A Community- and Culturally-Centred Approach to Secondary Vocational Education and Training in a Remote Northern Indigenous Environment

Rubin McNeely

Department of Integrated Studies in Education

Faculty of Education

McGill University, Montreal

A thesis submitted to McGill University in partial fulfillment of the requirements of the Degree of the Master of Arts in Educational Leadership

Table of Contents

List of Figures and Tables

Abbreviations

BITSVET- Blended Indigenized Transitional Secondary Vocational Education and Training

CK- Cree Knowledge

FNHLLM- First Nations Holistic Lifelong Learning Model

HCT- Human Capital Theory

HE- Higher Education

IK- Indigenous Knowledge

SVET- Secondary Vocational Education and Training

TAP- Traditional Academic Pathways

WOTP- Work Oriented Training Pathway

VET- Vocational Education and Training

Abstract

This thesis is a study of how secondary vocational education and training (SVET) can be developed to meet the cultural, labour and community-based needs of the local and regional economies in a remote Northern Indigenous context. The region of Eeyou/Eenou Istchee in Northern Quebec provides the regional setting and helps define the challenges and potential of SVET through community engagement. There are three themes that will be explored to develop the foundations of SVET, Traditional Academic Pathways (TAP), school-to-work and essential skill development, and purposeful community centred learning.

TAP, defined through the colonial history of Canada, are viewed with distrust and have dismantled and excluded the Indigenous learning paradigm. The review of the literature along with interviews with study participants illustrate that understanding TAP and integrating lessons learned are integral to adopting transformative Indigenized SVET.

The discourse pertaining to school-to-work programs and vocational education and training in Canada at the secondary level is contentious as it has historically held a lower status then the traditional academic system. This is further exacerbated when SVET is considered in a Northern Indigenous context in Canada. SVET, in a Northern Indigenous context, must be developed to not only to allow learners to participate in the labour market and the regional economy but also support community capacity building through purposeful community centred learning.

Purposeful community centred learning is an opportunity to weave Western and Indigenous learning paradigms to develop core learning programs that benefit the community. Community engagement and understanding local knowledge systems from an Indigenous cultural perspective can help develop SVET into a holistic approach to learning.

Résumé

Cette thèse est une étude de la façon dont l'enseignement et la formation professionnels secondaires (EFPS) peuvent être développés pour répondre aux besoins culturels, de main-d'œuvre et communautaires des économies locales et régionales dans un contexte autochtone éloigné du Nord. La région d'Eeyou/Eenou Istchee dans le nord du Québec fournit le cadre régional et aide à définir les défis et le potentiel de la EFPS grâce à l'engagement communautaire. Trois thèmes seront explorés afin de développer les fondements de la EFPS, des parcours académiques traditionnels,de l'école au travail et du développement des compétences essentielles, et de l'apprentissage centré sur la communauté.

Les parcours académiques traditionnels définis à travers l'histoire coloniale du Canada sont considérés avec méfiance et ont démantelé et exclu le paradigme d'apprentissage autochtone. L'examen de la littérature ainsi que les entretiens avec les participants aux études, la compréhension du TAP et l'intégration des leçons apprises font partie intégrante de l'adoption de la EFPS indigénisée transformatrice.

Le discours relatif aux programmes école-travail et à l'enseignement et à la formation professionnels au Canada au niveau secondaire est controversé, car il a historiquement occupé un statut inférieur à celui du système scolaire traditionnel. Cette situation est encore exacerbée lorsque la formation professionnelle secondaire est considérée dans un contexte autochtone du Nord au Canada. La EFPS dans un contexte autochtone du Nord doit être développée non seulement pour permettre aux apprenants de participer au marché du travail et à l'économie régionale, mais aussi pour soutenir le renforcement des capacités communautaires par le biais d'un apprentissage centré sur la communauté.

L'apprentissage centré sur la communauté est une occasion de tisser des paradigmes d'apprentissage occidentaux et autochtones pour développer des programmes d'apprentissage de base qui profitent à la communauté. L'engagement de la communauté et la compréhension des systèmes de connaissances locaux d'un point de vue culturel autochtone peuvent aider à faire de la EFPS une approche holistique de l'apprentissage.

Acknowledgements

I would like to acknowledge my thesis supervisor, Dr Blane Harvey, for his steadfast support and incredible patience that helped me though this prolonged and, at times, painful journey.

Dedications

I dedicate my thesis to the members of the Cree community of Chisasibi, Quebec where I found my inspiration to continue my studies and tackle topics pertinent to Indigenous experiences in the North. Furthermore, I dedicate this to the community Elders who kindly and patiently worked with me on different projects, from engaging with my students and passing on traditional knowledge and wisdom to guiding me through my own journey of learning about the importance and value of learning from the land. And last but certainly not least I would like to dedicate this study to my critical friends, Andy, Janie H, Annie, Charlie and Janie P.

Chapter 1: Overview and Introduction to the Study

1.1 Overview

The Northern experience for many young First Nation secondary learners in remote communities is challenging due to many factors, such as finding a sense purpose and direction, lack of mental health resources, teacher retention, and an educational system that has consistently marginalized Indigenous knowledge and values. The result for many young Indigenous students who do not fit into the structure of western-centric concepts of traditional academic pathways is leaving school early or enrollment in school-to-work programs that do little to empower students and help them create a vision of a positive future. Furthermore, community capacity building and regional development are stymied by inadequate approaches to skill development and limited notions of how vocational education can support remote northern First Nation communities. For well over a decade of working in Northern Canada in remote First Nation communities in different capacities, I observed many students leaving secondary school with not only academic limitations, but also lacking the skills to forge a pathway in the community and regional labour market. Therefore, I began considering how a different model of education, developed for students who were more interested in quick access to job market than remaining in a long-term academic stream, could be developed through a community- and culturally-centred approach to secondary vocational education and training in a remote northern Indigenous environment.

This thesis introduces a community-centred approach to rethinking how school-to-work programs can contribute to local community capacity building in a Northern Indigenous context. Furthermore, this study looks to extend beyond the minimalistic notion of learning skills for the

workforce through finding the intersection and inclusion of the Indigenous worldviews and Western-centric traditional academic pathways (TAP). The term Secondary Vocational Education and Training (SVET) will be used to encompass ideas, such as school-to-work programs, while opening itself up to broader perspectives of learning at the secondary level. Emerging and re-emerging discourse in SVET moves beyond the limitations of learning for the labour market and creates a space for the inclusion of culturally-based learning paradigms and traditional academic learning. The community of Chisasibi in the region of Eeyou/Eenou Istchee (Cree Nation of Northern Quebec) will be the focal point of research and analysis to answer the following question: *How can Secondary Vocational Education and Training programs be developed to benefit Northern Indigenous communities?*

My research will engage the study participants in what they perceive as challenges in the current education system, their insights into work-based learning and the role of Cree knowledge systems. In addition, I will look at a specific practical example of vocational education by discussing my research in the development of horticulture in local communities to elicit the attributes of community engagement, capacity building and addressing the historical impositions of the dominance of Western-centric concepts of education and development.

1.2 Aims, Objectives and Contribution of the Study

The aim of this thesis is to discuss the relevance of vocational pathways and provide an argument for the need to develop a model of community relevant Secondary Vocational Education and Training. The potential model will be framed through community interviews, data and the literature involving Indigenous worldviews and western discourse pertinent to the historical and contemporary concepts of SVET/VET and TAP.The objective is the development of a proficient SVET program that provides an educational model that incorporates skills and education required

for community capacity building and includes Indigenized community-based knowledge systems. Ultimately, this study is meant to evoke conversation around traditional forms of education, challenges modes of thinking, and puts the community and its reality at the centre of community capacity building.

1.3 Thesis Structure

The structure and content of this thesis is distributed througn six chapters.

Chapter 1: This chapter introduces the overview, aims, goals and contribution of the study and is completed by background and place placement of myself in the study.

Chapter 2: Overview of Eeyou/Eenou Istchee: Chapter two presents an overview of the region that is specific to this study and presents an argument for the development of community centred SVET within the context of education and the needs of the regional economy.

Chapter 3: Literature Review: Through the literature, the study develops the pertinent discourse involving historic and current Western-centric perspectives involving vocational pathways as means to establish where the learning paradigm converges and diverges from the Indigenous community centred concepts of education. Furthermore, the literature review extracts relevant information as a means to develop SVET in manner that is relevant to the Indigenous socio-economic reality of Northern region it is designed for.

Chapter 4: Methodology: The methodological apporach to this study engages with Indigenous Research Methodology that places the commnunity at the centre at the centre of the study and works to ensure the outcomes are beneficial to the well being of the people and the community.

***Chapter 5: Analysis of Study*:** The analysis of this study engages with the participants to discuss the three themes as a means to develop relevant and purposeful criteria in the development of a commnuity SVET Program. The themes are as follows:

- Theme 1: Participant Perceptions and Experiences with the Dominant Western Centric Approach to Education.
- Theme 2: Work-Based Learning and Essential Skills.
- Theme 3: Purposeful Community Centred Learning

Chapter 6: Study Review, Significant Findings and Recommendations: Chapter 6 reviews the pertinent issues of the study to discuss the significant findings towards defining a secondary vocation and training program within a remote Northern Indigenous/Cree context. Recommendations are considered in terms of the next steps that are needed to create a viable model.

1.4 Background and Situating Myself in This Study

My initial interest in the concept of my study stemmed from my studies during my first degree focusing on international conflict and security where I began to focus on Arctic Security, climate change and conflict relating to resource development. Furthermore, during the same time I was involved with Amnesty International Canada as a member of the steering committee for the business and human rights group where we worked on specific files relating to the extractive industry. This experience allowed me to join a human rights mission to Northern Colombia to support local communities with were engaged with a struggle with a mining project in El Cerejon. During our time in Colombia, we worked with many different groups, including the Indigenous Wayuu people. The experience piqued my interest and concern relating to the encroachment of the resource sector on the environment and the local communities. In many

cases, community values and cultural connections to the land were relinquished to adapt to a one-dimensional view of regional economic development. Some embraced the opportunity to have a higher-than-average income with relative job security. However, many of the communities were devastated by the rapid change incurred by the domination of the mining company and its effects on the diversity of the local economy. Those had lived on the land for thousands of years were cut off from traditional hunting and fishing grounds as the mine continued to expand and control the natural landscape. Although I didn't know it then, the experiences during that point of my life would help shape my perceptions of how education and training needs to engage with the local and regional economy that both benefits communities and protects cultural values.

In 2011, I accepted a secondary teaching position in Chisasbi, located on the North-Eastern shores of James Bay in Eeyou/Eenou Istchee. Over my career, I have taught geography and history and Work Oriented Training Pathways (WOTP). Eventually I transferred to administration as a school principal and finished my career with the Cree School Board as a Centre Director for vocational and adult education. Currently I am a principal in Northern BC in the Sekani community of Tsay Keh Dene. As I progressed through my career, I increasingly recognized that traditional academic pathways were failing many students and became convinced that secondary schools in First Nation communities require a new model to help transition them from high school to the workforce.

Traditional Academic Pathways in Eeyou/Eenou Istchee

> While contemporary Canadian society considers school as a daily and necessary aspect in their lives of Canadian children, the delivery of formal education and the training of Cree teachers is a relatively recent phenomenon in the Cree communities. The concept of a

> formal school system and the organization and control of such a system, originally designed for a clientele other than Cree, was initially and is still alien to many Cree people (Blacksmith, 2010)

The Cree of Eeyou Istchee, survivors of government and religious institutions imposed under the Indian Act, worked towards the independence of their governmental, health care and education system. The signing of the JBNQA (James Bay Northern Quebec Agreement) in 1975 granted the Cree the right to manage and control their educational system with the creation of the Cree School Board (CSB). The opportunity was to ensure the language, customs and values were included along with the educational requirements of the Quebec provincial education system, however the integration of Western-centric and Cree learning paradigms has been challenging (Blacksmith, 2010).

The CSB and its guiding principles and philosophy of education set out the right of Cree instruction to be in the Cree language and "that the Cree Nation has a definite culture, language and tradition which sets it as a distinct society" and "that the Cree child as a unique individual has the right to be taught and practice his-her culture and its value system" (Philospophy of Cree Education, 2021). Although the JBNQA and the Cree School Board are clear in their desire to ensure the protection of their Eeyou vision of education, it still must work within parameters set by MEES (Quebec Ministry of Education) and has been greatly influenced by pedagogical systems, such as Whole System Reform supported by Professional Communities at Work (Fullan, 2016; Dufour, 1998) recently adopted by the CSB. However, these pedagogical approaches are focused on classroom instruction from a traditional academic perspective and do not acknowledge Indigenous worldview approaches to education nor the realities of remote Northern communities.

Although Whole System Reform and Professional Learning Communities discuss the importance of external community, their models are more specifically directed to the inner working of the institution itself and the stakeholders within, such as the roles of the administrators, teachers and students (Fullan, 2016; Dufour, 1998). The disengagement in perspective is further compounded by assertions that changes in Western society and the "school improvement movement" (West-Burnham, 2003, p. 4) have "forced schools to become both insular and introverted" (p. 4). The attempts to renew the education system in Eeyou/Eenou Istchee through different learning models, such as Whole System Reform to engage students and keep them in school, is a complicated task. Many educators and other staff in Eeyou/Eenou Istchee come from different backgrounds in terms of teaching philosophies and learning models. It was my experience that emphasizing new Western educational models just added to an already confused system of learning. Furthermore, many of the marginalized students who struggle within the current system are more readily empowered by Cree Knowledge and learning from Elders and on the land.

