

**Indigenous-Led Housing and Education Systems Transformation: A Case Study of the
Wikiwin – University Education Partnership with York Factory First Nation.**

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Abstract

Housing and education disparities exist between Canadians and First Nation reserve communities. These inequities may explain the worse health and education outcomes for First Nation people living on reserves. This study investigates whether community-led post-secondary education improves the holistic well-being of the student interns engaged in the Wikiwin program of the York Factory First Nation (YFFN)-University of Manitoba education partnership. A longitudinal survey was conducted between 2023 and 2025 for all 20 Wikiwin students. This longitudinal survey had an 85% return rate (n=17) among the 20 Indigenous students in the Wikiwin (means "home" in Inineew) program. I analyzed a paired t-test of the pre-survey and the post-survey (n=17). Wikiwin students had statistically significantly ($p < 0.05$) higher satisfaction with most human, financial and social assets, but not their physical assets, after a year or more in the program.

The Wikiwin program made a difference at the individual and community levels, with the Wikiwin partnership bringing an \$8.4 million grant to YFFN. This grant built, with local labour, four different housing prototypes, a student dormitory, and a trades training centre, towards creating a local housing and education ecosystem. Wikiwin students benefited from this earn-as-you-learn program, taking in-person and distance university courses in their YFFN community of York Landing and homebuilding internships. The Wikiwin post-secondary education program built local housing and youth capacity in pursuit of the YFFN goal of “bringing education home.”

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Chapter 1: Introduction

1.0 Introduction

Education is a determinant of health and sustainability (Kioupi & Voulvoulis, 2019). For decades, students in First Nation communities in Canada have faced significant barriers to education, including geographic barriers, underfunded schools, inadequate resources, and a lack of culturally relevant curricula (Carr-Stewart et al., 2013; Layton, 2023; TRC, 2015). The educational barriers are deeply rooted in colonial legacies and significantly contribute to persistent educational gaps between the Indigenous and non-Indigenous in Canada (Layton, 2023; TRC, 2015). Limited access to quality education has contributed to a shortage of skilled professionals in First Nation communities (Haun, 2023).

Other social determinants of health include housing (Office of Disease Prevention and Health Promotion, 2020; U.S. Department of Health and Human Services, 2020). Inadequate housing refers to housing needing major repairs (Hahmann & Masoud, 2023; Statistics Canada, 2022). Overcrowding in First Nation communities has negative public health outcomes, particularly for the spread of infectious diseases, including tuberculosis and COVID-19 (Kovesi et al., 2022; Mallach et al., 2023; Hahmann & Masoud, 2023; Perreault et al., 2022; Adegun & Thompson, 2021). Other environmental health issues for housing, including mould, inadequate heating, and a lack of piped water, affect the health and well-being of First Nations populations living on reserves (Hahmann & Masoud, 2023; Sawchuk, 2020). This study investigates whether community-led post-secondary education improves the holistic well-being of the University student interns in the York Factory First Nation (YFFN)-University of Manitoba education partnership, hereafter called the Wikiwin program or Wikiwin.

This research investigates whether a community-led homebuilding post-secondary initiative impacts the educational gaps and housing challenges of the YFFN. Education that builds homes fosters the development of innovative solutions, enhancing participants' skills and knowledge and increasing their employability (Leah et al., 2016; Oni et al., 2023; O'Reilly, 2024). Culturally appropriate education, incorporating Indigenous curriculum, acknowledges Indigenous people's history, language, culture, and traditions and equips them with advanced knowledge and skills (Hassan, 2020; Persaud et al., 2025).

1.1 Significance of the study

This research examines a community-led post-secondary education program with homebuilding internships for Indigenous youth at York Factory First Nation (YFFN). This study aims to inform educational programs and housing policy to transform Indigenous communities across Canada.

1.2 Community partner, York Factory First Nation (YFFN)

York Factory First Nation (YFFN) is an Ininew community (with the Ininew name of Kihci-wâskâhikan, meaning the Great House) in Northern Manitoba, Canada (Heckman, 2018). After displacement from their original home on Hudson Bay, the YFFN people reside at York Landing (Keewatin Tribal Council, 2024; Parks Canada Agency, 2022; Bulbuck et al., 2022). York Landing is located along the eastern bank of the Nelson River, between Lake Winnipeg and Hudson Bay, 116 kilometres from Thompson, Manitoba (Keewatin Tribal Council, 2024; York Factory First Nation, 2021).

The YFFN people were forced to relocate from their homeland in 1957. York Factory, where the Ininew resided, became the headquarters of the Hudson's Bay Company in 1810 until its closure (Kiinawin Kawindomoni, 2024; Parks Canada Agency, 2022). The colonial government forced the displacement of the Ininew people from their York Factory homeland on the coast,

which was abundant in whales, fish, birds, and caribou (Pannekoek & Scott, 2023), to an inland location without trapping and hunting territory nearby. York Landing received its reserve status in 1989, for the York Factory First Nation (YFFN) (Keewatin Tribal Council, 2024).

