The Indigenous Garden Project:

Reflecting on Land-Based Education, Decolonizing and Garden Spaces in British Columbia's K-12 Education System

by

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Bachelor of Arts, University of Victoria, 2002

Bachelor of Education, University of British Columbia, 2005

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Abstract

The Indigenous Garden Project was a garden classroom built for the Nala'atsi Program, an Indigenous alternate education program. The project, initially envisioned as purely a garden, was built into a Science 11 course for students attending the alternate program. Students, staff and community members contributed to the planning and building of the multi-use area. The garden contained over fifty different plants (including native plants used for food and medicines by Indigenous peoples), a greenhouse, and a cedar smokehouse. The project centered on Indigenous pedagogies, incorporated Elders and knowledge keepers into the learning space, and provided students with the opportunity to experience science in a hands-on experiential learning environment. This reflective paper outlines the beginnings, building process and end of the project. It details the experience of the garden for the author, several students and a Nala'atsi staff. The literature review discusses the importance of decolonization in education systems, issues regarding racism and settler colonialism in outdoor education, land-based learning versus place-based learning and the benefits of garden-based learning environments. Reflections and recommendation for educators who wish to begin a garden-based learning space are provided. The paper also provides reflections and requirements for educators about incorporating Indigenous education in a decolonizing way into their teaching.

Keywords: Indigenous education, land-based education, garden-based education, place-based education, decolonization, experiential learning

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Acknowledgements

This paper created a space for me to look back at a project that was very important to me and that had a major impact on my personal outlook about education as well as on my decisions regarding my career. Throughout the garden project and my Master's work, my family have been my champions, especially my husband Roland. Thank you for all the support and encouragement you have given me. As well, thank you to Dr. Wanda Hurren for the guidance and support throughout this process.

Chapter One: Background and Context to the Indigenous Garden Project

I am Métis on my mom's side of the family and my dad's family was one of the first settler families in Courtenay, British Columbia. I acknowledge that we are and continue to be guests on this unceded land that the Pentlatch and K'ómoks peoples have know intimately since time immemorial, commonly called the Comox Valley. My work on the Indigenous Garden Project and the research completed for this paper have been completed on this territory.

My Métis heritage on my mom's side of the family was something that I was told to hide as a child. It was a secret easily held because my mom's family was mostly estranged from me when I was growing up, and I lived with my dad. As well, my mom and I do not meet societal norms of "looking" Indigenous. The way my school books and lessons presented Indigenous nations, cultures and peoples seemed far removed from my family, so I didn't consider myself Indigenous by the school book definitions. Not knowing about my mom's family history was in stark contrast to my dad's family history, where I knew the names and birth places of my family back several generations and could recite little anecdotes about my ancestors' exploits in India, Europe and North America. Ignorance about, and lacking a place to learn about my Métis culture prompted me to feel shame about who I was, and it created in me a desire to feel pride about being Métis. Pride in my ancestry and the desire to know more about my Métis culture has driven me, and it continues to drive my work in advocating for improved services and programs for Indigenous peoples.

I have been an educator for the last 14 years, working in various school districts in British Columbia and Alberta as a classroom teacher, district level teacher and as an Indigenous Education department administrator. Almost all my teaching career has been in Indigenous Education departments. I was trained as a secondary social studies teacher, although I have taught courses in English Language Arts, Science and Math as well. While I was working in school districts, I developed

curriculum for teachers and ran teacher professional development programs that allowed me to teach educators about incorporating Indigenous content into the classroom. I was part of the English First Peoples 10/11 curriculum team and the Social Studies K-12 curriculum team during the last British Columbia curriculum renewal, from 2015-2016. My passion for developing curriculum led me to take work as a contractor with the UBC Faculty of Medicine for the Aboriginal eMentoring and Rural eMentoring programs, and with Native Education College in Vancouver, as the curriculum developer for the Indigenous Land Stewardship certificate program (2019). In the last few years, I moved away from working in school districts and I am currently the Executive Director for the North Island Métis. I have worked in the publishing world as well as a book evaluator, an Indigenous consultant, and a cultural sensitivity reader.

As an educator working in Indigenous Education, I have been confronted with discrimination and harassment on all fronts. My appearance does not conform to stereotypical images of Indigenous people that settler colonialism via Hollywood movies and school textbooks has helped to create and perpetuate. Additionally, Métis are often seen as not Indigenous enough in comparison to First Nations in Canada, which negates our peoples' long history and unique culture. Métis are dismissed as either Indigenous pretenders or as nonexistent as a distinct people. This has allowed both Indigenous and non-Indigenous people to dismiss me as an Indigenous person. My experience is far from unique, as many Indigenous staff and students commonly experience discrimination and harassment in education systems, as well as in other daily situations. Discrimination and racism can occur in various ways, some of which include staff not having physical spaces from which to work, having our suggestions and ideas dismissed, being targeted or watched, and being the recipients of patronizing comments or bullying. Indigenous people also commonly experience lateral violence, an effect of settler colonialism. Lateral violence takes place when Indigenous people act out the learned behaviours taught through settler

colonization (residential schools, structural racism in Canadian government and social systems, etc.) on other Indigenous peoples by way of bullying, gossiping, undermining, segregating, and withholding of information.

There is a struggle to have Indigenous knowledge, culture and people valued and respected in education. My experiences are often ones of dismissal about the importance of including Indigenous content, or frustration expressed by others because Indigenous education did not fit nicely into their Western framework of education. Donald (2009) notes this is a common issue for teachers who are required to include Indigenous content but resist because they are comfortable in the colonial frontier logics that place Indigenous peoples and perspectives outside of settler colonial education. I found my efforts as a consultant to increase Indigenous content were often negated because the lessons or presentations being offered were made into one-off sessions that were disconnected from the teacher's daily lessons or were presented as a play time and not serious education. Indigenous education is often relegated to add-on status, secondary to Western knowledge. Steps taken by textbooks and curriculum to be more inclusive often only manage to make Indigenous content a footnote or last paragraph in the chapter. Although educators are attempting to be more inclusive, a lack of knowledge, failure to include Indigenous people and Western settler approaches to education may only recolonize students or make space for settler moves to innocence, as outlined by Tuck & Yang (2012), and this does not empower Indigenous peoples. Even at the provincial level, attempts over the years to create more inclusive curriculum have been difficult and had varying levels of success. My personal experience of creating Indigenous focused courses was an exercise in frustration sometimes because despite the inclusion of competencies that reflect Indigenous pedagogy, such as in the Personal and Social Core Competencies in the British Columbia K-12 curriculum, creating a course that centers Indigenous pedagogy and rejects settler colonialism is nearly impossible due to the fact that the educational framework is firmly rooted in

Western paradigms. Indigenous education in British Columbia's school systems is far from what is needed to support Indigenous students and increase graduation rates in schools.

Schools and educators also struggle to understand how to support Indigenous students in the classroom. Inclusion of Indigenous education is seen as a solution for poor attendance, disinterest in classroom subject matter and low graduation rates. As a district level teacher, I often spoke with my colleagues about strategies for supporting Indigenous students. Often, these meetings would reveal frustrations the teachers were feeling about the Indigenous students in their classrooms. It was common for teachers to express confusion and irritation because the Indigenous student they were trying to engage didn't attend the presentation by an Indigenous knowledge keeper they booked, or the student wasn't engaged in the lesson that had Indigenous content. The teachers felt the students should be grateful the class had the opportunity to experience Indigenous history or information, but what the teachers could not see was that the information came to the students in a way that was filtered through a non-Indigenous lens and/or was controlled by a Western framework for learning. Parent's (2011) research notes that when educators use Western frameworks to measure success, it can lead to blaming Indigenous students or families for perceived failures. The negative labels are in fact not deficiencies on the part of the students and families, but a reflection of the deficit in existing education systems. Indigenous students' experiences of Indigenous content in classrooms is often an experience of colonization. My observation has been that the lessons, and not the students' engagement levels, are the problem because the lessons are a far cry from authentic Indigenous learning experiences. To incorporate Indigenous education into schools and classrooms, educators must truly allow Indigenous learning to have a place and space that will change the look, flow and control in their domains. A classroom that embraces Indigenous education will change the power relationships and this is one reason why very few Indigenous education experiences exist in mainstream institutions.

In my own teaching, I was very conscious of how I created lessons and classroom structures. I wanted to build a relationship in my classroom that differed from mainstream classrooms. Within the first few lessons of a new course, the students and I would discuss how we wanted to be treated in the classroom, what we wanted to be included in lessons and what methods we preferred to learn by. I worked to ensure my lessons did not privilege Western history, culture and knowledge. In Humanities courses I taught in a middle school, all the authors were Indigenous and all the history focused on Indigenous peoples, culture and history or what the Indigenous peoples' perspectives of history were when the history included colonialism. Schools are a colonizing experience for Indigenous students, where traditional languages, cultures, community values and ways of knowing are dismissed in favour of Western ways which are taught as norms. I wanted to create spaces where Indigenous ways were valued and privileged in order to try to counteract all the other ways (warning bells, desks, classroom walls, etc.) Western norms were implemented. I wanted to create spaces where frank conversations about colonization could happen and where students could express their frustration or confusion over the reasons colonization continues to affect them. Lessons included (as often as possible) Indigenous Elders and guest speakers, workshops provided by Indigenous community members, opportunities for interactions between Indigenous students in the district from K-12 and field trips to experience a wide range of cultural activities. I felt that my role as the teacher who was hired to specifically support Indigenous education was to take the Western mandatory educational system and stretch, reimagine or break the boundaries of the system to ensure my students were experiencing the most decolonized education I was able to provide. Another way to look at it was that I was forcing the square shaped education system into a circle, to varying levels of success. It was a constant struggle and I was often fighting the education system as there were many forces and processes in place that were forcing the circle back into the square.

I have been a part of many different Indigenous education programs set up in public school systems. These programs are usually set up to address low attendance and graduation rates of Indigenous students in the district. The anticipated outcome of these programs is that student success rates will improve, although there is usually no stated level that would become an achievable outcome and all the stated responsibility is usually put onto the students. Indigenous students are often in these programs for one or more of the following reasons: they are labelled as Indigenous, they are failing courses or have dropped out of school, the student /parent/guardian wants more Indigenous-based knowledge in the assigned courses, or the student/parent/guardian is looking for an alternate education pathway than the mainstream classroom. Decisions about these programs are usually made by administrators and are funded through Indigenous Education budgets, which are separate from mainstream school district funding. In this way, Indigenous students, staff and programming are separated from mainstream public schools, allowing the public system to benefit from the Indigenous programs with low risk levels.

The Indigenous Garden Project

The above discussion provides the background context for both my personal and professional experiences related to a project I undertook that provided the focus for my graduate studies: The Indigenous Garden Project.