The Current School-to-work Program

Students in Eeyou/Eenou Istchee who are not successful in the regular academic stream are transferred to the school-to-work program called the Work Oriented Training Program (WOTP) (MEES, 2021). WOTP is, in theory, meant to help struggling students transition to the work force, vocational programs or reintegrate back into the academic stream. However, the program is neither transitional nor properly developed to help struggling Cree students reintegrate back to the academic sector within the one-year time allotted by the program. The certificate that is granted at the end of the program does not have any merit nor recognition in terms of transitioning to vocational programs from within Eeyou/Eenou Istchee or at other

institutions such as community colleges or CEGEPs. Many students do not complete WOTP both from disinterest and the sense that they have been devalued and relegated to a semi-skilled future. Jobs and careers in the area, such as the trades, administration technicians, hospitality, forestry, mining, Hydro-Quebec and the developing areas of eco-tourism and land management are often out of reach even at the most basic entry level positions. Furthermore, I observed many instances where few Cree are employed in some of the largest regional labour sectors due to lack of certification and qualifications.

Students who drop out of secondary school and who later want to upgrade to get the necessary prerequisites to attend a vocational program must wait until they are 18. They often must begin their studies at the secondary one and two level to work their way up to the minimum pre-requisites of secondary three for vocational programs and as high as secondary five for the more specialized programs. Those who return to school in adult education have often been out of school for many years with very little foundational knowledge in traditional academics, such as math, language and science which causes immense stress to overcome their learning deficits and either complete their GED or transition to vocational studies. Unfortunately, many students will drop out of school for a second time without feeling they have any prospects in the labour market, adding to an even greater sense of marginalization and disempowerment within their communities.

Rethinking the Current School-to-work Program

My experience as the WOTP teacher at the James Bay Eeyou School in Chisasbi further helped me to reflect on how we needed to rethink and restructure current school-to-work programs. Having watched many students drop out of traditional academic pathways and subsequently drop

out of WOTP, I wanted to restructure the program as much as I could within the current Quebec ministry curriculum guidelines. We adapted the program to include experiential learning through community programs, Elder participation, and our developing greenhouse program that the students were responsible for running. Traditional academic instruction was included in the daily classroom that did not simply focus on simple math and basic literacy. We worked together every day to integrate science, history and geography to ensure cross curricular development. The greenhouse program portion allowed students to develop not only introductory skills in horticulture, carpentry, plumbing and electrical work, it also opened conversations about climate change, food sovereignty, alternative green energy, nutrition and food sources. By the end of the year, 90 percent of my students had completed the year but unfortunately the program did not have a clear pathway for students who wanted to continue with vocational learning.

Through my experience in Eeyou/Eenou Istchee, I came to recognize there is significant need to forge a vocational pathway that empowers and engages marginalized and disinterested students towards meaningful and fulfilling employment. However, the pathway should not be perceived as a dead-end that is narrow in its vision and must possess the prospect for lifelong learning. It is within this context and with my own experiences, growth as an educator and as a human being who had the opportunity to be exposed to aspects of Cree Knowledge (CK) that I decided to study the possibilities of SVET to keep students in school with a more holistic and purposeful approach to learning. As I establish myself in my study, I must acknowledge that I am not an Indigenous/Cree person, and I have been educated in and experienced an almost exclusively Western-centric environment. Although I have spent over a decade in the remote Northern Cree community and have been very fortunate to spend time learning about Cree Knowledge from Elders and other community members in Eeyou/Eenou Istchee, it is important to recognize that

my life has not been steeped in the Indigenous worldview. I endeavour to be mindful of these facts as I undertake this analysis.

Chapter 2: Education in Eeyou/Eenou Istchee

2.1 Eeyou/Eenou Istchee

Figure 1: Map of Eeyou/Eenou Istchee (Blacksmith, 2010)

Eeyou/Eenou Istchee, ('Our Land' in Cree) also known as the Cree Nation of Quebec, has nine communities, five of which are situated along the eastern shore of James Bay stretching up to the southern edge of Hudson Bay. The other four communities reach inland to the more central regions of Northern Quebec in a geographic area in which the Cree have lived for thousands of years. The Eeyou are the Cree on the coast of the eastern shores of James Bay and the Eenou are inland, the difference in environment is also represented in variations in the Cree

language and certain traditions due to, in part, migratory patterns of animals, such as the caribou that do not extend to all the communities. Many Cree still hunt, trap and fish along their traditional traplines, as they have for millennia. 22 percent of the Cree labour force is employed in trapping and hunting (Moar, 2009). Those who live, work and study in the communities full time will often participate in traditional land-based activities during the migration times of animals, such as geese and caribou.

Elders are highly regarded and respected as knowledge keepers and are given a reverence that is well deserved as many still participate in passing down their knowledge well into their late eighties and early nineties. The mother tongue is Cree, and most families speak it at home even though it is threatened by the English language that found its way into Eeyou/Eenou Istchee through trade with the Hudson Bay Company dating back centuries. French is taught in the two largest communities of Mistissini and Chisasibi, but does not have the same influence as Cree and English. Chisasibi is Eeyou/Eenou Istchee's largest community, Chisasibi (The Great River in English but better known as La Grande Riviere in French), a community of over 5000 people.

Eeyou/Eenou Istchee, as with most Indigenous regions in Canada, is recovering from the devastation of colonialism led through the generations of Cree who were sent to residential schools, in many cases over a thousand kilometers away from their families. The result is a society navigating its way to become a society that embraces its rich history and traditions while adapting Western-centric concepts of education to forge its own unique future. Cree Knowledge is not static; it changes and develops like all societies. However, Cree identity is rooted in its language, relationship with the land, its own worldview of education that is holistic, experiential and community centred (Blacksmith, 2010).

2.2 Developing Skills for the Labour Market

> The predominant issues facing the North in terms of education and skill development are directly linked to their distinct challenges regarding new technologies, commodity cycles, demographic change, climate change and new Indigenous governance models (Conference Board of Canada, 2022 p.7).

As noted in the previous chapter, there is currently not a viable system for students who prefer applied learning and early leavers of TAP at the secondary level. For many students, their success is often limited and costly to their self-esteem. The alternative to traditional academic pathways for many students is a diluted and antiquated school-to-work program that focuses on rudimentary academic skills in English, Math and skills required for the workforce. Furthermore, remote communities often lack resources, have different economies and labour needs from the more industrialised and knowledge-based economies of southern Canada that are linked to large urban centres. High unemployment, low graduation rates and lack of basic skills that are needed for the developing Northern economy and labour market threaten to increase the already large employment, education and skills gap between Indigenous and non-Indigenous peoples living and working in the North.

Educational achievement levels relating to the Cree labour force in Eeyou/Eenou Istchee helps put into perspective the gap existing between the needs of the labour force and educational outcomes. In 2008, 62.7 percent of the Cree labour force between the ages of 15-64 had completed secondary three without a secondary graduation certificate (Moar, 2009, p. 11), 11.9 percent had a secondary diploma and 3.1 percent of the work force had attained a bachelor's degree (p.11). Data provided for the economic region of Nord-du-Quebec in 2016 continued to show a concerning trend in the low levels of educational achievement (see Table 1).

Table 1: Educational base of the potential workforce in 2016, 19 economic regions
(highest certificate, diploma, or degree for the population aged 25 to 64 years in private households; per cent)

Economic region	Total (n)	None	High school	College or CEGEP	Trades	Univsity certificate / diploma	Bachelor's degree	Post-graduate diploma	Medical degree	Masters	PhD
Northern, SK	16,400	43	21	14	10	2	8	0	0.2	1	0.1
Nunavut, NU	16,485	41	15	19	10	1	9	0	0.2	4	0.3
North, MB	40,870	37	24	15	9	3	8	1	0.2	1	0.1
Nord-du-Québec, QC	21,235	35	14	15	23	3	7	1	0.2	2	0.2
Parklands, MB	19,475	21	31	23	10	3	9	1	0.4	1	0.1
Northwest Territories, NT	23,610	21	19	22	11	3	17	1	0.5	6	0.4
Côte-Nord, QC	50,310	21	18	19	26	3	9	1	0.4	2	0.2
Athabasca–Grande Prairie–Peace River, AB	140,160	21	29	21	14	3	9	1	0.4	2	0.2
North Coast, BC	30,130	20	28	21	13	3	10	1	0.4	3	0.3
West Coast–Northern Peninsula–Labrador, NL	57,580	19	22	29	14	2	9	1	0.4	3	0.2
Nechako, BC	20,595	18	31	20	14	3	10	1	0.5	3	0.1
Northeast, BC	37,290	18	32	20	16	3	9	1	0.4	2	0.3
Prince Albert, SK	100,845	17	31	53	13	3	8	11	0.5	2	0.1
Northwest, ON	119,995	17	25	27	10	2	14	1	0.5	3	0.5
Cariboo, BC	84,485	16	32	21	13	3	10	1	0.6	3	0.4
Saguenay–Lac-Saint-Jean, QC	146,385	13	16	21	31	3	12	1	0.5	2	0.4
Northeast, ON	288,370	13	26	32	10	2	12	1	0.5	2	0.4
Yukon, YT	21,030	11	21	24	11	3	20	2	0.8	7	0.5
Wood Buffalo–Cold Lake, AB	83,845	11	27	25	16	3	13	1	0.4	3	0.3
Total	**1,319,095**	**18**	**25**	**27**	**15**	**2**	**11**	**2**	**0.5**	**2**	**0.3**

Source: The Conference Board of Canada (2022)

Thirty five percent of the potential labour force in Nord-du-Quebec, which includes Nunavik, Eeyou/ Eenou Istchee and the francophone communities of Chapais and Chibougamau, are challenged by the minimum educational requirements to enter the regional workforce. Only 14 percent of the potential workforce had a high school graduation certificate. Although trades are proportionally well represented at 23 percent, college and CEGEP diplomas are not highly represented at 15 percent of the eligible base for the potential workforce. Overall, there is a

considerable chasm between educational outcomes and the challenges for many to enter the workforce as a skilled worker. Consequently, there is a significant reliance on skilled labour from outside of Northern communities and regions, especially in Indigenous communities and regions (Conference Board of Canada, 2022).

The data is an indicator to rethink how education is delivered within a Northern Indigenous context. Secondary vocational education and training could potentially bridge the gap between the large amount of high school early leavers and the workforce. However, the negative stigma for students entering a secondary vocational pathway needs to be overcome by broadening the narrow vision of the existing programs for Indigenous students in a Northern context. Although Cree communities are building Vocational and Adult Education Centers in communities across Eeyou/Eenou Istchee, there are many challenges that need to be addressed in terms of overcoming the learning gaps students face during their elementary and secondary years. The data shows how few students are graduating from high school thus making any transition to higher education in a post-secondary environment difficult, but it is also incredibly challenging for many young people to develop skills to work in the local and regional economy as a skilled worker.

2.3 Supporting SVET through Community-Relevant Learning

Indigenous education in remote and isolated communities should be factored into how SVET can be effective within the context it is offered. Education and training in Eeyou/Eenou Istchee are crucial to developing a strong and professional workforce that is open to cooperation but not reliant on outside help. To develop this type of specific work force, it is important to

begin the learning cycle at a young age and incorporate the learning into the schools of Eeyou/Eenou Istchee.

One example of the model is The James Bay Eeyou School Greenhouse Project (JBESGP) (Bell, 2018) which began in 2015 and has developed into an indoor and outdoor program. The JBESGP was a joint program between the high school, economic development, and business development in terms of investment and cost sharing. The shared vision regarding the long-term value of developing programs that can help reduce food costs, increase food security at a local level and become a possible means for future employment made this program viable. In 2018, the idea of greenhouses and agricultural development was becoming more prevalent across Eeyou/Eenou Istchee who are looking to begin their own programs in the different communities (Bell, 2018). One of the dilemmas these initiatives targeted was how to develop a community-based movement to ensure locals are trained and educated to ensure that they have the jobs of the future and there is less reliance on skilled labour from outside of Eeyou/Eenou Istchee. The greenhouse, school-to-work program, incorporated community engagement through dialogue between the curriculum design with community members that is it is founded through needs assessment consultation. Essentially, by incorporating elements such as leadership training, soft-skill development, team building, technology, and creative thinking through the lens of Indigenous and non-Indigenous learning paradigms, it allowed for theory and practice to merge to help develop student participation in their own education.

2.4 Conclusions

Eeyou/Eenou Istchee provides an example of a remote Northern Indigenous community and the challenges for secondary students to gain more direct access to the labour market.

However, the history of colonialism must be considered in defining how a new model could replace the defunct and archaic notions of western-centric school-to-work programs into a more robust, culturally relevant and community-based approach to SVET.

An integral part to developing a successful model of SVET is considering how TAP marginalized Indigenous knowledge and emphasize community-based values. The goal is to develop a skilled and professional workforce that empowers youth through education and training beginning at the secondary level and thus enhances the community and regional economy while ensuring the protection of cultural values.

Chapter 3:Literature Review

3.1 Introduction

This chapter will review literature written by Indigenous and non-Indigenous authors and discuss the historical implications of domination of colonialism on Indigenous education and culture and how they may apply to SVET (Little Bear, 2009). Furthermore, the literature will review the potential divergence between Western perceptions of SVET and the First Nations Holistic Lifelong Learning Model (FNHLLM) (AFN, 2021) while also attempting to find where the two rivers of worldviews can converge and develop common ground.

The template for understanding is based on SVET where blending of learning between academics and skills for the workplace are tempered through Indigenization that places value on the holistic community-based cultural values of Indigenous Knowledge. This model could support the transition of secondary learners in SVET to higher education and labour markets with skills that prepare them as active participants in their community and their chosen vocations. While there is a lack of literature specific to SVET and VET in Northern Canada, the literature will draw upon relevant concepts from wider settings to contextualize them to a Northern Indigenous context.