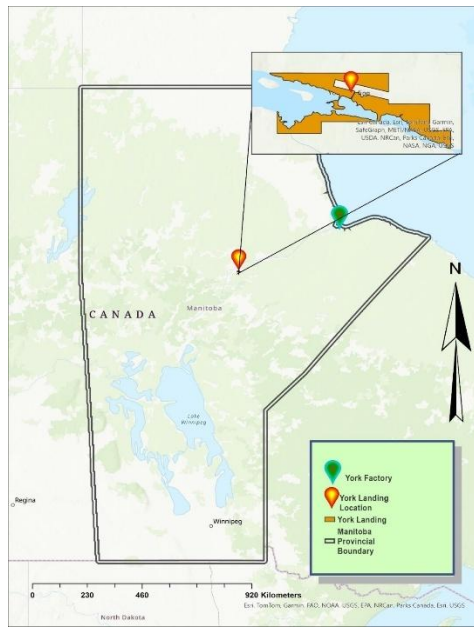


Figure 1.1: York Factory First Nation (YFFN), original location, and York Landing reserve of YFFN

The YFFN people face infrastructure deficits at York Landing (Chura, 2025; Frank, 2025; Schwientek, 2023). Inadequate housing, lack of all-weather roads, overcrowded schools, no hospital and limited food infrastructure are challenges faced by YFFN community members in accessing essentials (Eco-Health Learning Circle, 2021; Statistics Canada, 2020). The YFFN was one of 11 First Nation communities that declared a state of emergency in 2023, which continues in 2025 due to inadequate infrastructure and services. (CBC News, 2023; Ringos, 2025; Schwientek, 2023).

1.2.1 The Wikiwin Education Partnership

The Wikiwin program is an educational partnership between YFFN and the Mino Bimaadiziwin partnership at the University of Manitoba that started in 2023. Wikiwin was modelled after the

successful Boreal Homebuilder, through the Mino Bimaadiziwin partnership in Wasagamack and Garden Hill First Nations (Oni et al, 2023). Wikiwin aims to transform the housing and education ecosystems with an earn-as-you-learn program. The Wikiwin program started in the fall of 2023 to offer year-round building and educational programs for youth, enabling them to build capacity within the community and construct homes (CMHC, 2024; Eco-health Learning Circle, 2023; Hill & Thompson, 2024).

This study analyzes the impacts of the Wikiwin education program in YFFN on the community's housing and education, as well as on Wikiwin students' holistic development. Wikiwin collaborated with experts and researchers from the University of Manitoba to build the Wikiwin Polytechnic Institute and a multi-unit dormitory, addressing educational gaps in the YFFN community. The Wikiwin program was designed to educate youth and build houses for the YFFN community. My thesis research was to see if the Wikiwin program achieved this.

1.3. Research objectives

The overall research goal is to assess the impact of Wikiwin on the sustainable livelihoods of youth and the sustainability of the YFFN community. The specific objectives are:

1. To evaluate Wikiwin's impact on the sustainable livelihoods of youth in the Wikiwin program.
2. To analyze community development outcomes of Wikiwin programming.

1.4. Research questions

This research investigates the effectiveness of Wikiwin community-led education on Indigenous youth at York Landing. Therefore, the questions that guide this research study are:

1. What financial, social, human, and physical assets (sustainable livelihood) outcomes result for youth from the Wikiwin program?

2. What is the Wikiwin program's story and impact on the community?

1.5. Personal viewpoint

Growing up with my parents in Nigeria, who were subsistence farmers and fishers, was a challenging experience. My community faced frequent flooding during the rainy season, leading to the contamination of water bodies and the destruction of our livelihoods. However, despite the odds, we persevered and found ways to survive. Consequently, I became more resilient and learned to value the importance of local agricultural produce. My family's experience taught me that there is always hope for a better future, even in the face of adversity.

These experiences shaped my goals, leading me to partner with women from the community, including those who are less privileged, to co-create customized training programs that meet the community's unique needs and increase their livelihoods. The experience provided me with valuable insights into how project-based learning can be effectively integrated into post-secondary education to empower and promote self-sufficiency within the community. Through my community development engagement, I have educated people on the importance of education in improving livelihoods and generating more income. As a native of the southwest, a region in Nigeria with strong Indigenous roots, I have witnessed firsthand how community-led initiatives can transform education and improve livelihoods. My background has equipped me with a deep appreciation for the knowledge of Indigenous cultures and education systems.

My undergraduate studies in Environmental Toxicology, in the Department of Environmental Management at the Federal University of Agriculture in Nigeria, provided me with an exceptional opportunity. I gained knowledge in community development and education, and developed practical skills in designing, implementing, and evaluating educational projects with

community-driven goals. My passion lies at the intersection of education, Indigenous culture, and sustainable development.