In 1999-2000, one of the school districts I was working in identified that high numbers of Indigenous students were dropping out of district schools in grades 9, 10 and 11. These students were not getting an opportunity to get a graduation certificate because secondary schools would not accept the students back and post-secondary adult graduation programs were too expensive or difficult for successful completion. The district Indigenous Education department hosted several meetings where

former students and Indigenous community members in the region provided feedback about what they felt would allow Indigenous students greater success in graduating from the public K-12 school system. From these community meetings, Indigenous Education created what would become the Nala'atsi Program.

Nala'atsi is an Indigenous Grade 10-12 alternate program that was originally run out of the Wachiay Friendship Centre, and then was moved to a small school district building provided to the Indigenous Education department for its staff and programs. The Nala'atsi Program is meant to be Indigenous focused, with low student numbers and primarily for students who have dropped out or are not welcome to attend the secondary schools in the district. The lessons are more individualized and less structured to a specific timetable. In addition, Nala'atsi offers many different social, cultural and physical education opportunities, such as hosting lunches for Elders, providing fieldtrips to the K'ómoks Big House, and running girls and boys groups. The program is closely connected with Wachiay (a two-minute walk from the current Nala'atsi site) and the Ni'nogad Elders group that meets at Wachiay. Nala'atsi also has good relationships with the K'ómoks First Nation, Miki'siw Métis Association, other local Indigenous organizations and with many local Indigenous community people. Students who attend this program usually have learning or behavioural designations. The teacher allocation for the program varies from 1.4 FTE to 2 FTE teachers with one Youth & Family Worker. The name Nala'atsi was presented to the program by a K'ómoks Elder and it means "place to begin the day" or "new beginnings."

For one school year, I was the Math and Science teacher at Nala'atsi. In addition to the British Columbia prescribed Grade 10-12 courses, I created modified and adapted courses for students. I did not provide daily structured lessons. Specific times in the timetable were allocated for students to work on course materials and students progressed at their own pace. Due to the number of different courses

needed and different levels of ability, I often relied heavily on textbooks to provide the framework for meeting learning outcomes. Modified courses allowed the most Indigenous content to be incorporated, as courses and learning outcomes for the Dogwood Certificate graduation path were more specific and students tended to move through the course at a faster pace. After my first year of teaching in this program, I became a district level Indigenous teacher, no longer working specifically with the Nala'atsi Program. I continued to work out of the same building as Nala'atsi so I still had many opportunities to interact with the students on a daily basis. In my new position I taught teachers how to incorporate Indigenous content into their curriculum, and I created learning resources and lessons for use in the classroom.

Working at Nala'atsi had created a close relationship between myself and the program, and knowing the challenges associated with the program, I made myself available to assist the Nala'atsi staff when possible. Due to the variety of activities Nala'atsi offered and the limited funding provided, grants for additional funding from outside organizations were often written by the Nala'atsi teachers. The principal of Indigenous Education (also the principal for Nala'atsi) was made aware of each grant application but generally did not assist with or make decisions about the use of the grants. In December 2011, I assisted the senior teacher in writing a $6,000 grant for Nala'atsi that focused on providing students with the opportunity to learn about healthy diets and Indigenous foods, especially regarding plants and their traditional uses. We saw the grant as a way to bring more community members in to Nala'atsi for presentations and activities with the students, as well as for purchasing supplies for the different activities. In Spring 2012, we were notified that our grant application was successful. We received the funds in June 2012. This was one of many funding streams Nala'atsi had at the time, so the senior teacher asked that I take a lead on the project, as between the two of us, I was most knowledgeable and interested in Indigenous foods and plant use. I became the lead teacher for the

project, with assistance as needed from the senior Nala'atsi teacher. At the time, Wachiay was interested in creating a native plants garden and the members there became interested observers. Additionally, we could go to the Ni'nogad Elders group for advice when needed. When we received this funding we did not have a concrete plan about how the project would proceed. We had our knowledge of educational best practices as teachers working with Indigenous students and a desire to provide the students with opportunities to learn from Indigenous community members and about Indigenous knowledge.

Figure 1. Images from the Indigenous Garden Project in Courtenay, B.C., taken between June 2012 – April 2013.

The project became known as the Indigenous Garden Project. Nala'atsi was given permission by the school district and the principal of Indigenous Education to use the fenced lawn area connected to our building as a garden. We began activities in the beginning of September 2012. Between June and September 2012, I asked for advice from the Ni'nogad Elders and different Indigenous people who were interested in traditional plant use and who were knowledgeable in gardening. I also gathered information about plants used by Indigenous peoples and purchased supplies. In September, the Nala'atsi lead teacher and myself asked students if they would be interested in helping to set up the garden I was building. Initially, various students helped out, but four boys became the main students who wanted to be involved. The principal of Indigenous Education then put forward the idea that I offer

a Science 11 course through the garden project. I agreed to be a guest teacher in the school, running this one specialized course. The students involved in the garden-based Science 11 were all within a year or so of graduating, had issues around their attendance and had been designated with behavioural problems.

The Science 11 course taught in the garden included hands-on outdoor work, dialogical teaching, diminished amounts of traditional desk work and incorporated the involvement of many different community people and groups. Lessons often consisted of problem solving the creation of the garden space, learning how plants grow, which plants were traditionally used by Indigenous peoples and deciding which plants would be in the garden. Students were provided with many ways to demonstrate their understanding, such as through presentations to community members on what they had learned, video recorded reports, and teacher-students discussions about the progress of the project. Weekly times to work in the garden were put into their timetable, but there were many times that work occurred in addition to this time due to scheduling conflicts and the needs of the garden itself. By June 2013, the project had gone from an empty lawn to a garden that had a greenhouse, smokehouse, multiple garden beds, several fruit trees, gravelled pathway and a working composting system. The project also received an award and additional funding from multiple funding organizations that allowed the project to continue to grow. The senior teacher and I hoped to increase the scope of the project, to allow space for more students and more garden.

In June 2013, the project also had a setback, as I was notified I was no longer working in the same teaching position or working for the district Indigenous Education department. I agreed to continue to look after the garden during Summer 2013, until the project future could be determined. In September 2013, the senior teacher and I were moving forward on a new multi-year grant opportunity that would provide a hired coordinator for the project, to allow for more staffing stability going forward.

The principal of Indigenous Education and the school district were made aware of the application and the senior teacher and I moved forward with good intentions. I also volunteered two time periods a week at Nala'atsi in the garden project, because I was working as a UBC employee in an unrelated job at that time. Abruptly in late September, the garden project was ended by the principal of Indigenous Education. I immediately stopped volunteering at Nala'atsi and withdrew the multi-year grant application due to conflicts of interest and miscommunications. All garden programming was ended, and by Spring 2014 almost all of the annual plants were removed and the garden beds were left to weeds. The abrupt end of the project created hard feelings from the staff, students, and Indigenous community organizations towards the principal of Indigenous Education and the school district and ruined the relationships that had grown through the Indigenous Garden Project.

The rise and fall of the Indigenous Garden Project is one small story in the experiences of Indigenous Education programs across the province of British Columbia, but I believe it is a story that has great value regarding what educators who wish to create change in the public school system might learn. As our education systems begin to acknowledge the need for Indigenous education in public schools, there is a need for examples that can be considered to help guide what the Indigenizing process looks like in the province. The care and consideration needed in incorporating Indigenous pedagogies into the existing British Columbia curriculum is great. The greatest danger is that this process becomes an act of recolonizing students and staff, rather than an act of decolonizing our educational systems. I believe that in its beginnings, the Indigenous Garden Project provided Indigenous students with a decolonizing learning experience. Although the project didn't continue, I became very invested in the story of how things unfolded and how things might unfold in future attempts to undertake similar projects.

The purpose of my study is to provide, through a review of related literature and sharing the perspectives of Indigenous students and educators (myself and one other educator) involved in the Indigenous Garden Project, a strong rationale for undertaking similar projects, and some cautions and recommendations that will support such projects.

Chapter Two: Literature Review

For my literature review, I am looking at three different aspects of the Indigenous Garden Project: land-based education, Indigenizing/decolonizing education and gardens as classrooms.

Land-Based Education

Friedel (2011) discusses how Western outdoor place-based environmental education programs directed at urban Indigenous youth do not meet their learning needs when it comes to culture and connection in the article *Looking for Learning in all the Wrong Places*. She writes, "the study that began as an examination of place-consciousness and identity for urban Native youth in the context of a non-formal place-based learning program, quickly morphed into a concern with how these young people were taking up such learning" (Friedel, 2011, p. 532) and her new focus became "how do urban Native youth understand non-formal place-based learning premised in large part on Western outdoor and environmental education and with what effects?" (Friedel, 2011, p. 532). Friedel identifies three key delivery areas where the program failed the youth—in approach, in connection and in technique.

The approach of the program was based on the idea of delivering lessons for the 'Ecological Indian' to the youth, "a presumption that youth somehow covet romanticized notions of Indian-ness, such as primitive fire building" (Friedel, 2011, p. 539) that serve to juxtapose modern Western environmental issues. This is "a stereotype linked closely to 'the vanishing Indian', it obscures the complexity and sophistication of Indigenous life" (Friedel, 2011, p. 534). When the youth did not conform to the requirements of the program through perceived disinterest or by them taking actions outside the structured boundaries of the lessons, they were seen as disengaged and unconnected. Friedel (2011) states "it is not Indigenous youth who have failed to properly engage; rather, it is an

overly-deterministic outdoor and environmental education that fell far short in the effort to recoup genuine cultural traditions" (p. 537).

The connection in the above program was not focused on Indigenous methodologies, instead choosing to perpetuate Western notions of romantic traditions. There is often an assumption in Western education systems that urban Indigenous youth are lost, struggling with "dispersion from nature, displacement from Indigeneity, and disconnection with an authentic being" (p. 539), so Friedel (2011) asserts "rather than distancing Indigenous youth from cultural traditions by thinking of them as already disconnected in the urban realm, we ought to build upon their inherited practices of knowing in Indigenous non-formal learning" (p. 541). She found that it is the social connections that bring value to the program for the youth. The opportunities to talk together as a group in the van while traveling to various destinations and the relationships the youth build with each other were held most high in responses as to the value of the program. As noted in the paper, the Canadian Council on Learning (2009) agrees with Friedel's (2011) findings, stating, "Aboriginal learning is a highly social process that serves to nurture relationships in the family and throughout the community. These social relationships are a cornerstone for learning about ancestral language, culture, and history" (p. 536). Indigenous youth attend these programs seeking to connect with culture and community, thus it is the responsibility of the program to decolonize itself in order to deliver on these needs. "Ensuring that educational aims align with the regional, spiritual, lived essence of Indigenous place-based literacies as described by Indigenous Elders and scholars is necessary for enhancing the potentialities of youth to take up their responsibilities" (Friedel, 2011, p. 541).