The literature begins by reviewing the historical and current impact Western-centric academic pathways have on Indigenous peoples in Canada and the importance of the FNHLLM (Figure 2 below) as the study moves into the Western-centric concepts and discourse regarding vocational pathways in SVET and VET. VET, for the purpose of this study, is distinct from SVET as it focuses on higher education and more specific skills for the work force. The term Vocational pathways is used to describe the transition between the two.

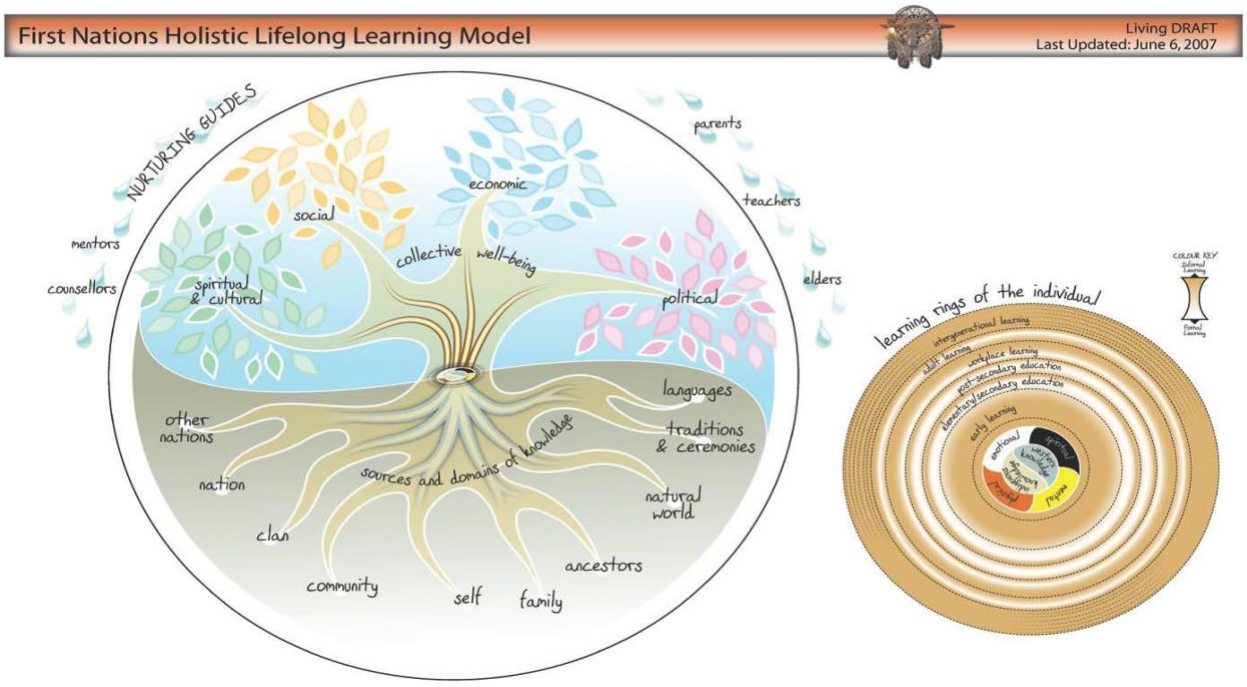

Figure 2: First Nations Holistic Lifelong Learning Model (CCL, 2007)

The words of Sir John A. Macdonald in 1883, highlighted by the Truth and Reconciliation Commission, underscore the damaging legacy of formal education systems in Canada on Indigenous Peoples:

> When the school is on the reserve the child lives with its parents, who are savages; he is surrounded by savages, and though he may learn to read and write his habits, and training and mode of thought are Indian. He is simply a savage who can read and write. It has been strongly pressed on myself, as the head of the Department, that Indian children should be withdrawn as much as possible from the parental influence, and the only way to do that would be to put them in central training industrial schools where they will acquire the habits and modes of thought of white men. (Truth and Reconciliation Commission of Canada, 2015)

The scars of the past still directly impact the relationships between institutions supporting Western-centric concepts of education and how Indigenous peoples are reasserting their own desire to establish how Indigenous youth are educated. The effects of residential schools

devastated generations of Indigenous peoples and decimated their language, traditions and way of life that existed for millennia pre-colonization (Vowel, 2016). The result of forced education through religious and government run institutions in Canada housed a minimum of 150,000 students from their inception in the late 1800's until the last one closed in the late 1990s (Henderson & Canadian Council on Learning, Aboriginal Learning Knowledge Centre, 2009).

The Commission on Truth and Reconciliation states that life in residential schools was "lonely and alien" (Truth and Reconciliation Commission of Canada, 2015). "Aboriginal languages and cultures were demeaned and suppressed" (p. 7) and "educational goals of the schools were limited and confused, and usually reflected low regard for the intellectual goals of Aboriginal people" (p.7). The concept that European civilization was superior to Aboriginal culture along with the Christian religion furthered the willful discouragement of students practicing their Indigenous languages and culture as these were seen as inferior. Thus, the results of forced Western-centric institutionalized education have contributed to "Indigenous peoples to be viewed as backward and passive recipients of European knowledge" (Battiste, 2002). Indigenous knowledge, perpetuated by the view that it was inferior, "became invisible to Eurocentric knowledge, to its development theories" (p. 4). Using exclusively Western-centric education, both through the over a century of forced assimilation in residential schools and within our contemporary educational systems, has failed Indigenous children (Battiste, 2002).

The FNHLLM provides a core for First Nation's perspectives on learning emphasising the importance of education being holistic and sacred that emphasises experiential learning and the view that learning is a lifelong responsibility (Youngblood & Battiste, 2007). The importance of ensuring FNHLLM is a fundamental necessity to the inclusion of newly developed curricula in terms of maintaining the "integrity of a people and its culture" (Little Bear, 2009). The lessons

from the impositions of the traditional academic systems adopted in Canada regarding Indigenous peoples and the complete disregard for Indigenous ways of knowing are imperative to the development of vocational pathways.

3.2 Western-centric Perspectives Regarding Vocational Pathways

> A vocation is a domain of practice performed by humans as economically productive beings. It encompasses the knowledge, skills, and attributes they are required to use at work. A vocation emerges from fields of practice that share commonalities in knowledge and skills. […] Vocational streams refer to the structure of occupations and the way they are linked horizontally in related occupations at the same level and vertically in specialist or more senior occupations. They consist of linked occupations that share common practices, knowledge, skills, and attributes that allow individuals to specialise within a broad field of practice, or move laterally into related occupations, Qualifications that prepare people for the labor market using vocations and vocational streams prepare individuals for broad rather than narrow fields of practice. (Wheelehan, 2015 p.7)

Vocational pathways appears to be in a transformational period as many researchers, policy makers and educators struggle with how they should be developed and implemented based on the needs of changing labour markets and how traditional academic pursuits should merge with learning for the world of work (Guile & Unwin, 2019). The transition from an industrial economy that was class-based to a knowledge-based economy have challenged traditional notions of VET by considering the potential of a unified curriculum that breaks down barriers between academic and vocational education (Taylor, 2019).

> VET helps to promote the socioprofessional integration of young people and adults in many countries, the pursuit of careers more oriented towards own life aspirations, as well as preventing social exclusion and poverty. (Cournoyer et al., 2017)

Vocational pathways have historically been developed by prioritizing national and economic agendas but have not focused on the central role of building expertise that extends itself to the

individual and enhances the workplace and society at large (Gaile & Unwin 2019). The debate about the role government, industry and play in terms of the skillsets needed to perform in the labour market is a central theme that scholars have investigated. The discrepancy between skills needed for the labour market and the lack of knowledge outside of specific skill sets in a particular vocation removes already disadvantaged students from theoretical knowledge needed to "participate in debates and controversies in society" (Wheelahan, 2015, p.751), as well as from within the industry and disciplines they are engaged (Wheelahan, 2015).

The 'social" and 'personal' sides are the systemic basis of vocational education (Billet, 2019). Essentially, the social side of VET is dominated by institutional oversight (Dewey, 1918) and over time has become more constrained by the demands of industry and government policy (Billet, 2019). The personal side of vocational education describes the potential of the individual working from within to transform how learning for the labour market is achieved, and it is the personal side that needs to be emphasised as it has been mostly ignored (Billet, 2019). Thus, the emphasis on the Dewey's 'personal side' as a potential catalyst for change is also reliant on adjusting how vocational pathways have been perceived through intertwining knowledge and skills (Billet, 2022). However, the perception of skill sets, and the knowledge required for SVET/VET students are essential elements to discerning how the learner and labour force participant can help structure the society around them (Bernstein, 2000).

VET at the turn of the 21st century England began to consider how the one-dimensional view of vocational pathways could be a form of indoctrination into the workplace and did not have room for the practitioner to contemplate the idea of self and their role in society (Colley, 2003). To move beyond the common perception that vocational education simply acquires technical skills and "knowledge to foster behavioural competence in the workplace" (Colley,

2003, p.471) is described through vocational habitus. Vocational habitus involves developing not only a 'sense' of how to be, but also 'sensibility': requisite feelings and morals, and the capacity for emotional labour" (Colley, 2003, p. 471)

In the late 20th century, policy makers and academics began to question the effectiveness of VET in terms of attracting students and properly training them for shifting labour markets driven by the knowledge economy across Europe and North America. Many countries adopted Competency Based Education (CBE) for academics and Competency Based Learning (CBL) for VET. Competency Based Training (CBT) approach was adopted in England, and anglophone countries in general, in response to the need to transform VET and has created a less than adequate system for vocational pathways and student development (Wheelalan, 2019). Its narrow interpretation, especially in England and Australia, and has not proven to enhance skills but has in fact achieved the opposite in many cases (Hager, 2019). More specifically, the implementation of CBT in Australia was developed through a top-down approach, guided by industry and government, which created an emphasis on isolated skills but missed the mark on a more holistic system of integrating different skills and focusing on student needs (Hager, 2019).

In response to the narrow conceptions of vocational learning pursued in many countries, Bernstein (2000) argues that VET must integrate theoretical knowledge because it is a primary component of democracy and allows the learner to participate in debates not only about their chosen field of work but also about their society in general (Wheelehan, 2019). Theoretical knowledge is important in discerning between disciplines, not only concerning vocational knowledge, to create a holistic understanding of science, math, humanities, social sciences and technology (Dewey, 1938; Wheelahan, 2019).

3.3 Comparing SVET in Canada to Other Jurisdictions

When compared to other regions, Canada has one the most decentralized systems in the world with no federal policy specifically linking VET across regions or provinces (Corbett & Forsey, 2020). Taylor argues that Canada lacks the "tradition of social partnership" (2010, p 507) found in parts of Europe that, according to Billet (2020), has developed a mature system in terms of relationships developed between the education system, government, unions and private industry. Northern European countries such as Switzerland, Finland and Germany have strongly embedded and developed VET pathways that help students transition from the secondary level to post-secondary VET programs and into the workforce while also having much more strongly defined national policies and standards. Canada, for example, does not have a common apprenticeship standard at the federal level so continuity between the private and educational sectors along with the unions and other organizations can make entering the trades more complicated than for an apprentice in Switzerland or Germany (Lehmann, 2012). Furthermore, SVET/VET in many European countries is more highly regarded than in Canada and many begin their VET journey in school at 15 years old. Historical perspectives of vocational programs and occupations contribute to how VET is viewed (Billet, 2019). In Germany and Switzerland, for example, the VET model is a dual system that actively engages students in the work force and the other half of the time students are learning within the classroom (Pleshakova, 2019).

Switzerland has been referred to as the gold standard in VET in terms of its high participation rate and societal acceptance of vocational pathways that is fully integrated into their education, economic and labour models (Hoffman, 2015). Conversely, secondary vocational school-to-work programs in Canada have long been referred to as a dumping ground for students who do not fit into traditional academic settings (Taylor, 2010). Potentially, VET at the

secondary level can be beneficial, but it could also become an alternative stream that further perpetuates socio-economic gaps, gender stereotypes and cultural bias (Colley, 2003). There is a need to transform VET to "consider its social, cultural and emotional aspects, its unwritten and hidden curricula, and go beyond explanations related to prescribes curricula, and the acquisition of technical skills and knowledge" (Colley, 2003, p. 492).

Canada originally followed the British model of education, focused mainly on academics, thereby causing it to fall behind other regions, such as Europe, in its development vocational pathways (Lyons et al., 1991). The result has been a lack of diversification in how we as a country understand how VET fits into the fabric of our education system with a clear path for students, especially at the secondary level for those who are more comfortable with applied learning over traditional academic pathways (Lehman, 2012). The lack of emphasis on applied learning has caused economic and social disparity for students who do not complete high school or continue with post-secondary education (Pilz, 2012). Although there have been attempts to adopt vocational education into the secondary school system, there were opposing philosophical principles that debated what VET was meant to achieve for the individual and the greater society. One side of the debate focused on "social efficiency" (Taylor, 2019, pg. 7) which suggested that "inequality was inevitable" (p.7), and the purpose of education was to fulfill the economic needs of the state while children needed to accept where they were placed based on social status (2019). The notions of John Dewey countered the debate with a more holistic approach to education by advocating for a system that saw vocational pathways being the catalyst for changing the industrial system (Taylor, 2019). Dewey was a proponent of combining Vocational Education with general education to weave "democratic and humanistic values with science and industry" (p.7). The progressive educational views of Dewey were influential in Canada and the

United States, however his concepts did not take root in terms of restructuring the strongly entrenched perceptions that traditional education held as a superior form of learning over VET (Taylor, 2015). Molgat et al. (2011) assert that the continued negative perception of VET in Canada, especially at the secondary level, has had an adverse effect on the many students who drop out of secondary school and lack the basic skills to enter the workforce in a meaningful capacity.