I examine the impact of community-led, project-based post-secondary education on Indigenous community development. Through this research, I found out that Canada, a developed country, faces community challenges like developing country like Nigeria. However, my research with Wikiwin has shown me that communities in Canada, with the help of universities, can effectively address various barriers. Recognizing the developmental challenges faced by Indigenous populations, including inadequate access to high-quality education, has made me realize the critical importance of advocating for equal opportunities for all. In this research and future work, I am committed to actively engaging in development projects in partnership with Indigenous communities to contribute to advancing these efforts.

1.6 Thesis Layout

In this introduction chapter, I introduce the issues, research objectives, and research questions that guide this thesis. This study aims to contribute to a growing body of evidence on the effectiveness of community-led interventions within Indigenous communities (Deer & Heringer, 2023; Clapham et al., 2025; Oni et al., 2023; O'Reilly, 2024). Chapter two contains existing literature on barriers to Indigenous education, the housing crisis in First Nation communities, skill development, and capacity building. This chapter concludes with a discussion of Indigenous methodologies and their importance for this study.

Chapter three explains the methodologies and research instruments for data collection, including longitudinal surveys and evaluation surveys. Chapter four presents the findings of the Wikiwin program's impact on four sustainable livelihoods of youth and community using the

sustainable livelihood framework. Chapter five, the conclusion chapter, discusses the findings for the Wikiwin programs' issues, meaning and policy implications.

Chapter 2: Literature Review

2.0. Literature review

My literature review examines the intersection of sustainable livelihoods with housing and education. I utilized the rapid review method for the literature review. A literature rapid review includes a streamlined process designed to produce a concise synthesis (Smela et al., 2023; Stevens et al., 2024). This method modifies the traditional systematic review process by simplifying or omitting certain steps to accelerate information generation (Stevens et al., 2024; Tricco et al., 2015).

This section identifies knowledge related to housing and education research among First Nations, highlighting current knowledge gaps. The literature reviewed covers the following areas: 1) Barriers to First Nations educational outcomes, 2) Housing on First Nations reserves, 3) Skill development and capacity building, 4) Sustainable livelihoods, and 5) Indigenous methodologies.

2.1. Barriers to First Nations educational outcomes

The barriers to education are broken down below into the gaps in educational attainment, geographical barriers, and financial barriers.

2.1.1. The gap in educational attainment for First Nation communities

In Canada, a significant gap in academic achievement exists between Indigenous individuals and the non-Indigenous populace (Carr-Stewart et al., 2013; Haun, 2023; Layton, 2023). Specifically, the province of Manitoba has noticeable disparities in education between these populations, particularly for those living in reserve communities (Cram et al., 2022; Indigenous Services Canada, 2023; Olsen and Thompson, 2017). In 2021, only 49.2% of Indigenous individuals aged 25-64 had completed a post-secondary certificate, degree, or diploma, a rate significantly lower than the non-Indigenous population (68%) within the same age range, an obvious contrast in

educational attainment (Melvin, 2023; Statistics Canada, 2023b; Thompson, 2024). Manitoba has the lowest university attainment among First Nations people living on-reserve at 7.5%, compared to non-Indigenous populations at 35.4% (Indigenous Services Canada, 2023).

Educational disparities are rooted in structural and systemic oppression, the lasting impact of colonial policies (Carr-Stewart et al., 2013; Harper & Thompson, 2017). The colonial legacy has had profound and lasting effects on Indigenous communities through institutions like the residential school system and racism (El Gharib, 2022; TRC, 2015). The residential school system aimed to assimilate Indigenous children into the dominant culture by separating children from their culture and parents at a young age (Rice, 2021; Bombay et al., 2014; Hanson, 2020). Trauma from the residential school era continues to influence the relationship between Indigenous people and educational institutions today.

2.1.2. Geographical challenges and impact of relocation on educational attainment

The barriers to post-secondary education (PSE) for Indigenous peoples are multifaceted and encompass systemic colonial issues and geographical challenges. Many Indigenous communities are situated in remote areas where access to PSE is either limited or non-existent regionally (Frantz & Howitt, 2010; Layton, 2023; Statistics Canada, 2023b). The geographical isolation requires Indigenous students to travel long distances or relocate entirely (Cameron et al., 2024; Hassan, 2020). The geographical isolation of Indigenous youth on reserves compounds the already present systemic barriers.

Many First Nation reserves are isolated. The lack of reliable, year-round, all-weather roads is a geographical obstacle for youth to obtain post-secondary education (PSE) (Hassan, 2020). The absence of such critical infrastructure in Indigenous communities undermines their access to education, healthcare, and other vital services (Nguyen et al., 2021). Inaccessibility to post-

secondary institutions due to the absence of all-weather road access can negatively impact educational opportunities for youth in Indigenous communities (Hanson et al., 2021; Statistics Canada, 2023a).