Friedel notes place-based learning as it is currently executed is unsatisfactory as a technique for creating programming for Indigenous youth, as it does not question nor call out the lack of acknowledgement of Indigenous peoples' place on the land. Western education spaces need to embrace

a more holistic approach to learning and by "expanding the place-based learning discourse beyond Western notions of nature serves to actively connect it with historical expressions of Indigenous resistance and to the plethora of learning happening for Indigenous youth outside of formal educational contexts" (Friedel, 2011, p. 539). Friedel (2011) sees this inclusion of Indigenous learning as being grounded in orality, noting that we are "well served to understand these young people as creative, active agents whose interest in cultural learning is a sort of remembering, a seeking of personal and communal healing in the context of conjoined cultural, social, and ecological worlds" (p. 540).

In *Land Education*, Tuck et al. (2014) create a working definition of what land education is, stating:

> Land education puts Indigenous epistemological and ontological accounts of land at the center, including Indigenous understandings of land, Indigenous language in relation to land, and Indigenous critiques of settler colonialism. It attends to constructions and storying of land and repatriation by Indigenous peoples, documenting and advancing Indigenous agency and land rights. (p. 13)

A large part of the Tuck et al. (2014) article addresses defining settler colonialism, as well as calling out actions and education that centers settler futurities, that of looking to supplant Indigenous peoples on the land, placing settlers as the stewards of the land who live in a post-colonial world without guilt of past deeds. "Any form of justice or education that seeks to recuperate and not interrupt settler colonialism, to reform the settlement and incorporate Indigenous peoples into the multicultural settler colonial nation-state is invested in settler futurity" (Tuck et al., 2014, p. 16).

Significant to land education is language. Tuck et al. (2014) reference Rasmussen & Akulukjuk's (2009) work that discusses how "language is not something developed in isolation in human brains, but in relationship to land and water" (p. 12). Language reaffirms connection to land and builds on Indigenous understanding of land and land education. The languages of Indigenous peoples are the

storehouses of their culture, as words have more meaning than just a name of some thing or action. Indigenous languages remind the speaker of the relationship they have with the land. The knowledge Indigenous languages contain is lost or pieces disconnected when it is translated to English. MacLean (2010), as referenced by Tuck et al. (2014) states, "people use their language to organize their reality" (p. 12). From this, it is clear that using the language of the land you are in is necessary to gain a better understanding and to combat settler colonialism.

Tuck et al. (2014) emphasis statements put forward by Bang et al. (2014) that suggest that environmental education quietly hides settler colonialism within its teachings and methods. Discussing land means considering all land, including urban areas. High density areas, in settler views, lose their Indigenous identity and become areas that are outside of traditional unceded territories. Yet, "relationships to land are familial, intimate, intergenerational, and instructive" (Tuck et al., 2014, p. 9), regardless of their location or what currently exists on that particular land.

Tuck et al. use their land education definition to critique and place themselves in opposition to place-based education, which is more commonly used by researchers and academics in environmental education. The hope of Tuck et al. (2014) is that researchers and academics will consider the effects of settler colonialism on their work, as this is the missing piece within place-based education. Settler colonialism creates a place for continued colonization through the process of inhabiting or re-inhabiting land. They posit that place-based education cannot continue to perpetuate the idea that Indigenous knowledge of land and Indigenous peoples' place in society is unchanging and should be recreated by settlers in a way which serves settler imaginings of Indigenous connection. It is also problematic when settlers create and promote the narrative of settlers as the new natives, which Tuck et al. (2014) note happens in the place-based education discourses of Jackson (1996) and Gruenewald & Smith (2008). The clear difference between place-based education and land education is that "land education de-centers

settlers and settler futurity as the primary referents for possibility. Land education seeks decolonization, not settler emplacement. Land education is accountable to an Indigenous futurity" (p. 18).

ÁLENENEC: Learning from Place, Spirit and Traditional Language (2008) is about an Indigenous education program of the same name, run by the Saanich Indian School Board for W̱SÁNEĆ First Nations adult students. Saanich Indian School Board et al. (2008) wanted to know from their research what the community, to whom they were delivering the program, felt were the most important factors in a *learning from place* program. They found "that knowledge of most worth was associated with land and territory, and significant essentials to this knowledge: Elders as carriers, SENĆOŦEN language and place names, W̱SÁNEĆ history, teachings, stories and ceremony, sense of belonging and identity" (Saanich Indian School Board et al., 2008, p. 274).

Saanich Indian School Board et al. (2008) in discussions with participants (students, Elders, staff and cultural knowledge keepers) brought forward the following conclusions from which the researchers created a theoretical model of practice for Indigenous education programs. They state learning from the land you live in is core to Indigenizing education. Secondly, community as a committee must be the foundation and directional force of any program. This links in with the third point, that community (especially Elders and knowledge keepers) must teach in partnership with the staff of the program as they are the ones connected to culture and history. Partnership and knowledge, the fourth point, must be authentic in terms of intent and in using place to shape learning. Language and tying language into learning is the fifth conclusion, as language creates context for the learning. Language is a repository for cultural knowledge and is a meaningful way to know the land more intimately, as Saanich Indian School Board et al. (2008) note. Sixthly, the program must be flexible, adaptive and innovative so that it continues to grow. Additionally, the programs are a place for building positive self identity and cultural

identity. Lastly, programs need the support of community and especially the backing of those who are placed in leadership or management roles.

One of the strengths of the ÁLENENEC study is the acknowledgement of the barriers the program has faced, as well as an acknowledgement of the work to be done for the future. As a fairly new program that was in development, the educators faced issues around time, funding, access to knowledge and Elders, lack of support from community and those in leadership positions, a Western focused curriculum, and accreditation. The researchers note that solutions were being found for many of the issues the research has identified, such as removing financial barriers students experience that may hinder participating in the program. In this way, the educators look to keep improving the services they provide.

Freeland Ballantyne (2014) presents an example of a decolonized education program located in the Northwest Territories that is continually in process of dismantling settler colonial capitalism in the article *Dechinta Bush University*. Freeland Ballantyne (2014) contends "strategic realignment of the flows of capital can create spaces where decolonizing practices can be explored and nurtured, whereby we can hasten the inevitable collapse of capital itself while protecting and training for the resurgent futures that come afterwards" (p. 69). Although the collapse of capitalism is a bit outside the scope of my review, the process by which she and the group (from here collectively called Dechinta) build this program contains valuable information about starting programs and thoughts for re-evaluating existing programs.

> The vision was a land-based university that would address critical northern issues rooted in Indigenous knowledge and values. The word university was used specifically to speak back to the settler notion of 'higher' learning, as an assertion that learning on and with the land held the significance. (Freeland Ballantyne, 2014, p. 75-76)

Dechinta began the university by acquiring land on which to operate, founding principles of organization, creating a curriculum, finding funders and by gathering interested Elders, academics and community members together. It was decided that Elder and knowledge keepers would teach with the academics, partnering in the education process. Quickly, the Dechinta advisory circle ran into stumbling blocks from the university they were partnered with, stating "the creation of Dechinta was polarizing, and reactions were telling of the deeply embedded sense of entitlement and power that the state, and existing institutions, had over determining what did and did not count as 'education'" (Freeland Ballantyne, 2014, 76). The Dechinta advisory circle persevered, building relationships and the program offerings, and were able to offer many courses to both local Indigenous community members and university enrolled students. As noted in other articles about land education, Freeland Ballantyne (2014) states that "returning learning to an intergenerational exchange, on the land… will shake the foundation of settler colonialism by breaking the dependency that has been created on capitalism through deterritorialization… learning on the land is healing" (p. 77).

Being at Dechinta is a physical, mentally and spiritually intensive experience, and Freeland Ballantyne addresses the root of the feelings expressed by participants of the program. She shares that while many participants live in the area of this program, they do not have access to land, creating feelings of guilt and anger because they have not learned traditional land-based skills, because "the colonial apparatus has been… effective in removing people from their land while leaving them physically on it" (Freeland Ballantyne, 2014, p. 79). Dechinta creates space for the participants to address these feelings and discuss how they can begin the process by which this stops, through sharing what they have learned. "Not only do these youth articulate why ongoing colonial practices harm Dene ways of being healthy and self-determination, but these youth are skilled at the practices that build this alternate

reality" (Freeland Ballantyne, 2014, p. 84), returning to their communities and offering session on hands-on skills as well as on methods of decolonization.

Land-based education in an urban area is the focus of Bang et al.'s (2014) article *Muskrat Theories, Tobacco in the Streets, and Living Chicago as Indigenous Land*. In their research project, they use a methodology called design-based research, "developed from the recognition of the inadequacy of many educational research traditions to understand the complexities of learning and the development and implementation of learning environments" (Bang et al., 2014, p. 45). For Bang et al. (2014), this means "working to move our practice beyond historicized us/them dichotomies and willfully contradicting common narratives of assimilated and landless urban Indians toward longer views of our communities and our homelands not enclosed by colonial timeframes" (p. 39). They see science, outdoor and environmental education programs as spaces that may be used to reaffirm settler colonial narratives of *terra nullius*, a 'zero point epistemology' that removes Indigenous peoples from land and categorizes land as meant for resource extraction/use or meant for protection. Bang et al. (2014) state that a 'zero point epistemology' is about complete or partial removal of Indigenous peoples presence from land that affirms land as uninhabited and thus available for settlement and stewardship by others, as they found outlined by Deloria et al. (1999) and Veracini (2011). When Indigenous peoples do appear in these outdoor programs, it is often as the 'Ecological Indian' described in Friedel's (2011) outdoor environmental education program reflection article. It is important to note that in Friedel's (2011) article, she is speaking about environmental education and not ecological education. Throughout this paper, I am also only referring to environmental education

Bang et al. discuss place-based education as an attempt to look at land education in a new way from traditional settler colonial methods, but place-based education also fails in this attempt. Bang et al. (2014) state, "the challenge to place-based work is in articulating the difference between residing and

dwelling in a place" (p. 42), as well as its response to anthropocentricism that removes Indigenous ways of knowing (p. 43). Bang et al. (2104) state that Burkhart (2004):

> In an effort to clearly articulate the difference in ontology between western and Indigenous knowledges, made a revision of the famous Descartes adage 'I think, therefore I am' to express something closer to an Indigenous ontology to 'We are, therefore I am'. Extending this, we might imagine that the ontology of place-based paradigms is something like 'I am, therefore place is,' in contrast, the ontology of land-based pedagogies might be summarized as 'Land is, therefore we are'. (p. 44-45)

The community-based design research project that Bang et al. developed in Chicago took place over six years. They utilized community members to work with them to make decisions about and design the program using Indigenous methodologies that would be inclusive of the community needs while disrupting settler colonial methodologies. The curriculum was decided to be about "remaking relatives" (Bang et al., 2014, p. 46), which was knowing Chicago as a storied land, in terms of both peoples and the plant/animal world, as well as to look at views on invasive species. Despite their conscious attempts to dismantle settler colonialism, Bang et al. (2014) discovered that through the use of scientific and English language, specifically in terms of the phrase 'invasive species', they were again confronted with erasure of Indigenous epistemology. In order to address this issue, they used 'plants that people have lost their relationship with' instead of 'invasive species' which "ruptures the epistemology of the zero point… and refuses a settler colonial narrative of and relationship to land" (p. 48).