In summary, the pursuit of vocational education for many students is still challenged by a division between academic and vocational pathways although there has been greater acknowledgement of the importance of work-based programs in the past 25 years (Taylor, 2019). The recognition of the changing labour market, shortage of skilled workers, high unemployment amongst students without a post-secondary education and rapid shifts in the use of technology have re-opened the discussion of how vocational education can play a more significant role in our society (Taylor, 2019). Vocational Education faces challenges in Canada in part through its historical perceptions of work-based learning, decentralized development, implementation, and addressing concepts of human capital and how citizens should be trained for the labour market (Corbett & Forsey, 2020).

3.4 Indigenizing SVET

Discussions of SVET in Indigenous contexts are based on a recognition that 21st century Indigenous pedagogical alignment must also include current and future skills for the workplace while drawing on traditional forms of learning (Papp, 2020). Creativity, innovation, critical thinking, problem solving, metacognition, communication, collaboration, information literacy, citizenship, technological literacy, life and career and cultural awareness are essential ingredients

(Papp, 2020). The concept of 'Two Eyed Seeing' suggests that First Nation education models work in conjunction with Western learning paradigm (Bartlett et al., 2012). 21st century education, from a Western point of view, is in many ways evolving to follow many of the core principles of Indigenous and more specifically, First Nations, perspectives of learning (Papp, 2020). Secondary VET education should follow the same pathway. If modes of learning of learning perceived through the one eye of the Western economic doctrine, the tenets of the FNHMLL are brushed aside. The Indigenous learning paradigm is mostly absent from SVET/VET discourse in Canada, therefore the review of literature will refocus to relevant discourse towards Indigenizing SVET.

Indigenous SVET in Australia

Australia shares many similarities with Canada concerning the state of Indigenous education, especially in remote Northern areas, due to colonization, access to education beyond the secondary level, the struggle between Westernized concepts of education and the more resource-based economy from the more industrialized south. The Indigenous experience of SVET in Australia is well documented in the literature, something that is not as readily available in Canada at the secondary transitional level. In this section, I will review literature that compares Northern Australia and the Indigenous experience with SVET to identify issues that may be pertinent to the development of SVET in Northern Canada.

Australia conducted a national survey, Young Visions, to study the effects of SVET in Australia in the late 1990s and early 2000s to help reform the education system (Helme, 2005). The reform saw a substantial increase in participants and schools offering VET programs at the high school level. There was also a strong interest in how VET could serve Indigenous remote communities (Fogarty, 2012). The results of the Young Visions study showed positive aspects of

introducing VET in secondary education, especially for improving student retention, empowering students who had fallen behind TAP (Helme, 2005). The study also found good practice concerning SVET and Indigenous students in the areas of meeting students' individual needs, supportive school environments, engaging and relevant curriculum, creating links between education providers and developing community partnerships (Helme, 2005). However, there is also evidence of the tendency of SVET to re-enforce stereotypes concerning gender, socio-economic background and culture (Helme, 2005). An example of gender differences regarding young Indigenous women and men in Australia enrolled in VET is 86 percent of young men reported their appreciation for the practical hands-on nature of SVET over more academic alternatives, while 66 percent of young Indigenous women reported the same (Helme, 2005, p. 173). This may suggest that young males are more likely to be comfortable with moving away from academia than females to garner direct practical experience into the workforce. However, the same study also found that young Indigenous men had a much higher chance of being actively recommended to SVET when they were struggling in TAP (Helme, 2005).

Subsequent studies have shown issues with retention of Indigenous students continuing beyond the secondary level to higher education (Frawley et al., 2017). Students are unlikely to complete their entire SVET program due, in part, to low levels in language and math literacy causing students to leave before attaining Certificate 4 which allows them to transition to higher education (Frawley et al., 2017). SVET in Australia progresses from certificate one to four, roughly covering ages 15 through 19. Although Indigenous students who complete their final year in SVET can transition to HE in post-secondary studies ultimately leading to employment, arriving at that point is problematic (Fogarty & Schwab, 2012). Numerous issues contribute to this trend, including the lack of community engagement and VET partnerships (Jack Frawley et

al., 2017). Furthermore, there is a need for enabling programs meant to enhance and develop academic preparedness necessary to guide students to the higher levels of secondary schools so they can transition to higher education in VET (Frawley et al., 2017). Ultimately, early leavers of the program do not acquire the skills needed for many of the jobs within their communities, contributing to high levels of unemployment or underemployment. Within the remote Northern communities, where academic institutions beyond the secondary level is scarce, further options are limited (Fogarty & Schwab, 2012).Community engagement is required for success in remote Indigenous communities that built upon, "trusting relationships and partnerships, respect for cultural knowledge and capacity, the utilisation of local capabilities and aspirations; culturally aligned policies and practices" (Ackehurst et al 2017, p.13).

3.5 Indigenous Community-Based Solutions

> Professionals responsible for skills development in the Northern regions of Canada need to understand more than just the regional socioeconomic context. They need to be alert to what makes Northern skills development ecosystems different from those in the South. And they must understand how those differences impact the design and delivery of skills development programs. (Conference Board of Canada, 2021 p.7)

In Northern Canada, there are very few post-secondary institutions and students must generally travel long distances to relocate for higher education. A significant reliance on skilled labour from outside of Northern communities and regions, especially in Indigenous communities and regions, is a further indicator for the need for localized education and rethinking how education is delivered within a Northern Indigenous context (Conference Board of Canada, 2021).

> [R]eplicating skills development strategies designed for more densely, populated, industrialized, and urbanized regions in the South will not be the answer. Northern workforces, including Indigenous workers, deserve skills development approaches that

> are built for the challenges of the Northern context and provide genuine opportunities. (Conference Board of Canada, 2021 p.11)

The importance of community-developed solutions for local employment and the means to create VET programs cannot be overstated (Ackehurst et al., 2017; Billett, 2019; Cournoyer et al., 2017). The success of VET programs at the secondary level will partly depend on how VET is developed and acknowledged by society at large, and it will need the participation of local communities to make SVET an attractive prospect while also being supported by social partners, such as parents and employers (2019). The importance of community involvement from an Indigenous perspective is fundamental to youth development and the learning process as it allows for rich and important dialogue with Elders and other community members (Little Bear, 2009). Little Bear further outlines that the entire community is the benefactor of positive educational outcomes for individuals (2009). Traditional Indigenous perspectives of learning are associated with collective community that is defined by "the learning spirit of an individual" (Tanaka, 2016, p. 83) being "intimately tied to the community at large"(p.83).

Local Knowledge Systems (LKS) (Quiroz, 2002) play an important role in the protection and development of " culture- based knowledge systems" (p. 306). Vocational education can be utilized to integrate new ideas and technologies while acknowledging the cultural and traditional values of the local Indigenous population. "Relevant education" (p. 305), for many young Indigenous secondary-level students in rural communities, is important to keep students in school who have trouble adapting to Western-centric applications of education. Indigenous knowledge can be defined as "traditional knowledge, lay beliefs or common-sense beliefs" (George, p. 80) and " denote the knowledge that has evolved in a particular societal context, and which is used by lay people in that context in the conduct of their lives" (p.80). This sense of

local knowledge helps to recognize issues at the grassroots level and how a community deals with local problems or potential threats (George, 2011).

Despite the recognized importance of local and Indigenous knowledges, the pervasive influence of the commodification of VET through the Western notion of Human Capital Theory (HCT) over the last 50 years (Corbett & Forsey, 2020) is a potential threat to be addressed at the community level. The domination of hegemonic western systems' attention to the "consolidation of the nation state, constructing the modern citizen, and strengthen capitalist labour formations" (Arenas et al., 2009, p. 22) often come into direct conflict with Indigenous worldviews in the context of education as they seek to restore "non-commodified vernacular knowledge critical for sustainable living" (p. 22). HCT bases formal education as a personal investment to garner return through income and economic growth. However, the notions of HCT are at odds with motivations connected to Indigenous community (Cournoyer et al., 2019) and expectations regarding the individual's role in the community and their input (Barney, 2016; Osborne & Guenther, 2013). The relationships between peers and educators are based on outcomes pertaining to a Western view of achievement (Kim, 2021) and could be considered contrary to the FNHMLL that empathises relationships and student well-being (CCL, 2007).

HCT becomes more significant and problematic within the environment of remote Indigenous communities due to the uniqueness of labour markets (Ackehurst,2017) and access to "diverse education opportunities" (p. 10). There is a tension that exists between the maintenance of "Indigenous culture and the achievement of socio-economic 'equity' "(Dockery, 2009, p. 2). Thus, students can become detached from a system based on the perception that Western concepts of HCT dominated SVET being primarily for economic gain without considering the Indigenous community-based values (Ackehurst et al., 2017). However, Indigenous community

and the concepts of mainstream SVET do not have to be mutually exclusive but require clear acknowledgment of each other (Dockery, 2009).

3.6 Conclusion

The discourse concerning Western HCT, the commodification of learning and the need for community-based learning are important issues regarding 21st century SVET. However, the issues are even more profound when considered within the Northern Indigenous context as culture, economy and community. The literature discusses discourse on the role of VET and secondary VET within the framework of a Western-centric paradigm while considering the effects on Indigenous learners in Northern Canada. VET at the secondary level is not a particularly diverse and well reflected subject in Canada due, in part, to vocational pathways being historically perceived as an inferior when compared to TAP. Therefore, SVET does not currently exist as a viable alternative that functions beyond a limited program to develop the most basic skills for the labour market. SVET and its relevance within an Indigenous context in Canada are in many ways contrary, or at best indifferent, to the cultural and economic reality of the remote Northern Indigenous environment. However, new attitudes and discussions illicit Dewey's century old challenge to the conventional attitude of the value of vocational pathways being more than a conveyer belt for industry.

Academic and skill development for SVET are important when considering students and their development at the secondary level. Focusing on skills for the labour market removes students at a young age from many of the benefits of academic curriculum that helps develop critical thinking skills. SVET requires broader based knowledge and skills that allows greater mobility and opportunity for students entering a vocational pathway. The 'social side' of VET is focused on the needs of the labour market further enhanced by the later notions of HCT.

However, the social and human capital theory are challenged by the 'personal side' by placing importance on the learner being an agent for change that benefits from a more integrated model of SVET with TAP. Subsequently, there is an opportunity for change regarding issues and breaking down social and economic barriers that are industry specific. Vocations in higher education such as trades, employment in the resource sector, forestry, land management, wildlife protection, eco-tourism and administration jobs in the public sector require more than narrow forms of learning. Creating change from the inside of an industry and within the society in general requires knowledge and skills beyond historical normative perceptions of SVET that is transformative and engages students with a more positive view of themselves and their place within their community and society in general. The Canadian model of 'dumping' students into a SVET program because they are struggling in TAP suggests they are being marginalized and relegated to previous notions of a class-based society. The current structure when imposed in an Indigenous learning environment threatens to perpetuate an already tumultuous and one-sided approach to learning already existing between FNHMLL and Western-centric TAP.

Community capacity building through the paradigm of emphasizing local knowledge systems and regional economic realities of remote Indigenous communities in Northern Canada are lessons learned from the literature highlighting SVET. SVET is well documented in Australia in terms of how Indigenous students engage in SVET in a manner mostly unavailable in Canada, especially in the context of remote Indigenous communities. The literature points to the success of the Australian SVET model in terms of student engagement, however many students struggle to complete the entire program and are unable to transition to higher learning in vocational pathways. Subsequently, this also leads to concerns about skills required for the local workforce.

Community engagement is a necessary path forward while also acknowledging relevant socio-economic and cultural dynamics of the community and the region in which it exists.

Chapter 4: Methodology

4.1 Purpose

The purpose of my study was to research the design and implementation of transitional educational programs to introduce relevant community and regional vocational pathways. Work Oriented Training Pathways (WOTP) is programming currently being implemented as an alternative pathway to the labour force for Cree students who have spent years in the school system without passing and have had little to no success within the current school structure. However, it is questionable that another program designed outside Eeyou/Eenou Istchee and implemented by mostly non-Indigenous educators can succeed without the input of the Cree communities themselves.

This study will include a review of pertinent academic literature and documents, as well as interviews with community members and officials discussing how transitional secondary vocational programs can be developed in conjunction with purposeful community-based learning and in line with Indigenous culture and values, Indigenous holistic learning models, western-centric concepts of vocational education, and the need for community involvement and cultural awareness. In addition, the development of the James Bay Eeyou School Greenhouse Program (JBESGP) will accompany the study as action-based research to illustrate purposeful learning and establishing common ground between Indigenous and non-Indigenous worldviews pertaining to concepts such as community development and harvest. The JBESGP is an example of core learning that addresses global challenges, such as climate change, through a community lens of food sovereignty and regional environmental impacts.