Geographical barriers have forced a lot of Indigenous individuals to relocate outside of their Indigenous community in pursuit of PSE. The relocation required to pursue PSE often means Indigenous students must leave their support networks behind (Olsen Harper & Thompson, 2017; Timmons & Stoicheff, 2016). These barriers contribute to a lower likelihood that First Nations individuals will complete postsecondary education compared to non-Indigenous individuals, thereby affecting employment rates and socioeconomic status (Campbell, 2016). Addressing these barriers is essential to ensuring equity and fulfilling the treaty rights that guarantee post-secondary education to Indigenous peoples (CFS, 2021).

2.1.3. Policy and Funding

The federal government ignores historical and legal commitments between Indigenous communities and the government, including exclusive educational responsibilities (Ottmann, 2017). Consequently, this perspective contributes to existing disparities in educational achievement. Failing to address the institutional challenges that Indigenous students encounter in accessing PSE creates barriers to educational attainment and undermines Indigenous rights.

Funding has been consistently identified as a significant barrier to higher education for Indigenous peoples in Canada (CFS, 2021; Cameron et al., 2024; Genge & Day, 2021). Current funding is inadequate to address the needs of the Indigenous community (Jones, 2023). Funding barriers have persisted over time, impacting the ability of First Nations and Inuit students to access and benefit from post-secondary education (Ottmann, 2017).

Financial barriers are compounded by policy decisions such as funding caps for First Nation students. The limited resources available to First Nations students make post-secondary education seem beyond reach (Carr-Stewart et al., 2013). The decision to cap funding allotments has been criticized for perpetuating educational inequities. Funding limits the potential for young Indigenous individuals to pursue higher education, undermining the socioeconomic growth of Indigenous communities (Carr-Stewart et al., 2013). The level of funding for First Nations has not kept pace with the demand for PSE.

Addressing the existing barriers that Indigenous individuals face in pursuing PSE is key (Ottmann, 2017). To achieve this, educational policies and funding models must be re-evaluated and restructured to support Indigenous students' aspirations for educational advancement and cultural integration. The full funding of PSE will promote inclusivity and equity in the academic environment, helping Indigenous students succeed academically (Cameron et al., 2024). This will lead to greater understanding and respect for Indigenous knowledge and culture (Hassan, 2000).

2.2. Housing in First Nation Reserves

2.2.1. Disparity in Housing Conditions

In Canada, the National Housing Strategy (NHS) Act represents a significant step towards recognizing housing as a fundamental human right. The NHS Act emphasizes that “Housing rights are Human Rights,” affirmed by Canada's federal housing policy (Berg, 2019; Leviten-Reid et al., 2024). The concept of housing rights has far-reaching implications that extend beyond shelter to impact health and well-being (Durbin, 2010; Berg, 2019; Howden et al., 2023).

The Canada Mortgage and Housing Corporation (CMHC, 2013) evaluates whether housing is acceptable based on a house's adequacy, size suitability, and affordability. Housing that requires “no significant repairs such as issues with plumbing, water, electricity, insulation, fire prevention,

heating, and structural repairs to walls, flooring, ceilings and furnishings” is deemed adequate (CMHC,2019). Houses with sufficient bedrooms for the size and sexes of the household are considered suitable. Housing is considered affordable when the cost of housing does not exceed 30% of pre-tax household income (CMHC,2013). Consequently, homes that fail to meet one or more of these CMHC criteria are identified as not meeting core housing needs, falling short of providing the necessary standards of living for the occupants (CHMC, 2013; NCCAH, 2017; CMHC,2019).

The complexity of housing on First Nation reserves calls for immediate intervention due to inadequate and/or unsuitable housing. First Nation people on reserves experience a disproportionately high rate of inadequate housing at much higher rates compared to First Nation people off-reserve and non-Indigenous populations in Canada (Office of the Auditor General of Canada, 2024). The high rates of inadequate housing among First Nation reserves in Canada have persisted for decades, with rates of 40.3% in 2021, 49.4% in 2016, and 46.2% in 2011 (Statistics Canada, 2022; Sallese et al., 2024; Thompson, 2024).

Housing conditions for First Nations in Manitoba are worse than in any other province or territory (Brohman, 2023). A staggering 47.2% (22,995 people) of Manitoba First Nations people are currently living in inadequate housing, compared to the general Canadian population (Thompson, 2024; Statistics Canada, 2022). These inadequate housing rates have remained high for many years at 47.2% in 2021, 53.2% in 2016, and 52.4% in 2011, as shown in Figure 2.1 (Thompson, 2024). Urgent measures are needed to address the pressing issues of inadequate housing on First Nation reserves.