This change in language prompted changes in how the researchers continued to develop the program, coming to the understanding that land was the teacher, and they needed to be aware of the stories it was telling. They note, "relentless efforts to story land from long views of time and experience and elevating the importance of and reclaiming naming practices we see as critical dimensions in urban land-based pedagogies." (p. 49) These authors show it is possible in outdoor education programs to find

a way through the subtle and hidden layers of settler colonialism as a program is running and evolving, as long as land stays the central focus of exploration and learning.

Indigenizing/Decolonizing Education

Donald (2009) discusses his theory of colonial frontier logics and its impact on curriculum in *Forts, Curriculum, and Indigenous Métissage*. He states:

> The fort, as a colonial artifact, represents a particular four-cornered version of imperial geography that has been transplanted on lands perceived as empty and unused. If we consider the curricular and pedagogical consequences of adhering to the myth that forts facilitated the civilization of the land and brought civilization to the Indians, we can see that the histories and experiences of Aboriginal peoples are necessarily positioned as outside the concerns of Canadians. (2009, p. 3)

Forts, like classrooms, force colonial ideas through privileging Western history, culture and knowledge while simultaneously placing Indigenous peoples' histories, cultures and knowledges in a museum-like stasis where they are not allowed to change because they are then seen as unable to adapt and add to Western knowledge systems. This forced stasis also feeds into the idea that Western systems should be privileged as Indigenous systems are primitive or did not exist in the first place.

As education systems realize the need for inclusion of Indigenous peoples' histories, cultures and knowledges in schools to increase completion rates and access a section of the population that had been excluded, this causes issues that need to be addressed. "Teachers, now confronted with the spectre of Aboriginal perspectives in their classrooms, are naturally finding it difficult to relinquish the more comfortable stories of Canada that they have been told and grown accustomed to telling" (Donald, 2009, p. 4). Donald sees the answer as shared decolonization done in ethical spaces, so that the work is completed together as all people living in Canada are inextricably tied together in Canada's past

and future through history and land. To decolonize curriculum is to create autonomously supported spaces and places for Indigenous systems to thrive in Canadian education systems.

Regarding Indigenizing/decolonizing education, in *The Whiteness of Green*, McLean (2013) discusses how "environmental education curricula may reproduce and extend structures of whiteness" (p. 355). McLean's main concern about environmental education programs and curriculum is that they remove any historical, social or political issues from the Canadian landscape to create a place that is wild, clean, open and ready to be molded into the form that middle- and upper-class white people wish to see, replacing Indigenous peoples, to become the 'natives' who reap the benefits. The thrust is that white environmentalism wishes to skip the decolonizing process and jump to a post-racial point in time. This would allow settler Canadians to forgo apologies, shift destruction and dispossession acts onto European settlers and to place blame on Indigenous peoples who continue to disrupt their ideas of what environmentalism should be, but "Canadian whiteness was not simply imported from Europe but forged through the colonial encounter" (McLean, 2013, p. 357). McLean (2013) states that a power analysis must be included in environmental education curriculum, as "this absence of a race analysis encourages a failure to acknowledge white supremacy as a system of ongoing colonial privilege and consumption" (p. 357-358) in Canada.

A main take-away point from McLean's (2013) paper is that any garden, science course or curriculum needs to be connected to topics and learning outcomes that are usually relegated to social studies classes, as "many outdoor education programs are problematically inviting students to 'reconnect with the land' without incorporating an analysis of the violent history that led to white-settlers' illegitimate occupation of Indigenous territories" (p. 359). McLean's discussion of whiteness also touches on grand narratives of Canada that echo Donald's (2009) colonial frontier logics, where hard working and industrious settlers are placed inside the area of study (for Donald, the fort) and

Indigenous peoples are removed, marginalized as primitive or romanticized as museum-piece cultures that impede progress.

The Métis experience of land and colonialism is presented by Adese (2014) in *Spirit Gifting*, an analysis of four Métis peoples' lived experiences focused on identity, story and understanding of land. There is often a lack of Métis voice within Indigenous education and in research about Indigenous peoples. I included this article because I felt there is great value in looking at the Métis experience because, as Adese also emphasizes, the Métis have their own experiences of displacement from the land and dispossession of connection to community and to the land. Adese's concerns about forgotten *wahkohtowin* (the interrelationships with the land and all that lives on it) reflect her own life experiences, as well as for many Métis people today (my own included).

Adese (2014) uses her own story, and written stories of three Métis Elders to reflect on the loss Métis people have faced, using stories to "call us home to remember that our relationships to our ecosystem must be at the core of contemporary expressions of Métis nationhood" (p. 51). A Métis way of being is shown to be not only connected to the ecosystems that Métis people live in, it is also adaptive and reactive to changing circumstances in Canada due to settler colonial capitalism. Through the Elders' life stories, we see people and communities connected to season cycles, spiritual ceremonies related to land that embrace both Indigenous reciprocity and Catholic spiritualism in varying degrees, and clear guides for responsible use of resources. Through the stories, we also see a communal Métis community that sought to live in balance.

The reader is also presented with stories of how settler colonial capitalism changes Métis relationships with land. As the environment around the Métis changed and they were forcibly moved from specific lands, and we see resilience as "new ways were readily entrenched in their families' way of living… [adopting] a mixed trade, harvest-agricultural system" (Adese, 2014, p. 57) that still honour past

traditions and cultural ways. "Métis in communities were 'learning to forget their buffalo-dependent past' and, in its wake, Métis women helped to ensure ways of knowing remained vibrant, adaptable, and responsive to new ecological contexts allowed Métis peoples, as peoples, to survive." (Adese, 2014, p. 58)

The ability to adapt was not always the answer, as Adese finds in the Elders' stories. Like Freeland Ballantyne's (2014) description of Indigenous peoples in the Northwest Territories, Métis people are impacted by and suffer from settler colonial capitalism. Capitalism changed the relationship Métis people had with the land. It changed Métis ways of living from one that was created and nourished by the land to one that used and removed land resources, impacting Métis people's connections with culture and community. In the way Freeland Ballantyne voices concern about how the Dene live physically on the land but do not have access to the land for traditional uses, the Métis Elders' stories similarly describe living in Métis settlements but lacking control of how the land is used by industry and the government, resulting in feelings of frustration and lamentation. Settler colonial capitalism leads to "the transition from living *with* the land, to living *off* the land" (Adese, 2014, p. 63, author's italics).

It is important to put forward this Métis learning and knowledge to breakdown past racist literature and clarify that the Métis were and continue to be a unique community with their own history, culture and way of knowing. Métis is not simply either First Nation or European when pressed by circumstances to be one way or the other. The Métis are a vibrant people who, despite settler colonial efforts at disruption, continue to exist with traditions and stories. This knowledge of Métis people and of relationships to land are stories that "Métis need to rediscover and recover" to "keep their heritage" (Adese, 2014, p. 64) and ways of being alive.

In *"Keep Us Coming Back for More": Urban Aboriginal Youth Speak About Wholistic Education* (2011), Parent writes about a research project in which Indigenous youth at several non-profit Indigenous youth organizations in Vancouver, British Columbia, were interviewed to discuss the benefits of wholistic education as offered by the youth organizations. These youth organizations offer a variety of programs and services to the youth and the Indigenous community in general, including sports activities, cultural activities, spiritual guidance, educations services, art programs and advocacy. They employ and engage Elders and Indigenous support workers who run specific programs and services, and are available for casual conversations and social gatherings. The settings of the youth organizations are described as welcoming and casual. Parent identifies 'Indigenous wholistic perspective' as the approach of the youth organizations.

Parent juxtaposes the Indigenous wholistic perspective used by youth organizations with the 'positive youth development' movement used in Canadian educational systems and government agencies. Parent (2011) identifies the 'positive youth development' model as problematic when considering Indigenous youth because it is label heavy, the labels given to the Indigenous youth and their families tend to be negative and the approach "pays little attention to the powerful social forces and structural conditions that have shaped Aboriginal communities and impacted youths' lived experiences" (p. 43). Parent (2011) identifies Indigenous wholistic perspective as "the spiritual, mental, physical, and emotional aspects of an individual, one's family, and one's community... rooted firmly in Aboriginal languages and relationships to the land, cultures, and the oral tradition" (p. 34). The perspective emphasizes learning as life-long, passed down to each generation by Elders and contributes to the strengthening of the community.

To learn more about the benefits of 'Indigenous wholistic perspective', Parent conducted interviews with youth at the youth organizations. The youth identified the youth organizations as

different than schools, where many had negative experiences such as racism and prejudice at the latter. They identified the youth organizations as safe, positive spaces that incorporate Indigenous knowledge. Although they identified areas where the youth organizations needed to build capacity (education around LGBTQ2S topics, women's topics and racism), they "demonstrated that the wholistic education delivered by these organizations not only enhances their physical, emotional, mental and spiritual well-being… but also helps to build strong connections with their families, communities and Nations" (Parent, 2011, p. 42). Parent sees the lessons learned from the youth organizations about wholistic education as ones that can be used by other organizations to improve the service and programs they offer Indigenous youth.

Gaudry and Lorenz's (2018) article *Indigenization as Inclusion, Reconciliation, and Decolonization: Navigating the Different Visions for Indigenizing the Canadian Academy* outlines a research project they conducted with 25 academics who had specifically taught Indigenous-focused courses at various Canadian post-secondary institutions. They wanted to gain a better understanding of what indigenization looks like in universities, comparing an academic's views of what needed to be done with what was actually occurring. Gaudry and Lorenz identify and use three different understandings of indigenization to categorize participant responses and current actions of various universities: 'Indigenous Inclusion' (a beginner level), 'Reconciliation Indigenization' (an intermediate level) and 'Decolonial Indigenization' (an optimum destination point level).

'Indigenous Inclusion' is an acknowledged need to do more for Indigenous peoples, which ends up being about getting increased numbers of Indigenous faculty, staff and students through hiring and recruiting practices. The universities create more access to services without creating any real shifts in mindset or changes in how the universities are currently being run because the services are about fitting Indigenous peoples into the existing system. "The problem with an Indigenous Inclusion policy is that in

its most basic form, it is a program that requires Indigenous peoples, not the academy, to bear the responsibility for change" (Gaudry & Lorenz, 2018, p. 220). Gaudry and Lorenz (2018) point out that these policies of 'Indigenous Inclusion' are important steps to be taken because they have the positive impacts of increasing students success and completion rates, "however, it is up for debate whether or not inclusion policies are actually Indigenizing policies" (p. 220).

'Reconciliation Indigenization' was pushed into the forefront due to The Truth and Reconciliation Commission of Canada's (TRC) Calls to Action document that called for structural changes to Canada's systems including health, education and justice. The TRC Calls to Action put into relief that education systems have for years been used "as a tool of de-indigenization" (Gaudry & Lorenz, 2018, p. 221), and it then became necessary for those education systems to somehow incorporate the recommendations to change the education institution's structures and methods. Gaudry and Lorenz see a change in the language used to discuss Indigenization and increased numbers of Indigenous advisory committees with goals that reflect the wording in the TRC Calls to Action at various universities. They state these changes tend to be full of aspirational and meaningless words in a single plan that acknowledges the problem without creating methods for substantive change in the existing framework of the institutions.