Professor Linda Tuhiwai Smith's *Decolonizing Methodologies: Research and Indigenous Peoples* (Smith, 2012) described how the development of Western-centric research approaches

since the European Enlightenment caused the marginalization of Indigenous knowledges and helped to dismiss Indigenous worldviews as unscientific (Smith, 2012), further compounded by what was already discounted as savage or backward by the Christian religious dogma (Commission of Canada, 2015, p. 7). Many researchers of Indigenous issues continue to be non-Indigenous who, as is the case with myself, are educated and raised in the very system that has systematically pushed Indigenous knowledges to the fringes of our society and is only recently attempting reconciliation. As a researcher and an educator who has lived and worked in Indigenous communities for over a decade, I sought to follow the principles of the "Indigenous Research Methodology" (Wilson, 2007, pg. 175) and acknowledge the importance that my work be for the benefit of the community or communities I am researching. Included is a balance of literature that is reflective of the Indigenous perspective and as up to date as possible since there are many new emerging perspectives on the plight of Indigenous education in Canada. I have tried to pay special attention and reflection will be paid through my narration of relevant literature to my perceptions of my own reality (epistemology) and those I include in my literature review to help me "gain more knowledge" about my reality (Wilson, 2007, p. 175) and how I choose to express it through my work as a non-Indigenous person. The most apparent difference between Indigenous paradigms and dominant paradigms is that dominant paradigms build on the fundamental belief that knowledge is an individual entity: the researcher is an individual in search of knowledge, knowledge is something that is gained, and therefore knowledge may be owned by an individual" (Wilson, 2007, pg. 176). As a non-Indigenous person and researcher this is the paradigm in which I am familiar with, and it is something I must constantly reflect upon when I consider the Indigenous paradigm:

> An Indigenous paradigm comes from the fundamental belief that knowledge is relational. Knowledge is shared with all creation. It is not just interpersonal

> relationships, not just with the research subjects I may be working with, but it is a relationship with all of creation. It is with the cosmos, it is with the animals, with the plants, with the earth we share this knowledge. It goes beyond the idea of individual knowledge to the concept of relational knowledge (Wilson 2007, pg. 177)

4.2 Research Question

As noted in my introductory chapter, my research question is derived from years of observations regarding students in Eeyou/Eenou Istchee who were marginalized through their experiences in TAP. For many students who did not find their path in TAP, there was not a viable alternative besides a limited school-to-work program. The research question is an opportunity to explore educational alternatives while addressing community and the regional socio-economic reality of a Northern Indigenous community. The concept of vocational pathways beginning at the secondary level, from a western-centric perspective, is a means to weave the more promising attributes with the Indigenous Learning Paradigm. Through engaging with the relevant literature and the community members of the Cree community of Chisasibi, the research questions delves into: How can Secondary Vocational Education and Training programs be developed to benefit Northern Indigenous communities?

4.3 Study Design

The research design of my thesis is qualitative in terms of the process used for my research combined with self-study with critical friends and action research. My thesis is as much a journey through self-reflection in the context of my social environment as an educator in an Indigenous/Cree community as it is about my research pertaining to the value of adopting and pursuing community-based SVET. The research design is divides by themes and sub-themes.

Thus, my qualitative study incorporates the essence of the Indigenist Research Paradigm that states “the reason for doing research must be one that brings benefits to the Indigenous community” (Wilson, 2007, p. 195) and the “foundations of the research question must lie within the reality of the Indigenous Experience” (p. 195). Furthermore, my own notions and experience of education are challenged as I reflect on my western-centric mindset (Smith, 2016). As with Wilson, Smith, and other Indigenous and non-Indigenous contributors, I discuss these insights through semi-structured interviews and consultation with key Cree critical friends.

4.4 Data Collection

Data was collected through semi-structured interviews selected through purposive sampling (Reid, Greaves & Kirby, 2017). These took place with members of the community that represented economic development, business development, graduates of the local high school, Elders and parents of current students. Interviews were approximately one hour in length and were through guided questions allowing participants to elaborate on specific topics to gain further insight (Reid, Greaves & Kirby, 2017). Given that I was critically and directly engaged in my study, I used self-study (Samaras, 2010) to reflect on conversations with critical friends.

I collected data from nine participants from different backgrounds and ages to ensure a diversity of perspectives. The age range is 18 to 70. The pseudonyms of Money, Sporty and Trad are used for participants who chose not to be identified. Charlie and Janie requested to be interviewed as a couple thus they will be identified as C and J.

Table 2: Study Participants

Name/pseudonym	Background	Community Role
Charlie and Janie/ C and J	-Elders -Married Couple -Residential School Survivors -University Graduates	Guiding marginalized youth and other community members through traditional land-based activities and Cree Knowledge.
Money	De-identified	Economic Development
Lucas	-Recent High School Graduate -Attended school in Ottawa during elementary. - Graduated from high school in Chisasibi.	Lifeguard
Sporty	De-identified	Recreation
Guylaine	-Non- Indigenous -Many years working in Indigenous communities in Northern Quebec in Kativik and Eeyou/ Eenou Istchee.	Social Worker
Trad	De-identified	Education
Janie	Teacher Grandmother Strong Traditional Values Residential School Survivor	Elementary Teacher/ Cree Language and Culture
Gabriel	-Father with children in the community school. -High school graduate in Chisasibi - Some post-secondary education - Works to combine Cree culture with concepts of sustainable community development.	Community Sustainable Development/ Greenhouse Development

The main research question is supported by the 5 sub-questions designed to create a framework to discover the following emergent themes:

1) How do you feel high school is preparing students to become active members of the community?

2) Are Cree cultural values being adequately addressed through our present system of education?

3) How can we develop an alternative program to prepare students for the workplace?

4) How do you think Cree concepts of education can improve learning for students to develop essential skills to thrive within their community?

5) How do you feel about incorporating horticulture into the program?

   a) How can we incorporate Cree ideas and values into such a program?

4.5 Data Management and Analysis

Data was selectively coded according to reoccurring themes that arose during my interviews. The selected data was transcribed from audio recordings of interviews. Document analysis pertaining to numerical data was transcribed through spreadsheets and identification patterns and explanations will take place to interpret the data according to established themes that emerge from the research questions (Reid, 2017). The theories and concepts of the literature review were then "brought forward" (p. 277) to establish interconnectedness between the literature, document analysis and the data pertaining to the interviews of my study participants.

4.6 Ethical Considerations

Participants were given the option of having their responses de-identified to eliminate any sense of anxiety that they may be negatively exposed to the community. The participants were

given the opportunity to read all quotes and information attributed to their interview and were given the opportunity to ask for them not to be included. To facilitate the participant who wanted to remain anonymous, I ensured their interview transcripts were de-identified and they were assigned individual codes. Any material containing identifiable data, including identification codes or email correspondence is stored in a separate password protected folder and accessible only to the research team (myself and my supervisor).

Chapter 5: Analysis of the Study

5.1 Introduction

This chapter provides an analysis of the themes during the categorization of the interview data and relevant concepts derived from the literature review. The main research question is 'How can Secondary Vocational Education and Training programs be developed to benefit Northern Indigenous communities?'. The emergent themes and sub-themes were discovered through the content of the literature, the experiential process of this study and analyzing the transcripts of the interviews by listening to the voice recordings of the participants.

Table 3. Emergent themes and sub-themes

Theme	Sub-Themes
Participant Perceptions and Experiences with the Dominant Western-Centric Approach to Education	• Cree Perceptions of the Dominant Western-Centric Approach to Education • Cree Values and Purposeful Learning
Vocational Learning at the Secondary Level	• Preparing for The Community and Regional Labour Market • Developing Essential Skills
Weaving Paradigms Through Purposeful Community Centred Learning	• Purposeful Learning • Innovation and Local Knowledge Systems

5.2 Theme 1. Participant Perceptions and Experiences within the Dominant Western-Centric Approach to Education

Theme one pertains to the study participants personal experiences in TAP and their observations. The dominance of Western-centric TAP from the Cree perspective is an important element of developing culturally relevant programs and relate directly to the other two themes of school-to-work and core experiential learning. All the participants experienced TAP in one form

or another. J & C, Trad and Janie attended residential schools, Lucas and Money attended Non-Cree schools in the South and school in Chisasibi. Gabriel and Sporty attended school in Chisasibi, Guylaine attended school in southern Quebec.

The Cree perception from the school system is an important factor in the development of SVET and the inclusion of academics into the program. All nine participants of this study felt strongly that the exclusion of Cree culture played a central role in the construct of their own personal experiences and their perceptions of the current school system. The educational system is dominated by the western perspective of education leads to marginalization of Cree identity through the absence of their own learning paradigm.

Sporty describes an important distinction between Cree and western perspectives of learning by pointing out that "the Cree way is if you screw up and you learn something from it and move on". Whereas the Western-centric approach to failure has negative consequences. Money's point of view was "bush life does not teach failure, school system creates anxiety because of failure". Lucas explained that he witnessed how many students became demoralized by a constant cycle of failure. Trad had a similar perspective by stating that **"**there is difference between how we think about learning". She continues,

> What I learned from non-native way of learning was there was a penalty or a punishment for getting something wrong where we did not have that way of doing things. There was no punishment for getting something wrong from the person teaching you. The non-Cree approach was if you're wrong you are wrong, there is no way around it. The way students are marked can be an example of a punitive response. True or false with no further discussion.

However, Trad goes further to explain that her experiences of growing up and learning on the land were not without consequences, however the impact of making a mistake was not personalized or an attack on the learner's self-esteem.

> Learning from my father on the land was strict and I had to follow everything he did. We had to follow, or we would have been in danger. For example, fish netting was unforgiving if we made a mistake. We could get hurt or be unsuccessful in getting our food. Learning on the land requires a lot of concentration, always busy and no sitting around.

The Cree concept of land-based learning is experiential where the learner is responsible for their part in the process (Eastman & Standing Bear, 2011), however participants found there was a disconnect from how they learned in the classroom. For instance, Money described the difference between Cree learning and the school classroom: “Questions are necessary when learning on the land but not always comfortable for students in the classroom. There is a ‘just do it' mentality with no explanation why”..

The emphasis on grades and percentages also disconnected Sporty from the classroom learning experience, “I didn’t care if I graduated. Passing was based on percentages and hard to understand the purpose”. Money stated that “school was a chore, learning on the land was fun and purposeful, seemed important. Tests did not teach long term knowledge; it was unclear what the purpose of the learning was”. Gabriel echoed the same sentiment as Money by stating that many students drop out due to the lack of connection to the purpose of learning.

When one sided concepts of learning are employed within the school structure it creates a divide between the learner and the system in which they are meant to be engaged. However, Sporty suggests that there is common ground to be found between Cree and Western-centric concepts of learning. However, the Cree Learning Paradigm is not actively embraced to create a balance in school. The current structure according to Gabriel, Lucas, Money and Sporty causes many students to disengage and dropout.

In addition to the negative impacts of Wester-centric learning content and assessment practices, participants also noted the impact of cultural differences in the classroom brought about when non-Cree teachers made little attempt to move away from the Western-centric learning paradigm. Non-Indigenous educators display a resistance to integrating new paradigms into their classrooms based on "long-held traditions of mainstream educational culture, contexts in which they faced deeply ingrained habits in the industrial model" (Tanaka, 2016, p. 189). Money recalled that there was often no connection to the teacher due to cultural differences causing many students to become disconnected from their teacher's method of teaching. This became more apparent when the teacher made little attempt to understand Cree ways of learning and their culture. "Teachers often did not show interest in the culture", Money explained. Money, who was educated in both Cree and Non-Cree schools stated there is a difference between Cree and Non-Indigenous ideas of learning, and if this is not acknowledged by non-Cree teachers it can be detrimental to the relationship between the educator and the student. Money went on to explain that the pace and rhythm of learning is different because the Cree are often adjusting to translating a second or third language back to their mother tongue so they can understand a question or a concept. This can occur verbally or through writing. Sporty further pointed out that "we are an oral culture; we haven't traditionally learned the same way. We listen and watch, writing takes us away from that".

Cree Values and Purposeful Learning

The inclusion of Cree values and purposeful learning were significant points of concern for the study participants. While there were concerns, the participants were optimistic that if these concerns were addressed it would have an impact on student retention. They also

recognized that the school system had made progress in seeing to changes being made, but there were still challenges in terms of how Cree concepts of learning were embraced by teachers and incorporated into the different subjects. Cree values were a topic many of the participants felt were not adequately addressed within the current system, Cree values also related to ways of learning. Gabriel explained that often when a concept was explained in the classroom his reaction was " we wouldn't do it that way".

The Cree worldview and sense of values were absent from many of the subjects taught in school: history, Cree culture and Cree language were the only classes where Cree Culture is present explained Lucas, "I had to compartmentalize Western and Cree worldviews, and it was hard to connect the two". When responding to whether Cree values were adequately addressed in the classroom environment, Lucas responded that Cree values are not taught through definitions, it is something experienced.

Purpose is an important aspect to Cree learners inside of school as they are on the land. The participants felt the same purpose for learning on the land should be implemented into the educational system in the school. However, Lucas stated that Cree concepts are not taught in Eurocentric education and the 50-minute class time allotted for different subject's instructional time is not enough to learn the important aspects of Cree Knowledge. C and J point out, the most important place for Cree learning is with family and on the land, however subjects such as history should begin with the history of the Cree and their region before branching out into the history of other peoples and cultures. C and J believe that the development of a Cree identity first helps to learn respect for other cultures while understanding the importance of their place in the world. "Curriculum taught in schools is from the outside world, it is important to know who the Cree people are. School curriculum needs to more related to the community and the people

itself". C and J explain that when curriculum and school programs are developed outside of the community it leads to conflict, "they don't know our ways. Cree concept of learning is more hands on. When I went to school down south it was just in the classroom, we have a different point of view".

Conclusion

The results of imposed Western-centric institutionalized education have contributed to "Indigenous peoples to be viewed as backward and passive recipients of European knowledge" (Battiste, 2002). The participants experience in western centric traditional academic pathways are pertinent to the design of SVET programs, the Indigenous Learning Paradigm is an essential part to putting an end to the domination to the one-sided approach to learning that favours the western perspective. While there was a broad age range between the participants, they all experienced the feeling that their Cree identity was not properly addressed through the more dominant Western-centric approach to learning. The current system continues to erode a student's self-esteem through a difference in worldviews involving failure. Trad explained, "Cree Learning is without feeling penalized, learning is continuous, failing is final from the Western-centric perspective where from the Cree perspective it's not failure but a learning opportunity".

Learning for the Cree is about a sense of purpose as they have learned on the land, the participants of this study felt that same sense of purpose to learning needed to be addressed in the classroom. However, curriculum designed outside of the Cree world does not adequately address Cree cultural perspectives. The inclusion of the FNHLLM is a fundamental necessity to newly developed curricula in terms of maintaining the "integrity of a people and its culture" (Little

Bear, 2009). Some of the participants also felt disconnected from their educators who move to the community and who need to be open minded and learn about Cree culture to understand rhythm and pace of learning in a Northern Indigenous context.