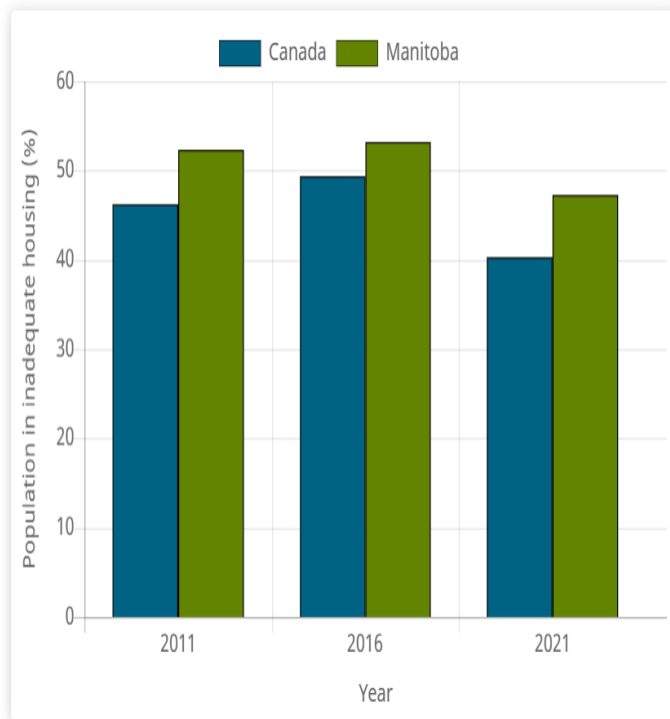


Figure 2.1: Inadequate housing in Canada compared to Manitoba in 2011, 2016 and 2021 (Thompson, 2024, using Statistics Canada, 2022 data).

2.2.2. The housing crisis as a reflection of historical and systemic issues

The housing crisis cannot be understood outside of the processes of colonialism, both historical and ongoing (Monk, 2013; Garneau, 2022). Colonial power dynamics have shaped housing policies and systems, leading to a crisis (McCartney et al., 2018). Suitable housing encompasses not just the size and composition of the physical structure but also the cultural, social, and environmental aspects essential to the well-being of First Nations' people (Monk, 2013).

Historical colonial policies, such as the Indian Act in Canada, have eroded Indigenous self-determination and drastically reduced the quality of life by exerting control over various aspects, including adequate housing, culture, education, food security, and income (McCartney et al., 2018; Monk, 2013; Thompson & Suzuki, 2022). The impacts of colonial policies are deeply embedded within the housing sector, resulting in limited accessibility, affordability, and overall low quality of use for First Nation communities across Canada (Garneau, 2022; Oni et al., 2023). Due to

historical state control, First Nations were relegated to reserves, to free up Indigenous lands, contributing to the perpetuation of economic poverty among First Nation communities (Harper et al., 2023). Sadly, the effects of these policies continue to impact housing access and undermine housing rights for individuals living on First Nation reserves.

2.2.3. The impact of poor housing conditions on First Nations

The housing crisis on First Nations reserves has been well documented: poor-quality housing and overcrowding are major concerns (Statistics Canada, 2022; Larcombe et al., 2011; Statistics Canada, 2020). 37.4% of First Nations in Canada dwell in homes that need major repairs. 36.8% live in unsuitable housing that lacks enough bedrooms for the size and sex of the occupants, with a higher percentage on First Nations reserves living in houses requiring major repairs and in overcrowded housing (Statistics Canada, 2022).

Inadequate housing on First Nations reserves is marked by a significant shortage of adequate housing, resulting in overcrowded and deteriorating living conditions and a pronounced rate of homelessness (Agrawal & Zoe, 2021; Adegun & Thompson, 2021). The rate for Indigenous people living in overcrowded homes on First Nation reserves (38.6%) is approximately twice the percentage of First Nation people living off-reserve (18.5%) (Sawchuck, 2020; Hahmann & Masoud, 2023; Joseph, 2023; Sultan, 2023; Statistics Canada, 2023). The overcrowding issue highlights the dire situation in First Nation communities.

Overcrowding in homes increases the risk of airborne illnesses, such as tuberculosis and COVID-19 (Adegun & Thompson, 2021; Shapiro et al., 2021; Holden et al., 2023; Howden et al., 2023). The rate of tuberculosis in First Nations people on reserves is alarmingly high, at “50 times greater than that observed in the Canadian population” (Thompson et al., 2020). The overcrowding conditions often result in deteriorating housing conditions, lacking proper ventilation and

insulation, creating an environment susceptible to toxic mould growth and dampness (Holden et al., 2023). Poor housing conditions have been linked to adverse birth outcomes (Shapiro et al., 2021; Kovesi et al., 2022). Housing conditions have been linked to infant death and pre-term births occurring on First Nation reserves (Shapiro et al., 2021; Kovesi et al., 2022).

Deteriorating housing conditions can pose additional safety hazards, leading to physical injuries. Due to the need for major repairs, the homes often lack essential amenities, including inadequate plumbing, electricity, sewage infrastructure, and access to safe drinking water, leading to poor hygiene practices (Stastny, 2019; Howden et al., 2023; Durbin, 2010; Gloux, 2021). The stress of living in overcrowded and unhealthy conditions also contributes to mental health issues (Rumboldt, 2022).