Gaudry and Lorenz (2018) identify 'Decolonial Indigenization' as "the most radical and substantive approach to Indigenization and is by and large off the radar of most university administrators" (p. 223) due to the fact that it seeks to create major structural changes to post-secondary institutions as they currently exist and place control in the hands of Indigenous peoples and communities. The authors define it as the "affirmation of Indigenous world views alongside the practical reclamation of Indigenous educational practices and on-the-land learning [which] provide ways to decentre hierarchical educational structures and empower Indigenous communities to regain

educational sovereignty while also working with universities" (Gaudry & Lorenz, 2018, p. 223). 'Decolonial Indigenization' can be approached in two ways: treaty-based or resurgence-based. Both of these look to placing education back into the hands of Indigenous peoples so they may dictate how their education is provided, and creating partnerships between Indigenous peoples and the universities while at the same time moving the power and location of academia from a central repository to localized land-based community programs.

Gaudry and Lorenz see all the levels of Indigenization as important in this process because people and institutions currently exist at all the varying levels. The importance to be taken from the research is that 'Indigenous Inclusion' and 'Reconciliation Indigenization' are not final changes, but markers along the path towards the end point which is 'Decolonial Indigenization'.

Tuck and Yang's *Decolonization is not a Metaphor* (2012) lays out the basics of what decolonization is and isn't, and how it is tied to settler colonialism. They state that the main point of decolonization is to unsettle everyone and "specifically requires the repatriation of Indigenous land and life" (p. 21). Although the term "decolonization" is commonly used in education and in social sciences, it is often used incorrectly and "it recenters whiteness, it resettles theory, it extends innocence to the settler, it entertains a settler future" (Tuck & Yang, 2012, p. 3). It is useful for settlers to take over the meaning of the term because redefinitions of the term "relieve the settler of feelings of guilt or responsibility, and conceal the need to give up land or power or privilege" (Tuck & Yang, 2012, p. 21).

Tuck and Yang discuss settler 'moves to innocence' extensively, described as "those strategies or positioning that attempt to relive the settler of feelings of guilt or responsibility without giving up land or power or privilege, without having to change much at all" (Tuck & Yang, 2012, p. 10). This is a very important issue as educators look to improve supports and increase success for Indigenous students because there is a great danger of creating more harm through the educator positioning themselves as

the ones who have the answers rather than creating space for Indigenous peoples themselves to determine what constitutes Indigenous education, knowledge and space. Moves to innocence employ methods that remove Indigenous bodies and knowledge from Indigenous land so that the settlers can replace them as the new Indigenous, done through various actions including settler appropriation of knowledge and identity, and erasure of Indigenous peoples through regulations around status and citizenship/membership.

In terms of education, Tuck and Yang explain that by placing Indigenous youth in "at risk" categories and creating data categories that render Indigenous youth invisible, settlers create additional moves to innocence. They state that education systems do not work to mitigate the situation of marginalization of Indigenous youth; educations systems use Indigenous youth as exemplars of concern that do not prompt real improvements. Until settlers acknowledge that the land they live on is stolen land and that decolonizing requires unsettling and changing current structures that use land as the basis of wealth, governance, law and control, settler colonialism will continue its assault on Indigenous peoples and their claims to land.

Garden Classrooms

In *Intrinsic Motivation and Engagement as "Active Ingredients" in Garden-Based Education*, Skinner et al. (2012) review past literature regarding student engagement and gardens. Their review finds that "using the outdoors as a vehicle for instruction sparks students' enthusiasm and interest in academic activities, which may in turn promote their learning in schools" (Skinner et al., 2012, p. 17). In their research they found that relatedness, competence and autonomy were key factors in student self motivation and engagement. Additionally, autonomy support, structure and warmth in student/teacher relationship was connected to student engagement.

Skinner et al.'s research was done using questionnaires with students and teachers who participated in a garden-based elementary program in the US. The results of Skinner et al.'s research were similar conclusions to those they found in their literature review. The results have greater scope in education than just for classrooms in general, as the researchers note, "if garden-based education can promote student engagement in the gardens, such programs may become a gateway to increased engagement in science class and in school more generically, contributing to academic success" (Skinner et al. , 2012, p. 19-20). An interesting point in their research conclusion is:

> Garden-based programs differ from regular schoolwork… research shows that, in regular school activities, students who lack self-efficacy are typically more dissatisfied from learning; however, it may be that, in the garden, doubts about one's scholastic ability are not necessarily a barrier to engagement. (Skinner et al., 2012, p. 32)

Cairns's *Beyond Magic Carrots* (2018) considers "the limitations of framing garden pedagogues through a 'rhetoric of effects' in which children are rendered educational 'outputs' of food-growing projects" (p. 517) in order to move past this in order to assess effects of gardens on youth that may be overlooked. Cairns (2018) critically examines what she calls a 'magic carrot' approach to measurable outcomes from garden projects, such as claims of "increased self-esteem, higher test scores, and greater ecological awareness" (p. 517). These outcomes are often used to position children as future solutions to current problems, in particular to issues around food security and eating choices. Cairns (2108) points out that often "children's garden experiences are removed from specific geographies and histories, erasing the unequal social relations in which educational processes take shape" (p. 519), and "divert attention away from the need for state action and institutional change to build a more just and sustainable food system" (p. 519). Gardens have been used as training grounds for getting children ready for the workforce, and can become places where consumerism is affirmed while ignoring historic injustices around access to food, poverty and forced labour. Additionally, Cairns (2018) states "the

promise of magic carrots seeks to remedy a supposed 'nature deficit disorder' plaguing today's youth, evoking nostalgic appeals to a past when children apparently lived in harmony with the environment" (p. 521), erasing current issues of poverty and marginalization children may face.

Cairns conducted research in two community garden projects, where youth maintained the gardens, attended workshops and sold the food at local food markets. In these experiences, she identified outcomes that are not mentioned in most garden research she had read. One outcome was a space for taking, sharing and relationship building for the youth.

> During these hours, youth were not only doing the work of growing food; they were also doing the work of negotiating gender, race, and sexuality through interactions with their peers. Contrary to portrayals of the garden as a respite from youths' social worlds, it was the messy complexities of everyday life that constituted this space. (Cairns, 2018, p. 526)

The youth were also confronted with historical injustices associated with food access and labour, which was also not being addressed in the workshops and discussions provided. Additionally, Cairns points to the youth enjoying collectively working together on the project, and minimizing how hard the physical and mental work is that gardens demand to succeed, as other outcomes not often mentioned in garden program literature.

The idealized versions of children and nature were disrupted in Cairns study, making it an interesting comparison to other garden program articles. Many youth worked in the garden program to assist their families, not to find some romantic idea of childhood, as "these youth are not simply future consumers; they are social subjects embedded within intergenerational food-work relations, already negotiating the injustices of capitalism and White supremacy" (Cairns, 2018, p. 529). One question Cairns (2018) asks is really an essential question when considering youth in urban areas: "what sort of environmental encounters might be made possible if we replaced the fantasy of pristine Nature with an attention to youths' actual, existing environments?" (p. 530). This question links with a major

shortcoming found in place-based learning as seen in other articles, which is that place-based learning fails to address injustices and settler colonialism of the land. Like Friedel (2011), Cairns (2018) sees these encounters happening through "telling stories of 'displacement and destruction' but also showing how such histories contain 'stories of survival, reciprocity, community, and refusal'" (p. 530).

Mundel and Chapman (2010) discuss the Urban Aboriginal Community Kitchen Project, located in Vancouver, British Columbia, in *A Decolonizing Approach to Health Promotion in Canada*. The project outcomes and research were focused on health and health promotion through Indigenous methodologies by way of access to a garden area, a community kitchen with weekly events and hosted community gatherings. Those who participated were mostly urban Indigenous community members, as well as some non-Indigenous UBC undergraduates. Mundel and Chapman (2010) affirm "for many Aboriginal cultures, health represents the physical, emotional, mental and spiritual wellbeing of individuals, their families and communities" (p. 166). This view on health looks at the whole person, including ways in which to decolonize and center Indigenous methodologies. The question they pose is "what might a decolonized approach to health promotion look like?" (Mundel & Chapman, 2010, p. 167).

Mundel and Chapman (2010) found that "empowerment and increased capacities were perceived as important project outcomes… [and] mutual skill sharing and the informal environment [the project] creates, allowed participants who had previously had negative educational experiences to enjoy learning" (p. 169). Learning about healthy choices, the garden and the shared food was another way for the participants to connect with land, traditions and each other "with the ultimate goal of healing for individuals, communities and the environment" (Mundel & Chapman, 2010, p. 172). This project was an opportunity for those involved (especially for the urban Indigenous members) to decolonize through reconnecting them "with nature and with cultural practices, both ceremonial and quotidian practices of

communal cooking, gathering/growing and eating" (Mundel & Chapman, 2010, p. 171). The project is "distinct from mainstream health promotion as it engages with cultural teachings for health and healing" (Mundel & Chapman, 2010, p. 171).

Mundel and Chapman (2010) see the Garden Project as an important start in a progression of actions that begin decolonizing health promotion.

> By providing a place in an urban context for Aboriginal people to discuss and educate others about experiences of being colonized while celebrating and engaging in cultural teachings and practices, the Garden Project serves as one example of what decolonizing health promotion could look like and how such an approach might facilitate healing. (p. 172)

However, they also acknowledge that decolonization requires more than just their project, it is only one part and that decolonization also requires "activities that are more directly oppositional to the colonial system" (Mundel & Chapman, 2010, p. 172).

Bridging the Gap (BTG) is an environmental education program in Winnipeg, Manitoba that offers cultural components to its science curriculum. Sutherland & Swayze (2012) used an evaluation model called *Ininiwi-kiskānītamowin* to examine areas of potential growth and development for BTG. They chose this model to make sure they incorporated Indigenous methodologies and avoided forcing Western notions of environmental education onto the program.

A strength of BTG was found to be in the use of Elders and attention to culture in the program. Sutherland & Swayze (2012) state:

> When involving Elders [in BTG], they are not viewed as tokenistic or symbolic. Rather they are acknowledged as leaders, repositories of traditional knowledge and primary providers and transmitters of language and Indigenous worldview. They are treated as professionals and respected as authoritative community stakeholders in developing BTG's culturally relevant Indigenous science curricula. (p. 90)

Another strength was using the fact that they were an inner-city program with an urban landscape to their advantage.

> Learners are guided to discover ways in which 'nature' exists within an urban context, and they are encouraged to consider human dependence on the natural world and our use of its natural habitat and what it means to live respectfully from the land within a city. (Sutherland & Swayze, 2012, p. 91)

The weakness of the program, a lack of use of Indigenous languages, is not seen as a detriment to the program as the authors state they will use this information as a jumping off point to build on the already existing framework. The article does not explicitly address how it employs decolonizing practices, if at all, and the BTG project has been mentioned by Tuck et al. (2014) as an example of re-inhabitation (a form of settler colonization) commonly found in place-based education programs.