5.3 Theme 2: Vocational Development at the Secondary Level

Theme two is derived from questions asked about how school-to-work programs could benefit the community and what skills were necessary for young people to enter the work force. The participants offered many ideas that included community-centred approaches and essential skills needed in effective community capacity building.

Assessing the current school-to-work programming

The current school-to-work program in Chisasibi, Work Oriented Training Pathway (WOTP), is not a well-known program. The participants in this study were not familiar with the program except for the work I had done with my students over a one-year period. However, when we started to discuss the concept of school-to-work programs and what they had to offer when combined with education and how it could benefit the community, the participants became more interested and offered their insights. Lucas, for example, explained that having a program that stressed vocational education as an alternative to the current academic model would be beneficial for many students. He further explained that "vocational programs are not pushed as a pathway" because the only path that is pushed is the academic pathway and "people feel looked down upon at the secondary level if they don't follow the academia pathway". However, Gabriel explained that university and college is not the best pathway for many students, and a vocational pathway can show that the world of work does not require a university degree. Gabriel continued by stating the stigma against vocational learning is perpetuated in part through different forms of

media that a university education is the pathway to happiness through economic gain. “Many of the students in our high school have trouble learning and a more applied method of learning would be beneficial”.

Trad shared that she had two grandsons with very different ways of learning, and it was noticeable when they were young. One grandson excelled in academics and enjoyed school while her other grandson struggled in school but showed a high aptitude for learning with his hands.

> For one grandson, who was more of a hands-on learner had a very difficult time in school could have benefitted from a program that helped hone his skill and let him do more of things he enjoyed and wanted to do in the future.

Money felt that there could be many benefits to the community by developing vocational pathways at the secondary level. There is value to our community by developing technical and manual skills Money explained. Furthermore, “our community needs to develop in other areas such as tourism, administration and entrepreneurship”. There is also an opportunity to develop career awareness as many students are unaware about what they could specialize in from a vocational standpoint. “Students need to know what they can strive for”. Money further points out the learner must be involved in the community by getting to know people in the work force where experiential learning creates clear and practical purpose.

All the participants observed a need for skilled trades in the community and for a proper place space to learn them. Guylaine explained that for the students falling through the cracks of the education system, hands on experiential learning is beneficial through developing a sense of purpose. However, because the current school-to-work program has difficulty retaining students it may be helpful to ask students for their input about how a vocational program should be developed.

Essential Skills and Learning in Northern Indigenous Settings

Study participants discussed that they considered to be essential skills that need to be developed for the world of work but also the skills needed to live in the community and maintain their culture. C and J state that:

> Many students are having trouble adjusting to the world of work. Once students leave school they don't seem to know what to do with themselves. They seem lost and unsure. It makes a huge difference in how you tell someone how to do something. When you show someone it has much longer impression than just explaining it. Learning on the land has helped students adjust through Cree teachings. Good habits come from our teachings.

In terms of developing skills for work, Money felt that a major component to many of the students hired for summer work and even those who had left secondary school was that they lacked functional literacy in language and math. C and J said that many of the young people they worked with in their land-based program had trouble filling out forms needed for work applications but also other documentation, such as applying for identifications, government programs and school. Many students who drop out of school early have an even harder time with very basic requirements in math and language literacy.

Lucas suggested that students should learn about finance and money to prepare them for life after they go out on their own. In his own experience, school did not address practical knowledge of money and personal finance. Gabriel discussed the importance of learning more about the applications of technology and the need for students to gain experience in the different sectors of the workforce. C and J felt there needed to be more emphasis of students interacting with different people and organizations in the community to learn respect for different perspectives and points of view that may occur in the labour market.

Some of the skills highlighted reflected the specific context of the community. For example, Janie recommended more emphasis on land-based learning that teaches survival, life

skills, preparing food and ensuring the use of Cree language. Ensuring that students learned on the land helped protect Cree culture and distinguish between Indigenous and non-Indigenous ways of learning. Gabriel also suggested that students need to learn skills to help them thrive in the community that connect the relationships and connections of bush life into Cree concepts of learning, not just skills specific to the workforce. Trad felt students need to learn life skills, such as birth control and responsibilities of having a child and that Elders should teach about ice safety and the proper use of firearms.

Sporty suggested that work placements should be at the Cree culture camps with Elders as the learning would be more beneficial than the limited work placement being used by the current school-to-work program. Trad echoed the same sentiment by explaining that camp life teaches the fundamentals of Cree Knowledge. “Boughs need to stay fresh, traditional structures need to be fixed immediately if damaged by the environment. The camp must always stay clean as a protection from wildlife”.

The participants also identified the role of Elders as a crucial part to learning and the development of skills required for the good of the community. Sporty stated that “we lose our values when we don’t listen to our Elders and Elders are losing respect due to young people not interacting with them as part of their learning”. Janie and Trad suggest that Elders need to be more involved in the development of programs to pass on their knowledge and wisdom. Life skill should also be taught by Elders. Lucas stated that “when an Elder dies it is the equivalent of a library burning down”.

Conclusion

The participants identified several areas that vocational education could be of benefit to the community through a diversity of learning opportunities. Furthermore, the participants felt there were opportunities for learning that could benefit different parts of the workforce, including trades, entrepreneurship, eco- tourism and administration. However, the essential skills that were discussed had as much to do with the connection to bush life and traditional learning as it did for skills for the workforce. As Dockery (2009) states, "there is a tension that exists between the maintenance of Indigenous culture and the achievement of socio-economic 'equity'" (p.2).

Thriving in the community is more than contribution to the economy; it is also about the well-being of the community member and the community they live in. Literacy in math and language were concerns as was learning about birth control and firearms safety. Enhancing knowledge in personal finance and technology are important as is understanding camp life and survival skills. The emphasis on community is paramount to development that essentially looks to weave the protection of Cree culture with the development of 21st century skills. Furthermore, the connecting roots that provides essential knowledge to grow from the involvement of the Elders. Elders provide the foundation of community knowledge.

5.4 Theme 3: Weaving Paradigms Through Purposeful Community-Centred Learning

Theme three is based on discussions involving the implementation of the greenhouse program as a type community-based learning initiative that combines many of the elements needed to address skill and community development along with conversations required to accommodate both Western and Cree worldviews. This theme combines the concepts of theme one and two along with carrying over pertinent notions from the studies literature review. Furthermore, the practical experience of developing the greenhouse program into an already

existing school-to-work program helps to define how SVET can be adapted through community engagement.

Purposeful Community Based Learning

> Developing innovative and successful approaches to education and training in remote and regional contexts with Indigenous people necessitates effective partnership and the recognition of diverse knowledge systems as they relate to the worlds of work, community engagement and learning. (Fogarty & Schwab, 2012)

The participants of this study acknowledged the importance of the greenhouse program and the introduction of horticulture to the community and region; however, they had concerns that were reminiscent of themes one and two. The dominance of the Western-centric world view continued to be a point of contention for many of the participants as they identified the need to ensure their own values and local knowledge systems as essential ingredients to integrating the program into their community. Horticulture had been initiated in the past with the region of Eeyou/Eenou Istchee, however, the reoccurring theme of the divergence between worldviews also pertained to past experiences growing food and development. Janie explained that some Cree did learn about horticulture through missionaries and the church in their original home of Fort George, but the experience may have created a feeling of distrust in the community. The churches grew food, but they did not share it in the community in the same communal way the Cree share their harvest. There were fences that protected the areas that grew food, and some Cree would sneak on to Church premises to steal potatoes. Many Cree Elders shared the same stories with me while I was researching and developing the greenhouse program. Essentially their lands were occupied and developed to feed the church clergy while the Cree continued hunting and gathering. The original experience the Cree had with horticulture was like their relationship with education: their world view was ignored, and food growth was another form of

control over the community. However, looking to other forms of harvesting alongside traditional hunting, trapping and fishing is becoming accepted as a necessity to combat the emergent threat of climate change to regional food stocks. Recent studies have found that "small scale farming could improve self-sufficiency, which could become necessary if transport of food is disrupted by extreme weather events" (Bissonnette et al, 2018).

Gabriel expressed the need for school to establish programs to address introducing horticulture into the education system:

> Experience is necessary to address food sovereignty and agriculture for the future of the community; we need to grow our own food locally. Cree values of harvest can be integrated into the concepts of horticulture. We can't rely on traditional ways and keep harvesting from the same patch of blueberries especially as populations grow. We need to learn more about local soils. We must also protect and maintain the land for wild animals. Many benefits, but there are potential environmental impacts. We need to know the long-term effects on the natural environment and the animals. Some Cree are concerned about fertilizers and their impacts on the water tables.

Cree knowledge of the community and their environment is an important factor when considering how new programs are developed and implemented. The introduction of the horticultural program helped to understand how the Western-centric domination of education and development have fallen short of what could be a beneficial relationship. Learning tied to community development through SVET is incumbent upon building relationships, integrating local knowledge systems and ensuring that community members are active participants in the process.

Purposeful Learning

The Greenhouse Program in Chisasibi was originally adopted to address issues relating to food sovereignty and climate change through the introduction of horticulture to students in the high school. Eventually it became a core project of the Work Oriented Training Program where

students were responsible for planting in the indoor facility and transplanting the seedlings into the garden beds in and outside of the greenhouse. Students were also responsible for the maintenance of the program all year round to prepare for the winter months where horticulture continued indoors using soil, lights and hydroponics. At the end of the summer when it was time to harvest, students were responsible for selling fresh produce and herbs to the community. The greenhouse provided a sense of purpose for many the students where they were able to participate in a process that they could see their hard work pay off. However, tomatoes, cucumbers, basil and mint were not very interesting to them in terms of eating. The food itself was foreign to their traditional diets that consisted of harvesting wild game, fish and wild berries. Although the harvesting of certain types of plants has always been a part of Cree life, it mostly consisted of using them for tea and medicine.

To address the dominance of Western-centric education and concepts of development that has been consistently imposed through different programs and curriculum, the concept of food growth needs to be developed as a grassroots community-based initiative. Subsequently a path was taken to involve different stakeholders within the community and the region to discuss how the Greenhouse program in Chisasibi could not only thrive in the community but within other communities with Eeyou/Eenou Istchee. For this study, it included discussions with the participants on how the program could be developed within the context of vocational education and respect Cree values and local knowledge systems.

The integration of purposeful community-based learning in SVET offers a way to introduce and develop skills necessary to address major global challenges, such as climate change and its impact in Northern Canada in a community based manner. One such area is the effect climate change is having on the traditional hunting and fishing activities for Indigenous

people living in remote northern communities. Developing ways to address the issues through education in a manner that is practical, purposeful and requires community engagement.

> Certain agricultural experiences have not been pursued due to lack of expertise in this sector and the scale of projects, which require a strong commitment and invested time. Capacity could be built locally to make some of these agricultural projects achievable. (Bissonnette et al, 2018)

The changing environment in Northern Quebec due to Climate Change has created a discussion amongst Cree people of Eeyou/Ennou Istchee at all levels of society on how best adapt to a changing climate and way of life that has been in place for millennia. Food sovereignty is one area that the Cree Nation of Quebec is beginning to actively pursue ways to grow food at the local community level in each of the nine main communities. A report commissioned by the Cree Nation Government on the effects of Climate Change in 2018 (Cree Nation Government, 2019) includes recommendations to better prepare Eeyou/Eenou Istchee for the future by adopting different forms of horticulture and green technologies into their communities. However, the report also recognizes that many "agricultural experiences" (Cree Nation Government, 2019, p. 6) have not been pursued because of a lack of expertise. Thus, the Cree Nation of Quebec is reliant on expertise outside of its territory and does have not situated cognition and the advantage of prior knowledge that is required to transmit experiences generationally (Jegede, 2011) when it comes to the development of horticulture. Knowledge is reliant on strong relationship between prior knowledge and the "socio-cultural environment of the learner" (Jegede, 2011, p. 120). However, local knowledge systems and understanding of the land by those who have existed on it for millennia have essential understanding of their own region that must be integrated into the adoption of horticultural programs.

Discussions with the participants involving the development of the JBES Greenhouse Program and horticulture entailed conversations reminiscent of theme one and two. “There is a Cree way and approach to a problem and there's the white society approach to our problem”, C and J explained. When it comes to new programs and ways of learning, the Cree are expected to accept the non-Cree approach, however initiatives being led from outside the community often fail when they don’t have community support. C and J further explained that when people first come up they generally don’t know where to start, they need community guidance to apply their knowledge:

> Outsiders and Cree must work together to gain an understanding of each other. Cree people understand the seasons within their region, and it is necessary knowledge. Both sides have knowledge that need to work together. We must use our own knowledge systems to learn how to grow food. You can take the nomad ways of harvesting and integrate into new forms of harvesting. The nomad way of life and the process of gathering are not as abundant as it used to be, and people are more sedentary. People are not hunting gathering as they used to. Growing food will help with providing food for the community. The new generation must learn a new method to acquire food sources. Growing something is a new idea for the Cree. It can work with the new generation.

Although agriculture can seem foreign, the Cree concepts of Meechum (Cree word for food) can tie into it. Sporty suggested that other First Nations have experience with agriculture, and it was opportunity to exchange knowledge, “Bring in the Mohawk to learn from them to feel more connected to the domestication of our food. Agriculture can feel imposed like other forms of education if it is not properly accepted by the community. We must feel connected like we do with harvesting on the land”.

Money viewed the introduction of horticulture through the greenhouse program as opportunity for students to learn through experience how the high price of food and lack of quality could be addressed. He also believed it would allow for dialogue pertaining to how Cree

had traditionally harvested plants in the bush for medicine, tea and blueberries which he believed would ensure that Cree values and knowledge be observed.