2.2.4. Housing crisis response

The Canadian government allocated \$281.5 million in the 2022 federal budget to address the critical need for safe and affordable housing in urban, rural, and northern areas (Statistics Canada, 2023; Crown-Indigenous Relations and Northern Affairs Canada, 2024). In the 2023 budget, the government also announced \$4 billion in funding to implement a rural and northern Indigenous housing strategy (Government of Canada, 2023). In the 2024 budget, the Canadian government also pledged \$9 billion in new funding for Indigenous communities over the next five years (Statistics Canada, 2023; CMHC, 2024; Forester, 2024).

The housing strategy aims to improve housing quality, supply, and affordability for Indigenous peoples living in urban, rural, and northern areas (Statistics Canada, 2023). Despite these government initiatives and efforts by the CMHC, the housing crisis among Indigenous communities remains. First Nations continued to be deprived of their right to housing due to chronic underfunding (Garneau, 2022).

Few studies address the housing challenges faced by First Nation communities. Fewer studies document housing solutions for First Nations through community-led post-secondary education projects (Oni et al., 2023). However, a few studies show First Nation community interventions can increase their capacity to tackle Indigenous housing challenges (Oni et al., 2023).

2.3. Community capacity building

Tailored skill, educational, and capacity-building programs that align with the unique needs of Indigenous communities (OECD, 2018; Hassan, 2020). Skills development is also crucial in improving labour market outcomes and overall well-being for First Nation reserves (Arriagada, 2016). By harnessing individuals' strengths and community cultural values through community capacity-building, skill development can enhance sustainable growth and the quality of life on First Nation reserves (Hassan, 2020; Oni et al., 2023). The development of work-related skills is essential for future success and achieving personal goals (Allary et al., 2023).

Community capacity building is key to inclusive community development (Zeidler, 2011). Community capacity building involves empowering community members, including the most vulnerable and underprivileged, equipping them with the necessary skills and opportunities (Dudgeon et al., 2017; Howard & Howard, 2000). The aim of capacity building is to enable First Nation individuals to take control of their lives and contribute constructively to community development (Murphy, 2014).

2.3.1. Community development needs in First Nation communities

. Community development involves a process in which communities take responsibility for identifying and solving problems and seizing opportunities important to their well-being and survival (Thompson et al., 2013). By fostering skill development and capacity-building initiatives within this framework, First Nation communities can empower themselves to address the

challenges they face and create sustainable solutions that are culturally appropriate and responsive to their unique needs.

Improving educational outcomes for Indigenous learners is key to reconciliation. Layton (2023) highlights the persistent gap in postsecondary achievement between Indigenous and non-Indigenous students. This educational disparity is shaped by historical injustices and ongoing systemic exclusion. Initiatives that prioritize Indigenous-led education, land-based learning, and culturally responsive programming are increasingly recognized as crucial to restoring identity and community strength (Wotherspoon & Milne, 2020). These models not only aim to deliver content knowledge but also support personal agency, resilience, and belonging, traits often undermined by conventional education systems rooted in Western values.

The colonial effects of the residential school system have caused lasting trauma. Residential schooling caused a deep distrust of colonial education, which has resulted in low educational outcomes for First Nation people (Layton, 2023). This enduring legacy of trauma contributes to high rates of suicide behaviours among Indigenous peoples (Elias et al., 2012). The trauma inflicted by the residential school system has lasting effects not only on those who attended but also on subsequent generations (Bombay et al., 2014; Hackett et al., 2016; Burrage et al., 2022). Therefore, education programs for Canada's Indigenous people should understand the historical trauma inflicted by the residential school system (Wotherspoon & Milne, 2020).

2.3.2. Educational attainment in First Nations

The Truth and Reconciliation Commission's (2015) recommendations purport that education programs should mitigate the ongoing impact of residential schools. Advocating for an educational system that includes Indigenous knowledge and perspectives offers some counterbalance to the assimilationist legacy of residential schools and contributes to capacity building and improved

outcomes (Kirkness & Ray, 2016). However, redefining educational success requires resonating with Indigenous families' values and perspectives. Reconciling educational practices with the lived experiences of Indigenous peoples, many of whom are still grappling with the effects of residential school trauma, is crucial (Madden, 2019).

Indigenous knowledge and perspectives should be incorporated into teaching practices to enrich Indigenous students' learning experiences (Danyluk et al., 2024; Chakma, 2024). Indigenous cultural heritage should be reflected in and respected by the curriculum to promote a more comprehensive understanding of Indigenous culture (Chakma, 2024). An inclusive educational model creates an environment where Indigenous students can be seen and Indigenous communities represented, affirming Indigenous identity and increasing engagement with the education system (Kirkness & Ray, 2016). Capacity building in education, informed by an understanding of historical trauma, is key to reconciliation and the empowerment of First Nation communities.