The three topics covered in this literature review – land-based education, Indigenizing/decolonizing education and garden classrooms – were chosen because they are the main features that I would like to consider when reflecting on the experience of the Indigenous Garden Project. Using the thoughts, theories and reflections gathered from the selection of readings I have shared above, I will consider the legacy of the Indigenous Garden Project. Reflections from former students and staff will also assist in fleshing out what this project was and allow me to make some conclusions about how educators could move forward in their own work of incorporating Indigenous education and outdoor spaces into their curriculum.

Chapter Three: Realities, Reflections and Recommendations

The Story of Our Garden Project

The Indigenous Garden Project was a short-lived project that impacted all who were involved. It also had ripple effects within other schools in the district and for Indigenous community organizations in the Comox Valley. Through this project I had hoped to provide an example of Science curriculum that centered Indigenous knowledge, specifically as it pertained to food, and for the students to have an opportunity to experience land in an urban area as a food growing location. I learned a lot about incorporating Indigenous pedagogies in a garden classroom. The experiences I had involving the garden, from start to finish, significantly influenced my teaching from that point and I collected valuable lessons that I feel any teacher who wishes to create a garden class in their school would find beneficial for planning next steps. The reflections regarding Indigenous education and land-based learning are useful regardless of where your lessons take place, as the techniques should be incorporated into every class.

The physical space of the Indigenous Garden was a fenced area on one end of the Indigenous Education building. The Indigenous Education building is in an urban area, surrounded by houses and an elementary school. The garden area started as an unused fenced grassy plot. The layout was planned and built by the Nala'atsi students and me between June 2012 and September 2013. At the end of the project it contained many different features and growing areas. The size of the garden was approximately 85 square metres with five different sections. The first section was the native plants area, composed of plants that local First Nations used for foods and medicines, including Labrador Tea and Oregon Grape. The native plant area contained more than twenty different plants, plus several tubs filled with swampy soil for bog plants. We ensured plants used by the local K'ómoks First Nation were included, but we also included native plants that were used by other Indigenous peoples because our Elders and knowledge keepers were from many different Indigenous nations. The second area was a two

by four metre greenhouse built as a gift for Nala'atsi by the Ni'nogad Elders and Wachiay Friendship Centre. At the front of the greenhouse was a rain barrel to collect rainwater off the greenhouse roof. We were not dependent on the rainwater because there was a water faucet in the area, but the students were interested in water collection after learning about sustainability. The third section was made up of four raised garden beds where we planted a selection of vegetables, herbs and flowers. Planting in the beds was done according to companion planting charts, so flowers were planted in amongst the vegetables and herbs. The raised garden beds were kits built by Indigenous community members and the students at Nala'atsi. On one of the beds, the students and I built a dome cover made of PVC pipe and covered with UV resistant plastic as an experiment in creating a warmer grow area. The fourth area was the berry patch, where we had several types of blueberries, cane berries and strawberries. The fifth section was the one by one metre cedar smokehouse build for the garden by an Indigenous teacher in our department with Nala'atsi student assistance. The smokehouse was used as a teaching tool where the students would learn to smoke fish, deer, seaweed and other foods for lunches and special events at Nala'atsi. There were also fruit trees (apple, pear) and flowers (daffodils, hyacinths) scattered throughout the garden area. The composting areas were mostly built outside the garden because I wanted to have a compost bin close to the kitchen door and because the garden area was very limited in size. The students and I decided it made more sense to maximize the garden size and

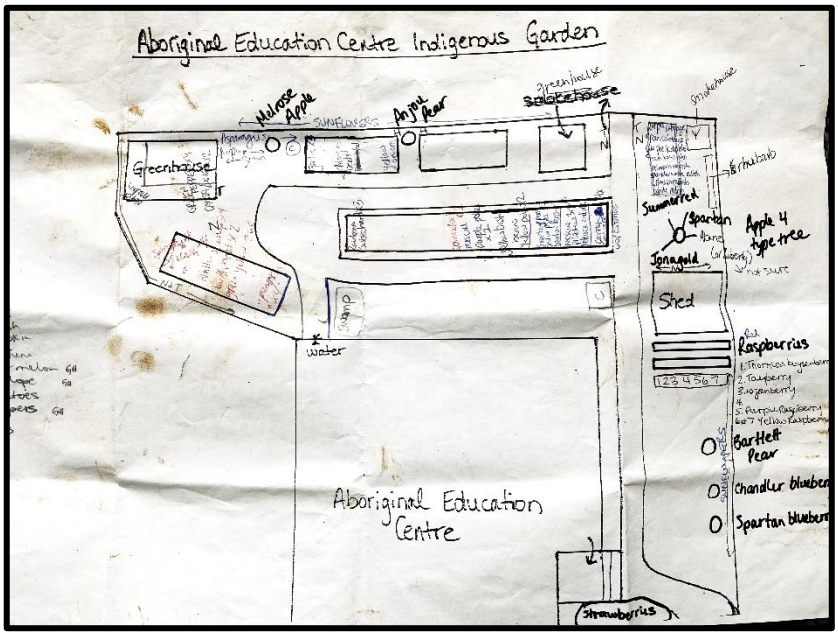

Figure 2. Sketch the author drew of the Indigenous Garden area for plant recording purposes, April 2013.

place large composting bins just outside the fence, where it was hidden by the building. The gravel pathway we made (built by district maintenance crews) lead from one side of the garden to the other, with a loop offshoot in the centre that circled around the raised beds. There was a garden shed next to the path, and the mason bee house was hung on the protected side of the shed. A small pile of rocks was also built to encourage snakes and other reptiles to enjoy the garden. Between the smokehouse and the garden shed was a patch of rhubarb. We were given ten solar lights, which the students decided to place along the paths so the garden would look nice at night.

The Indigenous Garden Project was started initially to fulfil the requirements of a grant that the Nala'atsi lead teacher and myself had written for the Nala'atsi Program. The grant, focused on local food security, included several different outcomes beside growing a garden with traditional and native plants. The grant included hunting, fishing, wild food gathering and food preparation. The time period to complete the grant was one year. As inexperienced grant writers, we included too many outcomes which caused us to be continually pulled in many directions and thus we were often rushing to keep up to the next requirement of the grant rather than doing as much pre-planning as we would have liked. As the coordinator for the garden area, I did consult many of our local Indigenous community members who were knowledgeable about native plants, gardening in general and Indigenous people's use of plants. I was given advice, magazines and ideas about where to look for more information. Unfortunately, this

Figure 3. Raised bed with frame made of PVC pipe built by the Science 11 students in the Indigenous Garden, April 24, 2013.

only happened for a few weeks because we didn't get the funding until late spring and school was ending for the year.

In September 2012, when the staff and students came back to school, I began my work in the garden. I had ordered a raised garden bed kit in June and a community member build it for us, but the real work began in September. I ordered several more raised garden bed kits and began research into greenhouses and native plants to purchase. The plan of the grant was to have the Nala'atsi students assist with different parts of the garden – building, planting, weeding, watering and such. Due to inconsistent attendance and varying levels of interest, we didn't have much participation from the students. The teachers and support staff encouraged the students to spend time doing some work, but they were very uncertain about what they were doing and didn't feel comfortable in the space. The lead teacher and I talked about the garden and how we could get a more consistent participation. It was noted that a group of boys seemed the most interested in helping with the garden, and the lead teacher and principal of Indigenous Education suggested that the boys could get a Grade 11 Science credit by working in the garden, if I was willing to teach this special course. I was comfortable with this, and I had a few years previous been the Science teacher at Nala'atsi. The course began immediately that day, as the four students agreed to get a Science 11 credit in exchange for being a part of my new class and fulfilling the requirements expected of them. My task then became hurriedly putting together a course outline, expectations and the first assignments.

The goal for the Science 11 course was to provide hands-on experiential learning with reduced levels of seat work. I wanted the students to be able to use the garden as the text as much as possible, and I tried to have community experts and Indigenous knowledge keepers come in to share their knowledge. Lectures that traditionally would have taken place in front of a board were performed as discussions in the garden while we worked. This format allowed our small class to become quite close

and conversations ranged from plants to politics to personal concerns. I feel the alternate learning landscape allowed connections to happen in a very fluid way that strengthened the experience and gave space for the students to have voice and express their concerns and needs. Cairns (2018) and Friedel (2011) note similar findings in their research, writing that the social interactions youth had were more influential than that of the outdoor activity the students were participating in. The Indigenous Garden was a place for learning about more than just Science 11, it was a space to discuss colonialism and land use, to access Indigenous knowledge, to discuss what the future could hold and for evaluating our place within it. Previous day discussions and physical exploration of the site influenced the next lessons for the students. Our lessons included Indigenous Elders telling oral stories and personal anecdotes about plant harvesting, preparing and use, researching about the different spiders and insects that lived in our garden, where our food in the local grocery store is grown, what our school needs to be food secure and asking why we have limited access to Indigenous foods. The favourite lesson for students and Nala'atsi staff was the day when the mason bees were hatched and introduced into the garden with the help and expertise of a local community member.

Although there were written assignments and readings as part of the course, much of the learning was completed in the garden. The students demonstrated proficiency of learning outcomes through various methods, including creation of video essays, creation of specific garden elements or through one-on-one discussions. The garden also provided a place to perform experiments with plants. We usually worked outside, rain or shine, for two half-days during a week, although the students were often in the garden more than just during the designated times. I found out a few months in that the boys would walk past the garden at night to check up on it and show their friends. They often jumped the fence during weekends to eat a small bit of the food and water the garden using the rain barrel water. The four students were champions of the garden, proudly providing tours to every Elder, staff or

community member that visited our building. This allowed me to more easily add in a leadership piece to the course near the end of year. The students assisted me in running several tours and planting workshops in the garden with Grade 2 and 3 students from the elementary school next door to our building.

As the teacher of a new course, I was often only a few steps ahead of the students for planning lessons and overseeing the garden space. I reached out to different teachers in the district to find out how they were incorporating the small garden areas they had at their schools into their classrooms and courses. I visited with elementary, middle and high schools to look at their gardens, and spoke with teachers about how they used the gardens. At that time, we were unique in our attempt to teach a course within the garden and having the garden as the focus. Our project was breaking ground in the district, which was wonderful but unfortunately this meant I didn't have any models that I could follow to ease the workload and responsibility. Many schools were interested in what we were doing and wanted to use us as an exemplar of where they might like to head towards. I found myself providing advice more often than receiving advice.

Figure 4. Spring construction in the Indigenous Garden, April 16, 2013.