Guylaine's perspective on the greenhouse program is that it engaged students and that community projects help the youth, "Programs developed in the south are lacking the cultural components needed to make them successful, they are out of touch with the Northern Indigenous experience". Guylaine further emphasised that community values and the involvement of community stakeholders are important.

Innovation and Local Knowledge Systems

The development of horticulture is an example of how purposeful community-based learning can open a dialogue between Indigenous and non-Indigenous stakeholders, involving education and development. There is an opportunity to not only find common ground but also find ways to innovate local knowledge systems that may be otherwise ignored. C and J point out that the nomad concept of harvesting can offer an alternative point of view to overcome localized challenges. For example, the migration path of geese has changed in part to the disappearance of the Eel Grass that the geese have stopped to graze on. C and J point out that growing new crops, such as corn could attract the geese once again to the local hunting grounds:

> We can take the concept of the way the nomad harvested and gathered nature's resources they can take that same scenario and apply it to today's generation.
> You must look for alternative ways to a to do that, and you can do that by planting and growing stuff. And like J mentioned, the geese there, that's a staple source of our diet. Yeah, now the geese aren't landing here as much as they used to, and one of the reasons is because of their habitat and feeding areas have been affected. The Eel grass is gone now, and we could grow corn to attract the geese.

Lucas explained that innovation is also necessary part of the development of horticulture in terms of learning to cope with a Northern Environment that contends with long winters and

shorter summers. Lucas further explained that rain gardens can help with water conservation by absorbing run off. However, he stated it is important for people to learn at a young age and have these concepts integrated into the school system. Finally, Sporty helped to summarize how a purposeful community-based program such as the greenhouse program can be beneficial:

> The Greenhouse Program offers experiential learning, is hands on and you can see what you are being taught. Tracking food and growing have similarities. The world is changing; the climate is changing. The more we focus on growing food we will be better prepared for the future.

Conclusion

Interviews with the study participants regarding the development of the greenhouse program and its integration into the school-to-work program revealed an opportunity to overcome conflict between learning paradigms through an open discussion. When common ground is established, there is a starting point in terms of creating an integrative approach to how SVET is developed and implemented. Practical and theoretical perspectives are helpful to intersect SVET and Indigenous holistic notions of learning by acknowledging Local Knowledge Systems (Semali & Kincheloe, 1999). The development of horticulture is an example of a purposeful community relevant initiative that can potentially bridge the divide between Indigenous and non-Indigenous perspectives of learning, education and community capacity building. However, the development of horticulture, within the sphere of SVET, requires community engagement. The participants of this study acknowledge the need for programs that benefit local development, but they are also cautious of outside interpretations of development and learning that does not respect local knowledge systems and cultural values. Purposeful community-based learning can take many different forms, but the root is based on ensuring that community capacity building, cultural values and local knowledge systems are woven into the

fabric of the learning combined with academic pathways, work based learning and essential skills. These combined elements have the potential to create a well-suited SVET program in a remote Northern Indigenous context.

Chapter Six: Study Review, Significant Findings and Recommendations

This Chapter addresses the conclusions I have made for this study. Accompanying my conclusion are the significant findings from my literature review and data analysis along with recommendations for future research.

6.1 Study Review

The perspectives shared through this study reveal the complexity derived from the conflict between learning paradigms associated with Indigenous and non-Indigenous perspectives on learning and worldviews. The study's objectives were originally to discover, through a community approach to conducting my research, how school-to-work programs could be developed to better reflect the Northern Indigenous reality in remote communities. However, as the study evolved, it became important to find a more suitable model that could potentially be developed for the cultural and socio-economic environment of Northern Canada and more specifically Eeyou/ Eenou Istchee. The decision to focus on SVET was partly based on my experiences working as a WOTP teacher during the same time I had been developing the greenhouse program. During that time, I was able to work with my students on the Greenhouse project while integrating elements of a school-to-work program and TAP. Through my observations during that experience, many of the students I had known over the years who were unsuccessful in a regular academic setting began to excel. The integration of the Elders program, the greenhouse program, and a more holistic approach to learning their core academic subjects created an environment where students who had given up on school were not only attending, but they were also improving as their confidence grew.

Through my study approach, I have tried to articulate a learning model that is practical and purposeful within its given environment while integrating academics, skills for the labour market that considers socio-economic realities in the North, and the Indigenous learning paradigm and worldview in a remote Northern Canadian context. Contemporary discourse concerning vocational pathways can help develop a space where purposeful community-based learning, academic pathways, work-based learning, and the development of essential skills can be holistically woven together to address cultural values and the socio-economic realities of community and regional capacity building. However, the experiences that Indigenous peoples have endured in Canada in TAP for over one hundred years must provide the cornerstone of understanding in all forms of learning and program development. Indigenous peoples have been marginalized and left on the sidelines as models of education have been developed and subsequently imposed with little or no consultation.

> There is little to no affirmation or integration of Indigenous knowledge, heritage, or identity into the curriculum or informal culture of institutions, and the environment tends to replicate the negative features of secondary and post-secondary schools, with their emphases on English literacy, numeracy, and citizenship, to the exclusion of all other forms of knowledge. (Henderson, 2009)

Regarding SVET, finding a way to blend academic pathways and skills for the workplace requires transformation from a First Nation's (FN) holistic perspective. Holistic from a Western-centric point of view concerning an interdisciplinary and theoretical approach to education and skill developed for the labour market is not the same deep connected meaning as outlined by the FNHLLM. The development of relevant secondary vocational pathways must transcend not only long held perceptions of SVET as a limited school-to-work program, but also develop programs blending applied learning and relevant skills through community engagement.

TAP as defined through the experiences of Indigenous peoples and this study's participants has been historically detrimental to Indigenous learners. The Indigenous Learning Paradigm as highlighted through the Cree participants of this study and the FNHLLM have been ignored by the Western-centric approach to learning however they have been identified as essential to First Nation learning. Purpose and Cree values stemming from learning on the land were consistent topics with the studies participants and are identified as imperative to the delivery of education from the teacher and how it is received by the learner.

6.2 Blended Indigenized Traditional Vocational Education and Training

Vocational pathways, in an Indigenous context, should reconsider traditional academic pathways as simply academic pathways that better suit the concepts illustrated in the FNHLLM, placing concepts such as community, language, collective well-being and the importance of self as the sources and domains of knowledge. By shedding the constraints of 'traditional' academic pathways, SVET programs can provide a First Nation holistic approach to learning that utilizes some contemporary Western-centric notions, such as providing cross curricular theoretical knowledge. While academic pathways are often overlooked within a vocational context, secondary students should still be able to develop their knowledge and skills that, at minimum, allows them the opportunity to move into higher education in vocational studies. Furthermore, students should have the relevant academic knowledge to be agents of change within their chosen industry, communities and regions. Theoretical knowledge is important in discerning between disciplines, not only concerning vocational knowledge, to create a holistic understanding of math, language, science, humanities, social sciences and technology (Dewey, 1938; Wheelahan, 2019). The academic knowledge portion of SVET in a Northern Indigenous

context should not be developed to be independent of the main components identified in this thesis. Academic knowledge, school-to-work and essential skill development, and purposeful community-based learning should be fully integrated with Indigenous language, culture and values. Blended Indigenized Transitional Secondary Vocational Education and Training (BITSVET) is a proposed path forward to localized and regional needs.

Blended Indigenized Transitional Secondary Vocational Education and Training
Blended
Academic Pathways: Cross curricular foundational knowledge and purposeful learning
Vocational Pathways and Essential Skill Development: allows students to learn about vocations and introduces skills attributed to different trades and vocations while also developing essential life skills based on community values and needs.
Purposeful Community Based Learning**:** Developing practical knowledge of community/regional issues, environment, economy and resource development through purposeful and experiential based learning.
Indigenized
Learning From Elders
Learning on the Land
Language and Culture
Transitional
Pre-requisites for Higher Education in Vocational Pathways
Essential Skills for the Workforce and Community Capacity Building
Understanding of Local Knowledge Systems and Cultural Values

Academic Pathways within BITSVET can create holistic foundational knowledge that can be applied within vocational pathways and essential skill development. Vocational pathways within the concept of BITSVET allows for a broader perspective in learning beyond the limitations of school-to-work programs. The FNHLLM emphasizes the student is on a lifelong learning journey and places importance on the development of the individual and the community. However, the significance of the contribution of an individual and their place within the community is more than an economic means of being productive and monetary returns as described through the notions of Human Capital Theory.

> A vocation is a domain of practice performed by humans as economically productive beings. It encompasses the knowledge, skills, and attributes they are required to use at work. (Wheelehan, 2015 p.7)

Much of the discourse pertaining to vocational pathways is based on post-secondary learning and is western centric in focus. From a secondary perspective within the context of Northern Indigenous communities, the development of vocational pathways should not be so narrow in scope to focus only on the world of work. The program should be designed to introduce students to different vocations while developing essential life skills that are important to both individual growth and community capacity building. Community values and engagement with community stakeholders are crucial in helping to define not only the development of local and regional economies but also the cultural values that are important to ensure that the protection the local Indigenous worldview.

Purposeful community-based learning is an opportunity to bring the academic and vocational pathways together to engage in meaningful discussion on long term development goals of a community and region. Horticulture was discussed in this study as an example of

community engagement pertaining to ensuring local knowledge systems and Cree cultural values are a necessary part of community capacity building. However, stakeholders in different regions and communities can engage with local schools to help decide what projects can provide a core learning program to engage learners in concepts of community capacity building through experiential learning. Purposeful community-based learning is meant to address development goals and the skills required to meet those goals while ensuring that issues, such as the protection of the environment, local innovation and resource development, are acknowledged through a local lens. The individual student can develop critical thinking skills about their place within their community and region while blending 21st century skills with local knowledge systems while developing vocational skills and having a practical outlet for academic knowledge.

The Indigenization component of BITSVET ensures that Elders, language, culture and values that are learned from the experiential learning process of being on the land are the underlaying foundation of all aspects of education and training. Elders provide the transfer of knowledge necessary to the oral tradition of Indigenous culture and help preserve the local language and are extremely important to helping define the place of a young learner within their environment. Without the participation of Elders and other community stakeholders, the Indigenous worldview can be lost to the dominant aspects of Western-centric concepts of learning and community development.

The blending of academic knowledge, vocational learning pathways and essential skill development alongside purposeful community-based learning that is Indigenized is meant to provide a transition for BITSVET students to enter higher education in their chosen vocation. The practical aspects emphasise the prerequisites for post-secondary vocational pathways are already established however transition has a greater purpose than that of continued skill

development for the labour market. Students should be able to transition with a sense of self, their values and what they can contribute within their chosen industries but also their community, region and to the world in general. Northern Indigenous communities have their own cultural identities, needs and economic realities that are different from the southern parts of Canada. The development and implementation of BITSVET is not meant to be insular and not open to ideas from the outside world. The participants of this study were all open to ideas from outside of their region but wanted to ensure that their values, culture and their local knowledge systems were respected and not overlooked in both education and the development of their region and communities. Transition in the context of BITSVET is the continuation and promotion of the Indigenized lifelong learning journey that provides the necessary tools to navigate the limitations of Western-centric constructs of education, training and development imposed on Indigenous learners. Ultimately, BITSVET is a means to create options and opportunities for the many young Northern Indigenous students who are struggling in TAP or prefer more applied forms learning by providing a more direct and faster route to skilled employment.

6.3 Concluding Remarks and Recommendations

There is a need to rethink the traditional Western-centric concepts of SVET that addresses the cultural and economic needs of the community. As with other forms of Western-centric concepts of learning and education, more emphasis must be put on the Indigenous experience, community engagement and local knowledge systems. Blended Indigenized Transitional Secondary Vocational Education and Training is meant to illicit conversation regarding how Northern Indigenous communities could benefit from an Indigenized form of

SVET to help marginalized youth help close the skill gap created through high dropout rates and inadequate school-to-work programs. However, Indigenous communities' and regions should be at the forefront of vocational pathway development and discern how it should be implemented to address localized needs and community capacity building. If vocational pathways are developed and implemented without recognizing the significance of the issues facing student and community development within a localized context,SVET both at the transitional level of secondary school and its subsequent pathways are in jeopardy of meeting the same 'passive resistance' (Battiste, 2002) as they have with imposed Western-centric TAP.

Further research and action are required to transform SVET in a Northern Indigenous environment and properly integrate academic pathways, school-to-work programs and community-based learning. To be effective, provincial and regional governments will need to understand the program's merits and recognize it through a diploma at par with a general education diploma. The amount of time allotted to the program should be two to three years to allow for students to develop the skills needed for cross curricular academic theoretical knowledge, skills for the community and regional workforce, and ensure that community cultural values are at the core of the learning. A one-size-fits-all will not be sufficient, localized community engagement must be part of the process to ensure that SVET, in whatever form it takes, truly represents the community and region it is developed and implemented for.

References

Arenas, A., Reyes, I., & Wyman, L. (2009). When Indigenous and Modern Education Collide. *Race, Ethnicity and Gender in Education* (pp. 59-84). Springer Netherlands. 10.1007/978-1-4020-9739-3_4

Bartlett, C., Marshall, M., & Marshall, A. (2012). Two-eyed seeing and other lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledges and ways of knowing. *Journal of Environmental Studies and Sciences*, *2*(4), 331–340. https://doi.org/10.1007/s13412-012-0086-8

Battiste, M. (2002). *Indigenous knowledge and pedagogy in First Nations Education: A literature review with recommendations*. Google Books. Retrieved February 3, 2023, from https://books.google.com/books/about/Indigenous_Knowledge_and_Pedagogy_in_Fir.html?id=-DIxQwAACAAJ

Bell, S. (2018, June 1). *Cree community of Chisasibi aims to return to its roots through gardening programs | CBC News*. CBCnews. Retrieved February 3, 2023, from https://www.cbc.ca/news/canada/north/chisasibi-greenhouse-programs-1.4286789

Berger, S., & Pilz, M. (2012). Pre-vocational Education in the Curriculum and Its Teaching Practice. A Study of Seven European Countries. *The Future of Vocational Education and Training in a Changing World* (pp. 361-378). VS Verlag für Sozialwissenschaften. 10.1007/978-3-531-18757-0_21

Bernstein, B. (2000). *Pedagogy, symbolic control and identity* (Rev. ed., 1. publ. ed.). Rowman & Littlefield.