Education is a key cornerstone of economic and social empowerment for First Nation reserves (Oni et al., 2023). Education and skills training are needed to support innovation in sustainable development, including energy, especially for on-reserve Indigenous peoples in northern Manitoba (McMaster et al., 2024). Education can occur through vocational training, teacher professional development, or specialized programs in areas such as homebuilding (Oni et al., 2023) and sustainable energy (McMaster et al., 2024). Skill development initiatives, when aligned with cultural values and community goals, can significantly contribute to the self-determination and prosperity of First Nation reserves (Hassan, 2020). Educational programs to support innovation in sustainable energy can lead to greater community self-sufficiency and

resilience in the face of changing environmental conditions among Indigenous on-reserves (McMaster et al., 2024).

A close connection between land stewardship and capacity building is shown by Indigenous-led conservation initiatives, such as the Akumunan Biodiversity Reserve in Canada (Champagne-Côté et al., 2023). First Nations are effective stewards of their ancestral lands and resources. These initiatives will help protect the environment and foster knowledge acquisition and skill development among community members, promoting self-reliance and self-determination.

2.3.3. Innovative approaches to skill development

Limited access to quality education and training resources persists as a significant barrier on reserves (Oni et al., 2023). Furthermore, a lack of infrastructure, financial resources, and qualified instructors, specifically within these communities, can further restrict opportunities. However, innovative approaches are emerging to address these issues.

One promising strategy involves developing culturally appropriate curriculum and training programs delivered by Indigenous educators (Hassan, 2020; Oni et al., 2023). The approach not only addresses the need for qualified instructors but also fosters a sense of ownership and cultural relevance within the learning experience (Oni et al., 2023). Additionally, leveraging technology for online learning modules and distance education programs can help overcome geographical barriers and reach a wider range of learners within remote communities.

2.4. Sustainable livelihood Framework (SLF)

The sustainable livelihoods framework focuses on the main factors influencing people's livelihoods and the typical relationships between these factors (Oni et al., 2023; Thompson et al.,

2014; Thompson et al., 2012). The sustainable livelihood framework identifies five capitals (personal, physical, human, financial, and social) on which livelihoods are built, as well as factors (e.g., policies, livelihood strategies, trends, etc.) that influence these capitals. A sustainable livelihood can “withstand and recover from stress and shocks while improving its skills, resources and actions in the present and in the future without degrading the natural resource foundation” (Serrat, 2008). Sustainable livelihood assets are needed to attain a good life and can be measured at the individual, household, and community level (Thompson et al., 2012; Oni et al., 2023).