Nala'atsi Program has had a long-time relationship with the Ni'nogad Elders and Wachiay Friendship Center. I often found support and advice from the Elders who regularly visited Nala'atsi for various activities or just for tea. They would check what was new in the garden, offering little pieces of

information about how a certain plant was used by their nation or would share a story about family harvesting or other activities. The Elders gave of their time so the students could tour them through the space, listening as the students explained what they had been building and planting. By May 2013, we were able to include food from the garden in lunch meals made by and for the Nala'atsi students and Elders. To prepare the students for future harvests of fruit and vegetables, the Elders taught the students how to do basic canning and how to make jam.

Wachiay had originally hoped to participate more in our garden and wanted to encourage us in our endeavours. At the very early stages of the garden, before we started the Science 11 course, Wachiay let us know they wanted to donate a greenhouse for the garden. Wachiay staff, Ni'nogad Elders and a few Nala'atsi students came to the garden site on a weekend in June 2012 and built a greenhouse at no cost to Nala'atsi. Unfortunately, this caused an issue with the school district administration and for a short period we feared the greenhouse may have to be removed. Luckily, the maintenance crew okayed the building after inspecting it for safety and code requirements. Unfortunately, the way in which discussions between the principal of Indigenous Education and Wachiay happened about the greenhouse caused Wachiay to move away from participation in our garden and they built their own garden at an elementary school closer to their site.

A smokehouse would seem to be an unusual addition to a garden, but it was a key part in the project. Our aim was to involve students in food sustainability, and a part of that is understanding how to prepare food for consumption and storage. Indigenizing the garden through inclusion of traditional plants and medicines used by Indigenous peoples, the smokehouse and inclusion of Elders does not mean that the space could not also include contemporary elements and conveniences. Indigenizing is not going back to primitive techniques; it is about inclusion of knowledge passed down and respect for those ways that connect culture and community to the way we live. Incorporating Indigenous

knowledge does not equate to primitivism, as declared by Friedel (2011) in her research regarding an outdoor education program for Indigenous youth. Our smokehouse was made of cedar planks nailed together and stood on a cement base for fire safety. We used oven racks that had been donated to us to place the food on, which worked well because it made it easier to clean. Nala'atsi students helped build the smokehouse with an Indigenous teacher in our department. He then taught the students how to smoke various foods, such as deer and fish, for several lessons over a period of a few months. Foil wrapped meats and vegetables were also cooked in the smokehouse over a hotter fire. The students wanted to use the plants that we grew in the garden when the food was being cooked and smoked so they researched the various herbs we grew.

Figure 5. New apple tree with smokehouse behind in the Indigenous Garden, April 16, 2013.

Lessons for the Science 11 course were mostly based in the garden, but we had several opportunities for field trips to learn more about sustainability and food harvesting. Students went on a fieldtrip to the local grocery store to research where the fruits and vegetables being sold were grown. Students were also taken on a walk through a local park and adjacent undisturbed area of a school property to learn about native plants growing there. Students got an opportunity to see how much food was growing around them that they had not previously identified as food. Students listened to a knowledge keeper discuss the uses of over twenty different plants we walked by, tasting the plants as it interested them. She also talked about invasive plants and how they too are used for different purposes. The research done by Bang et al. (2014) in Chicago describes a similar objective, to (re)story land in urban areas as Indigenous and remake relationships with Indigenous lands and plant relatives. Bang et

al. comment that invasive plants are a part of colonization and in their work began to refer to them as "plants that people lost their relationships with" (2014, p. 47). Our garden work and field trips were meant to (re)connect the youth to the land around them. After the field trips, Nala'atsi students began to see that even though the garden has a section for native plants, plants used by Indigenous peoples also grew naturally in the areas where they lived. It triggered the students to see the opportunities for accessing and growing food all around them.

In June 2013, I was notified that I would not be in the same teaching position and I would not be a part of the Indigenous Education department. Due to a number of factors, I chose to take a leave from the school district and I began working full-time with the UBC Faculty of Medicine. I was still involved with the garden during July and August, maintaining the grounds and coordinating with district maintenance staff. The principal of Indigenous Education was aware of this, as I communicated many times with him about various issues and we had talked about it before the end of the school year. It was my understanding that this was not an issue. I also informed him that I was working with the Nala'atsi lead teacher on a new multi-year grant that would enable the hiring of a coordinator for the garden, since I was no longer in the teaching position and no one else in the building had stepped up. The Superintendent was also aware that I was looking after the garden during the summer despite the fact that I was no longer in the same teaching position. She also knew that we were applying for more funding, as the funding required official signatures from the Manager of Finance and the Superintendent.

When the new school year started and no one had offered to lead the garden work, I volunteered a few hours twice a week to be with students who were interested in maintaining the garden. The students who had been in the Science 11 course were no longer attending Nala'atsi, as some had graduated and others were in special programs at a different site. The principal of Indigenous

Education was aware that I was volunteering my time, as we had communicated multiple times between the end of June and the middle of September. Suddenly three weeks into September, I was forced to completely step away from the project, as there was miscommunication between the principal of Indigenous Education and myself. The turn of events meant that the project abruptly ended that day for Nala'atsi as well. The situation created anger and confusion among the Nala'atsi students and staff, and with the Ni'nogad Elders and staff at Wachiay. I was very hurt by the turn of events, sad and angry at how the end of the project had happened. All that had been built in the previous year was gone and I was left with feelings of shock, displacement and dispossession.

Reflections

The garden project was an amazing opportunity for me. I have worked for many years to make a space in education for Indigenous pedagogy and for inclusion of community in the education process. The garden project excited me because it gave an opportunity to remove the barriers schools often create, such as desks and walls, and to connect learning to the world around us by moving the lessons into hands-on experiences. My passion for gardening fueled the project, and I was personally invested in the success of the garden, volunteering my time on evenings, weekends and over the summer months when school was out. It was wonderful that the project was a generally positive experience for me, but I wondered if the project had as much impact on the students and staff at Nala'atsi as it did on me.

I interviewed two of the four students who were in the Science 11 course. Conlin and Kalem, the students I interviewed, expressed that they enjoyed the garden experience and getting a science credit in an alternate classroom setting. Kalem stated that he found it relaxing in the mornings to work in the garden rather than starting right into his deskwork, telling me:

> "In the beginning it was… [an] easier way to get out of doing science but then I started liking it a lot more than like doing like science… I wouldn't call it easier but it's definitely a lot… less stressful than science and like doing all that stuff… cause it didn't feel like ya had to like, you know, get a bunch of paper done, even though you did but at the same time you're still working in the gardens or doing that stuff." (personal communication, August 23, 2015)

Conlin (personal communication, August 19, 2015) expressed similar sentiments, stating "I really liked being outside in a classroom-based environment… because it's hard for me to sit in a classroom at a desk and having the opportunity to learn in an outside environment was much more engaging". Toresa, the lead teacher at Nala'atsi, also noted the students' enthusiasm for the garden in changes in their work ethic, interest level in school and attendance level. Toresa remarked:

> "What we found is, we had a group of four boys who had behaviour issues, they were attention deficit, they had difficulty sitting still, listening to instructions, following directions, and putting them in the garden was like a sedative. They changed. Their personality changed. They took pride in what they were doing… and people who came into the school, they also noticed the changes these boys, what happened to these boys. Yeah, [the boys] were pretty rough and tumble when they came in, and they really took ownership." (personal communication, August 10, 2015)

Ownership is an interesting word to describe what it was that the students were expressing in relation to the garden. A more appropriate word may be *wahkohtowin*, which is used by Adese (2014) to describe the interrelationships with the land and all that lives on it. *Wahkohtowin* is this kinship, as we are all related and connected. The students rebuilt their *wahkohtowin* in the garden space, changing from youth who told me they used to vandalize gardens to youth that walked by our garden to stop vandals and to show it to their friends. Conlin notes:

> "At first I thought differently about [the garden] but then when we started doing it I really liked it and it was fun starting from the beginning and seeing everything coming together, starting from an empty, an empty fenced-in yard to a bed with a greenhouse and raised beds and… something that made it change was me becoming more involved in it, and ah, wanting to be a part of it as I saw it growing, then I could grow with it too." (personal communication, August 19, 2015)

School visitors were taken for multiple garden tours by the students and a time-lapse video we made of a bean growing was shown daily for two weeks after it was made. Toresa remarked that visitors noticed the change in the students, saying the students:

> "Took ownership, I guess that was the big word. They had ownership of that garden for the time that we had it. Yeah, it was really quite spectacular. And amazing because these kids, people would come into the school and they'd be like 'what happened to this student or that student"?' because [the student] had been in trouble since Grade Four and so that was amazing." (personal communication, August 10, 2015)

Getting a chance to grow plants or to be involved with gardening was a new opportunity for most of the students. It was fascinating to watch the students go from fearfully planting the first plants to happily harvesting the food for lunches every day. Every aspect of the garden seemed to interest them, not just the plants. One lesson was spent on exploring which spiders and insects were in our garden because we found a spider that no one had seen before. The students also enjoyed building the garden, as Kalem (personal communication, August 23, 2015) noted "it was pretty cool where, what were we doing there... making the path and then doing all that, like sort of planting around it in a way, that was kinda cool. Getting it all like, you know, fancy."

Figure 6. Greenhouse with plants of varying ages in the Indigenous Garden, June 20, 2013.

One student said that being outside and having hands in the soil was calming and everyone should get a chance each day to do it. Students took home soil, pots, leftover raspberry canes and extra herb plants throughout the year. Some of the plants taken home did not survive but that fact did not seem to dampen their excitement in trying again. One of the Science 11 students who had a bit

begrudgingly planted peas and beans weeks previous proudly exclaimed to me he had created life when he saw how the seeds had grown.

All three interview participants noted the importance of the Elders, knowledge keepers and community experts being part of the project. Although we did have some involvement from outside people, the students wanted there to have been more time with the Elders in an unformatted way, such as having the Elders come and plant with the students. They also wanted more traditional activities included, such as making medicines with the plants. All three noted the day the local bee expert came to the school and helped us introduce the mason bees to the garden as one of the most exciting events. Part of the enjoyment from having guest presenters came from the fact that much of the activities were hands-on, experiential and seen as more enjoyable than deskwork. Conlin felt the Science 11 course would be:

> "Really useful for students who have troubles being in a classroom who might not want to learn about the traditional things and they want to step away and have fun and, you know, but still learn at the same time and be involved with Elders and community." (personal communication, August 19, 2015)

Additionally, I wanted to understand how the end of the project had impacted the students and staff, so I inquired about their feelings on this topic. Kalem and Conlin were a bit sad about the project ending, but both expressed the idea that it was a natural conclusion for it to end because they were graduating and I was no longer there as the "driving force" as Conlin (personal communication, August 19, 2015) put it. Kalem (personal communication, August 23, 2015) summed up the students' sentiments about the past project saying, "I don't feel bad about it really, I feel kinda just glad we did something like that while we could."