Billett, S. (2019). Vocational Education and the Individual. *The Wiley Handbook of Vocational Education and Training* (pp. 41-62). John Wiley & Sons, Inc. 10.1002/9781119098713.ch3

Billett, S. (2020). Perspectives on enhancing the standing of vocational education and the occupations it serves. *Journal of Vocational Education & Training*, *72*(2), 161–169. https://doi.org/10.1080/13636820.2020.1749483

Binda, K. P., & Lall, M. (2013). Decolonizing Indigenous Education in Canada. *Education, Dominance and Identity* (pp. 11-27). SensePublishers. 10.1007/978-94-6209-125-2_2

Bissonnette, J.-F., Del Vecchio, L., Lloyd, K., & Talec, P. (2015). *ENVISIONING RESPONSES TO CLIMATE CHANGE IN EEYOU ISTCHEE Report on the Regional Forum on Climate Change*. Regional Climate Change Report: Priorities in the context of climate change. Retrieved February 3, 2023, from https://www.cngov.ca/environment/climate-change-report/

Blacksmith, G. (2010). *The intergenerational legacy of the Indian residential school system on the Cree communities of Mistissini, Oujebougamau and Waswanipi : an investigative research on the experiences of three generations of the James Bay Cree of Northern Quebec* Available from WorldCat.org https://mcgill.on.worldcat.org/oclc/713349831

Bouvier, R., & Battiste, M. L., Jarrett. (2016).): Centering *indigenous intellectual traditions on holistic lifelong learning.* (Retrieved February 3, 2023, from https://www.researchgate.net/publication/319177713_Centring_Indigenous_intellectual_Traditions_on_holistic_lifelong_learning

Corbett, M., & Forsey, M. (2020). *Rural youth out-migration and education: challenges to aspirations discourse in mobile modernity*. Routledge. 10.4324/9780429400988-10

Cournoyer, L., Fournier, G., & Masdonati, J. (2017). Going back-to-school in vocational education and training: Introduction. *International Journal for Research in Vocational Education and Training, 4*(3), 196-205. 10.13152/IJRVET.4.3.1

Deer, F., & Falkenberg, T. (Eds.). (2016). *Indigenous perspectives education well-being Canada ESWB Press*. Education for Sustainable Well-Being Press (ESWB Press). Retrieved February 3, 2023, from https://www.eswb-press.org/uploads/1/2/8/9/12899389/indigeneous_perspectives_2018.pdf

Dewey, J. (1986). Experience and Education. *The Educational Forum (West Lafayette, Ind.), 50*(3), 241-252. 10.1080/00131728609335764

Dummert, S. (2021). Employment prospects after completing vocational training in Germany from 2008-2014 a comprehensive analysis. *Journal of Vocational Education and Training,* 73 (3), 367-391.

Eastman, C. A., & Standing Bear, L. (2011). Two Early Indian Writers and Educators. In Knapp Smith (Ed.), *Sourcebook of Experiential Education* (pp. 122-130). Routledge. 10.4324/9780203838983-20

Edwards-Groves, C., Grootenboer, P., Wilkinson, J., & Kemmis, S. 1. (2018). *Education in an era of schooling: critical perspectives of educational practice and action research. A festschrift for Stephen Kemmis*. Springer Nature.

European Centre for the Development of Vocational Training. (2019). *Vocational Education and Training in Finland: short description* http://www.cedefop.europa.eu/en/publications-and-resources/publications/4176

Fogarty, W., & Schwab, R. G. (2012). *Indigenous education*. Centre for Aboriginal Economic Policy Research.

Frawley, J., Larkin, S., & Smith, J. A. (2017). Indigenous pathways and transitions into Higher Education: An introduction. *Indigenous Pathways, Transitions and Participation in Higher Education*, 3–11. https://doi.org/10.1007/978-981-10-4062-7_1

Fuller, A. (2015). Vocational Education. *International Encyclopedia of the Social & Behavioral Sciences* (Second Edition ed., pp. 232-238). Elsevier Ltd. 10.1016/B978-0-08-097086-8.92091-9

Fuller, A. (2019). Does Vocational Education Still Need the Concept of Occupation? *The Wiley Handbook of Vocational Education and Training* (pp. 81-96). John Wiley & Sons, Inc. 10.1002/9781119098713.ch5

Gobeil, M. J. (2022, June 1). *The investigation and development of experiential learning theory in primary and secondary education*. HARVEST. Retrieved February 3, 2023, from https://harvest.usask.ca/handle/10388/13740

Guile, D., & Unwin, L. (2019). VET, Expertise, and Work. *The Wiley Handbook of Vocational Education and Training* (pp. 17-40). John Wiley & Sons, Inc. 10.1002/9781119098713.ch2

Hager, P. (2019). VET, HRD, and Workplace Learning. *The Wiley Handbook of Vocational Education and Training* (pp. 63-80). John Wiley & Sons, Inc. 10.1002/9781119098713.ch4

Helme, S. (2005). Indigenous students and Vocational Education and training in schools: Ladder of opportunity or corrugated iron ceiling? *Australian Journal of Education*, *49*(2), 169–181. https://doi.org/10.1177/000494410504900205

Henderson, J. Y., & Canadian Council on Learning. Aboriginal Learning Knowledge Centre. (2009). *When learning draws us in like magnets, our heart and brain connect to animate our worldviews in practice*. Canadian Council on Learning, Aboriginal Learning Knowledge Centre.

Hoffman, N., & Schwartz, R. (2015, February 28). *Gold standard: The Swiss Vocational Education and training system. International Comparative Study of Vocational Education Systems.* National Center on Education and the Economy. Retrieved February 3, 2023, from https://eric.ed.gov/?id=ED570868

Kevin, O. C. (2009). *Puzzles rather than answers: Co-constructing a pedagogy of experiential, place-based and critical learning in indigenous education*. Retrieved February 3, 2023, from https://isidore.science/document/10670/1.ktguao

Kim, E.-J. A. (2021). Regressive moment: Historical contexts. *Integrating Indigenous and Western Education in Science Curricula*, 115–153. https://doi.org/10.1007/978-3-030-88949-4_4

Kolb, D. A. 1. (2015). *Experiential learning÷ experience as the source of learning and development* (Second edition. ed.). Pearson Education LTD.

Lehmann, W. (2012). Youth Apprenticeships in Canada: Context, Structures and Apprentices' Experiences. *The Future of Vocational Education and Training in a Changing World* (pp. 25-41). VS Verlag für Sozialwissenschaften. 10.1007/978-3-531-18757-0_3

Little Bear, L. (2009). *Naturalizing indigenous knowledge÷ synthesis paper*. Canadian Council on Learning. Aboriginal Learning Knowledge Centre.

Lyons, J. E., Randhawa, B. S., & Paulson, N. A. (1991). The Development of Vocational Education in Canada. *Canadian Journal of Education, 16*(2), 137-150. 10.2307/1494967

McGrath, S., Ramsarup, P., Zeelen, J., Wedekind, V., Allais, S., Lotz-Sisitka, H., Monk, D., Openjuru, G., & Russon, J. (2020). Vocational education and training for African development: a literature review. *Null, 72*(4), 465-487. 10.1080/13636820.2019.1679969

McGregor, D. (2015). *From 'decolonized' to reconciliation research in Canada: Drawing from Indigenous Research Paradigms*. ACME. Retrieved February 3, 2023, from https://acme-journal.org/index.php/acme/article/view/1335

McNeely, R. (2018). *Greenhouse Program Development In Eeyou Istchee.* Retrieved February 3, 2023.

Miettinen, R. (2000). The concept of experiential learning and John Dewey's theory of reflective thought and action. *International Journal of Lifelong Education, 19*(1), 54-72. 10.1080/026013700293458

Miller, T. (2018). Measures of indigenous achievement in Canada. *Diaspora, Indigenous and Minority Education, 12*(4), 182-200. 10.1080/15595692.2018.1506436

Ministère de l'Éducation Ministère de l'Enseignement supérieur. (2013). *Work-Oriented Training Path - Prework Training and Training for a Semiskilled Trade (Chapter 5)*. Work-Oriented Training Path. Retrieved February 3, 2023, from http://www.education.gouv.qc.ca/fileadmin/site_web/documents/dpse/formation_jeunes/PFE_FPT_FMS_Chap5_EN_LOW.pdf

Moar, F. (2009, September 9). *9 Cree Communities of Eeyou Istchee: Cree Labour Market Survey.* Human Resources and Skill Development Canada. Retrieved February 3, 2023, from https://ceaa.gc.ca/5D97CA58-docs/statistical_profile_2008-eng.pdf

Molgat, M., Deschenaux, F., & LeBlanc, P. (2011). Vocational education in Canada: do policy directions and youth trajectories always meet? *Journal of Vocational Education & Training, 63*(4), 505-524. 10.1080/13636820.2011.580361

Morris, T. H. (2020). Experiential learning - a systematic review and revision of Kolb's model. *Interactive Learning Environments, 28*(8), 1064-1077. 10.1080/10494820.2019.1570279

Mullen, C. A. (2019). De/colonization: perspectives on/by indigenous populations in global Canadian contexts. *International Journal of Leadership in Education, 23*(6), 1-20. 10.1080/13603124.2019.1631986

Munroe, E. A., Borden, L. L., Murray Orr, A., Toney, D., & Meader, J. (2013). Decolonizing Aboriginal Education in the 21st Century. *McGill Journal of Education, 48*(2), 317-337. 10.7202/1020974ar

Oliver, D., Yu, S., & Buchanan, J. (2019). Political Economy of Vocational Education and Training. *The Wiley Handbook of Vocational Education and Training* (pp. 113-136). John Wiley & Sons, Inc. 10.1002/9781119098713.ch7

Papp, T. A. (2020). A Canadian study of coming full circle to traditional Aboriginal pedagogy: a pedagogy for the 21st century. *Diaspora, Indigenous and Minority Education*, *14*(1), 25-42. 10.1080/15595692.2019.1652587

Pilz, M. (2012). *The Future of Vocational Education and Training in a Changing World* (1. Aufl. ed.). VS Verlag für Sozialwissenschaften. 10.1007/978-3-531-18757-0

Pleshakova, A. Y. (2019). Germany's dual education system: The assessment by its subjects. *Obrazovanie i Nauka, 21*(5), 130-156. 10.17853/1994-5639-2019-5-131-157

Rintala, H., & Nokelainen, P. (2020). Standing and attractiveness of Vocational Education and training in Finland: Focus on Learning Environments. *Journal of Vocational Education & Training*, *72*(2), 250–269. https://doi.org/10.1080/13636820.2020.1744696

Rioux, M. (2007, February). *The Educational Success of Aboriginal Students.* www.assnat.qc.ca. Retrieved February 3, 2023, from https://www.bibliotheque.assnat.qc.ca/DepotNumerique_v2/AffichageFichier.aspx?idf=57926

Semali, L. M., & Kincheloe, J. L. (1999). Indigenous Knowledge as a Component of the School Curriculum. *What is Indigenous Knowledge?* (pp. 95-110). Routledge. 10.4324/9780203906804-8

Tanaka, M. T. (2016). *Learning and Teaching Together*. UBC Press.

Taylor, A. (2010). The contradictory location of high school apprenticeship in Canada. *Journal of Education Policy, 25*(4), 503-517. 10.1080/02680931003735544

Taylor, A. (2019). The Future of Vocational Education in Canadian Secondary Schools. *The Wiley Handbook of Vocational Education and Training* (pp. 251-274). John Wiley & Sons, Inc. 10.1002/9781119098713.ch13

Truth and Reconciliation Commission of Canada. (2015). *Honouring the truth, reconciling for the future: summary of the final report of the Truth and Reconciliation Commission of Canada.* Truth and Reconciliation Commission of Canada.

Virolainen, M., & Stenström, M. (2014). Finnish vocational education and training in comparison: Strengths and weaknesses. *International Journal for Research in Vocational Education and Training (IJRVET (International Journal for Research in Vocational Education and Training)), 1*(2), 81-106. https://www.econstor.eu/handle/10419/142436

Vowel, C. (2016). *Indigenous writes: a guide to First Nations, Métis & Inuit issues in Canada*. Highwater Press.

Wheelahan, L. (2015). Not just skills. *Journal of Curriculum Studies, 47*(6), 750-762. 10.1080/00220272.2015.1089942

Wheelahan, L. (2019). Knowledge, Competence, and Vocational Education. *The Wiley Handbook of Vocational Education and Training* (pp. 97-112). John Wiley & Sons, Inc. 10.1002/9781119098713.ch6

Wheelahan, L., Moodie, G., & Doughney, J. Challenging the skills fetish. *British Journal of Sociology of Education, ahead-of-print*(ahead-of-print), 1-20. 10.1080/01425692.2022.2045186

Windley, G., Ackehurst, M., & Polvere, R-A. (2003). *Indigenous participation in VET: Understanding the research*. National Centre for Vocational Education Research. Retrieved February 3, 2023, from https://www.ncver.edu.au/research-and-statistics/publications/all-publications/indigenous-participation-in-vet-understanding-the-research