trust), Tsey'ewtsus (to have in both hands), Kwum'kwum (courage), and Txw'anaxw (to bring into the open) to support our students in developing their sense of identity, self-esteem, self-confidence and self-discipline? We'd like to explore Brad's term "Sninew": which he defined as meaning "well-disciplined" as in "we do our research, we do our homework within our community to strengthen it" (Dick, 2012).

In July 2019 we plan to submit an Investigate grant proposal to use the survey we will have developed as a quantitative tool to determine the generalizability of Shoreline's experiences and needs.

***(b) Collaboration (1500 of 1,500 characters)***

*Who are you currently partnering with? Who else do you intend to include in the development process? How are people affected by the issue involved?*

Emily Menzies, a Masters student undertaking her thesis in UNBC's Special Education program, is partnering with the Galiano Conservancy Association, an environmental education service provider located on Galiano Island, B.C. Emily's husband, Levi Wilson, is a member of the Gitga'at Nation and grew up surrounded by his southern kin, most of whom are descendants of the Lamalchi People of the southern gulf islands and lower mainland. Together, they have been developing and providing "eco-cultural" programs with the Conservancy since 2011, and have both become teachers at Shoreline Middle School in the greater Victoria School District.

Through classroom discussions, staff meetings, parent teacher interviews and Individualized Education Plan meetings between school staff, parents and students with designated exceptionalities, it has become clear that many Shoreline school community members have an interest in decolonizing and Indigenizing both the content and manner in which lessons and school programs are conducted, as well as the creation of more nature-based opportunities to promote mental health, exercise and executive function skills. Together, we have been creating and expanding Shoreline's Exploratory classes on "Sustainability" and "Indigenous Place-based Learning," Big Canoe program, Camas Meadow, and hope to plan a canoe-based field trip to Galiano Island with the GCA.

In October, the Greater Victoria School District offered a teacher professional development event facilitated by Songhees Elders Bradley (Yux'wey'lupton) Dick and Clarence "Butch" Dick at their Bighouse. They invited us to work with them and use their Circle-based pedagogy and research methodology to use with their Nation's children and other students.

*How has the community's experience contributed to the identification and development of the research question? How will this project align with the principles and processes of participatory action research?*

So far, community members have shaped our programming in a very informal, ongoing and evolutionary way. For example, each program is planned and adapted to meet the needs of the classes and groups involved, and we discuss how it went and how to improve the program for next time with our partner teachers and group leaders, as many of our client groups return to work with us year after year. However we have yet to systematically take stock of the effectiveness of our different program options, especially from the perspective of exceptional youth and those of Indigenous heritage. Through the convene stage of our research project design, we hope to formalize our interactions with community members and partners Circle-based Indigenous research methodology so that our process of generating and selecting our survey questions aligns with the principals of participatory action research.

#### **(4) Public Statement**

*Vancouver Foundation shares excerpts from approved grants on our website and with our donors and Board of Directors. We might also share your proposal with other funders or external reviewers that we think may have valuable insight into your work (such as your local community foundation). Many people do not have a background in your area of expertise and so please use plain, compelling language (avoiding jargon) to write a paragraph that answers the following questions.*

**(a) Project Description** (697 of 700 characters)

*What is the pressing health issue that your team is trying to understand? Why is this understanding meaningful? How will your Convene process lead to a fully formed and viable research project?*

All young people benefit physically, emotionally and mentally from access to nature-based education programs, but marginalized youth with executive function exceptionalities are often left out. Indigenous students need opportunities to learn outside to build their sense of identity, self-esteem, confidence and self-discipline to reach their academic and life potential. By researching, creating and testing tools to assess and improve the inclusivity and restorative nature of environmental education programs, this collaborative project will enable program providers, teachers, parents and students alike to advocate for and act to improve educational opportunities for all students, in a way that will specifically benefit Indigenous learners with FASD without further isolating and stigmatizing them.

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