The same can not be said for Toresa and other adults involved with the project. Toresa and I kept the politics and specific details about the end of the project from the students, and she just told

them that unfortunately the project had to end at this time. This explains why the student reactions were generally sad or slightly upset but not angry or reactive. The experience for Toresa was much more intense:

> "It suddenly ended and it was awful because it was something that had really been part of our school and something that had worked and something that kids looked forward to and that I looked forward to… we put all this time into it, we believed in it, we totally believed in this and then it was suddenly gone. So it was, ah, I felt a loss, I really felt a, it was grieving for weeks after. I couldn't even go down to that end of the school because the plants were dying, there was some vandalism on the, in the greenhouse, um, yeah it was awful. And the kids felt that too. It wasn't just me. And people from the community said, 'what's happening with the garden? Where's Jackie? What are you guys, when are you going to be putting, when are you going to be inviting us to have tea in the garden?' Yeah, it was awful." (personal communication, August 10, 2015)

Toresa noted that as time passed she is able to look back at the experience and be glad it had happened because it was a great opportunity for the students, but it also made her reflective about what could have been done differently.

Recommendations

I learned invaluable lessons from this project that would be useful for any educator looking to incorporate garden programs and Indigenous land-based education into their courses.

Teaching a science course in an outdoor space was a very positive experience for the students at the school. The opportunity to learn hands-on engaged the boys and allowed them to put into action the lessons they learned. Garden-based education creates *wahkohtowin* for participants, a fact that Mundel & Chapman (2010) and Skinner et al. (2012) also found in their research. Although this may not mean the students are necessarily learning more or better than in a classroom, they did exhibit higher levels of engagement seen through increased attendance levels and behaviour changes towards staff

and participation in school work. Opportunities for students to connect with their schools in a new way or at increased levels are invaluable and a good reason to consider inclusion of garden and outdoor spaces in learning.

When attempting to create any course that significantly utilizes a garden area or outdoor environment, I recommend building time for planning and organizing at the beginning. When we decided to begin the garden area, we had not planned further than the idea of making an unused lawn into a garden space. The creation of the Science 11 course happened in one day and I had no time for preparation. At the same time as I was creating a garden-based science course, I was also trying to research best use of the garden space, to purchase basic items and organize the work being done in the space. Looking back, I would have spent more time deciding what the purpose of the garden area was going to be, creating a plan of action and inquiring how that plan may impact the school and staff before I began creating the garden or offering to teach courses in the space. Often opportunities happen quickly, and as teachers we are forced to make immediate decisions. In situations such as this, I recommend requesting time for planning before the project is implemented. Even a day to sit undisturbed and look at all aspects of a project will increase your chances of success. I feel the project would have run differently and probably would not have ended in the manner it did had there been more time to prepare.

Figure 7. Pear tree and raised beds with herbs, flowers and various native plants in the Indigenous Garden, June 20, 2013.

Although staff at Nala'atsi occasionally went into the garden with the students to do garden tasks, I was the only staff directing the project. Toresa, lead teacher at Nala'atsi, was in charge of other aspects of the grant but was not interested in building or maintaining the garden. The principal of Indigenous Education was interested in the garden only so far as in what is achieved (we received a local award) or how the space could be used to promote the Indigenous Education department (visiting British Columbia Ministry of Education staff and politicians toured the site). Elders and other community members would visit the garden, but they volunteered when they wanted. I was the person responsible for the project, the "driving force" and it consumed much of my work and personal time.

Looking back, the best way to approach a project such as this would have been to create a garden council. At the beginning of the project, there were many people who wanted to be involved. We often did not know how best to include the various people expressing interest. Had we taken the opportunity to gather those people into the decision making, perhaps they would have found solutions to problems that arose during the project, for example the incident related to building the greenhouse. Such a garden council could have included the staff coordinating the project, staff from Nala'atsi, the principal of Indigenous Education, a representative from Wachiay, Elders, and community members or organizations with an interest in the project. Our project was dependent on one person, and when I was forced to leave the project, it immediately ended. Had there been different people with various roles, the project could have continued because the council would have time to determine the next steps. A council could have taken some responsibility and stress off me. Had the project not ended, the pace I was working at would have led to burn-out. I have worked with other community gardens in the past and I have talked to board members in current school-based gardens and implementing a council or board is the method they have found success with.

A garden council would have been a great way to incorporate more Indigenous voice into the processes of the project. I was the only Indigenous person closely linked to the running of the project, as Toresa and the principal of Indigenous Education are not Indigenous. A council may have facilitated improved communication between various parties involved and provided a place to air concerns and solicit assistance. Elders on the council may have guided the project to be more strongly grounded in Indigenous pedagogies and working as a connected community would have been a more Indigenous way of proceeding. Comments from Kalem, Conlin and Toresa all touched on the desire for more Elders and Indigenous content in the project. I agree with this, as I feel there can not be too many opportunities to incorporate Indigenous knowledge and people in education, especially when it concerns the education of Indigenous youth.

Figure 8. The native plants section in the Indigenous Garden, June 20, 2013.

My largest concern relating to the project is that in my rush to keep up with all the different parts of the garden and science course, this experience may have been recolonizing rather than decolonizing for the students and staff. I wanted students to have the space to talk and collaborate with Elders, to talk about how their culture contributes to food production and to discuss why access to traditional foods can be challenging especially in urban areas. A big question for me is whether I perpetuated colonial ideas of land in the garden space the same way that McLean (2013) notes many environmental education courses do. Did I address race and space, or did I maintain settler colonialism?

Tuck & Yang (2012) state decolonization requires unsettling the land, but the land the project took place on was not unsettled, and in fact the land use and project were rigidly controlled by the

school district. As well, it was the school district that abruptly ended the project without involvement or voice of the Indigenous people and community organizations involved in it. This has led me to wonder if a public school system can provide decolonized education. Gaudry & Lorenz (2018) pose a similar question in a post-secondary level institution and found mixed results in their research as to what decolonization would look like. Examples of successful Indigenous food and land-based programs I found were outside the public K-12 education system, such as the Dechinta Bush University (Freeland Ballantyne, 2014) and the ÁLENENEC program (Saanich Indian School Board et al., 2008).

Despite finding few examples of decolonized garden spaces being built in education systems, I have to believe that this is something that can be accomplished, especially as an Indigenous person who has worked for years to support Indigenous students, build Indigenous-centered programs and teach educators about incorporating Indigenous content.

If it is possible to start the process towards decolonizing education spaces in K-12 education systems, I feel that there needs to be an outline or a sort of basics checklist. Decolonizing needs to happen on many fronts of a projects. In the planning and working stages, teachers need to build connections and collaborative relationships with local First Nations, Métis communities and local Indigenous organizations such as friendship centers. In the class, opportunities to connect youth with Indigenous Elders and knowledge keepers need to be cultivated consistently and as often as possible. This is necessary because unless you are creating actual space for many Indigenous voices through guest presenters, partnerships or co-teaching, you are maintaining settler colonial systems. As well, the space to discuss colonialism in the context of land, needs to be present in all lessons because despite whether or not you address the issue, students are impacted by colonial systems that have stripped them of cultural connections and stripped their nations of traditional unceded territory.

Start with placing yourself within the context of lessons and acknowledge your settler, immigrant or Indigenous ancestry and connections. Students need to hear acknowledgement that the school and garden are built on Indigenous land. They need opportunities to discuss the history of colonialism, even in non-history courses, because colonialism shapes the lessons taught to them. They also need the chance to (re)connect with land, (re)claim their own cultural practices, and a place to build community that (re)centers Indigenous futurity. This is not a proclamation that settlers should be forced off Indigenous lands and out of educational systems. Tuck, McKenzie & McCoy (2014) explain that "Indigenous futurity forecloses settler colonialism and settler epistemologies… [it] does not require the erasure of now-settlers in the ways that settler futurity requires of Indigenous peoples" (p. 20).

The recommendations given above are useful to anyone interested in the topics of land-based education, decolonizing education or garden-based education. Often teachers ask for specific examples of how to incorporate new techniques or methods into their teaching. I have tried to use the Indigenous Garden Project as an example of a starting point for these educational areas. These recommendations are not exclusively for teachers doing garden projects with Indigenous content. These recommendations are for any teacher who is teaching in British Columbia today, as the new curriculum requires inclusion of Indigenous pedagogies in all courses to successfully teach the Indigenous competencies and content outlined in the K-12 course documents. Accountability demands that teacher's acknowledge Canada's responsibility in settler colonialism. I hope my recommendations are a starting place for action. Through my literature review and interviews with project participants, I can conclude that although it may seem like a daunting task, educators can work towards centering Indigenous futurity because it benefits all people in Canada. Remember that any day can be a place for "new beginnings" in education or life, the same way it is for students who are enrolled in the Nala'atsi Program.

References

Adese, J. (2014). Spirit gifting: Ecological knowing in Métis life narratives. *Decolonization: Indigeneity, Education & Society*, *3*(3), 48-66.

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.

Cairns, K. (2018). Beyond magic carrots: Garden pedagogies and the rhetoric of effects. *Harvard Educational Review*, *88*(4), 516-537.

Donald, D. T. (2009). Forts, curriculum, and Indigenous Métissage: Imagining decolonization of Aboriginal-Canadian relations in educational contexts. *First Nations Perspectives*, *2*(1), 1-24.

Freeland Ballantyne, E. (2014). Dechinta Bush University: Mobilizing a knowledge economy of reciprocity, resurgence and decolonization. *Decolonization: Indigeneity, Education & Society*, *3*(3), 67-85.

Friedel, T.L. (2011). Looking for learning in all the wrong places: Urban Native youths' cultured response to Western-oriented place-based learning. *International Journal of Qualitative Studies in Education*, *24*(5), 531-546.

Gaudry, A., & Lorenz, D. (2018). Indigenization as inclusion, reconciliation, and decolonization: Navigating the different visions for indigenizing the Canadian Academy. *AlterNative*, *14*(3), 218-227.

McLean, S. (2013). The whiteness of green: Racialization and environmental education. *The Canadian Geographer*, 57(3), 354–362.

Mundel, E., & Chapman, G. E. (2010). A decolonizing approach to health promotion in Canada: the case of the Urban Aboriginal Community Kitchen Garden Project. *Health Promotion International*, *25*(2), 166-173.

Parent, A. (2011). "Keep us coming back for more": Urban Aboriginal youth speak about wholistic education. *Canadian Journal of Native Education*, *34*(1), 28-48.

Saanich Indian School Board, Guilar, J. & Swallow, T. (2008). ÁLENENEC: Learning from place, spirit, and traditional language. *The Canadian Journal of Native Studies*, *28*(2), 273-293.

Skinner, E. A., Chi, U., & The Learning-Gardens Educational Assessment Group (2012). Intrinsic motivation and engagement as "active ingredients" in garden-based education: Examining models and measures derived from self-determination theory. *The Journal of Environmental Education*, *43*(1), 16-36.

Sutherland, D., & Swayze, N. (2012). Including Indigenous Knowledges and pedagogies in science-based education programs. *Canadian Journal of Environmental Education*, *17*, 80-96.

Tuck, E., & Yang, K. W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society*, *1*(1), 1-40.

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.