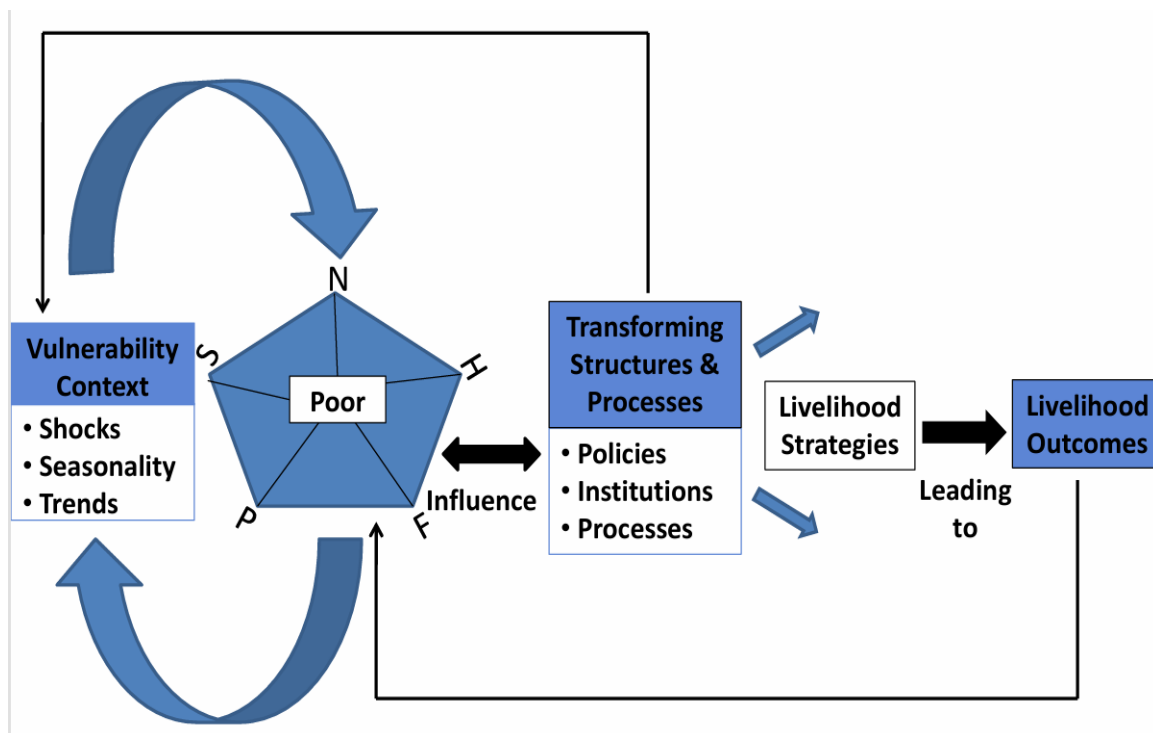


Figure 2.2: The sustainable livelihoods framework. Source (Thompson, 2024; Modified from DFID Sustainable Livelihoods framework, 2000).

Canada's sustainable livelihood framework, adopted from the UK's Department for International Development, recognizes six core sustainable assets (TMI, 2019; SLC, 2021). The six core assets are physical, social, human, financial, personal, and health assets (SLC, 2021).

Sustainable assets are key to addressing exclusion and poverty, and to supporting individual and community development, particularly for marginalized Indigenous populations.

Physical assets are the infrastructure required to meet 'basic needs' (SLC, 2021). The physical assets include safe housing, grocery stores, childcare facilities, affordable transportation, safe and clean water, production equipment, and other services that can maintain its capacities for the present and future while withstanding shock and stress (Kamal et al., 2015; SLC, 2021; TMI 2019; Serrat, 2008). The social assets involve collaborative relationships and social connections which individuals can rely on for support for survival while coping with circumstances that make them vulnerable (SLC, 2019). The social assets include family support, friendships, and political participation, relationships with mentors, network connections within the community and between the community and external partners (TMI, 2019; Thompson et al., 2012). Personal assets involve an individual's sense of identity, values, and cultural beliefs. These personal assets contribute to individuals' growth and sustainability, providing the mental capacity needed to withstand shocks. Motivations, optimism, self-worth, self-confidence, spirituality, and mental well-being are all defined as personal assets.

Human assets for sustainable livelihoods comprise the skills, capacity for employability and ability to adapt. Human assets include education (formal or informal), knowledge, acquired skills, employability skills, and leadership skills. Human capital (assets) is self-developed and can ascertain success in conjunction with other sustainable livelihood capital. Health assets enhance the capacity to improve physical and mental well-being (SLC, 2021). Health assets include health and wellness initiatives, resilience, coping mechanisms and access to affordable health care. Financial assets include all credits that facilitate sustainable living. Financial assets include

income, savings, financial services, banking services, access to credit and credit ratings (TMI, 2019; SLC, 2021).

2.5. Indigenous Methodologies.

Indigenous-led research in Canada has seen substantial growth in recent years, reflecting a resurgence of Indigenous communities reclaiming their narratives and contributing to academic discourse (Smith, 2012; Kovach, 2021). Indigenous research for community development emphasizes the importance of community-based participatory research (CBPR) approaches. This aligns with the principles of self-determination and respect for Indigenous knowledge systems (Wilson, 2008; Smith, 2012).

Indigenous methodologies are recognized as legitimate research approaches that elevate Indigenous knowledge systems, challenge traditional Western paradigms, and seek to decolonize research practices (Smith, 2012). Indigenous methodologies emphasize the importance of cultural context in community involvement, relational accountability, and the recognition of the interconnectedness of all life forms and the significance of relationships in knowledge creation (Kovach, 2024). The Indigenous approach contrasts with Western methodologies that often prioritize objectivity and detachment (Kovach, 2024). Indigenous methodologies are empowering and beneficial to Indigenous communities

A central aspect of Indigenous methodologies is the decolonization of research. Decolonization of research challenges and transforms the power dynamics and structures that have historically marginalized Indigenous knowledge systems (Anderson et al., 2025). Decolonizing research involves integrating Indigenous methodologies to recognize Indigenous knowledge systems as legitimate and valuable, and highlighting the shift from traditional positivist methods to participatory and community-engaged approaches in studies involving Indigenous communities

(Evans et al., 2020; Braun et al., 2014). The transformative potential of decolonizing research is essential to foster more inclusive, respectful, and empowering research practices for Indigenous communities and Indigenous ways of knowing, aiming to create transformative and empowering research for Indigenous communities (Tsosie et al., 2022).

Indigenous methodologies often involve participatory and collaborative processes. The process respects and incorporates the cultural protocols and values of Indigenous communities. Indigenous methodologies advocate for research for Indigenous peoples. Indigenous methodologies ensure that the research process and outcomes are beneficial to Indigenous communities and ensure that Indigenous perspectives are central (Fast & Kovach, 2019).

2.6. Summary

Colonial structures limit access to education, skill development, and housing among First Nations Peoples in Canada. This literature chapter highlights the need for local community-led capacity-building education to address reconciliation. The housing crisis among First Nations can potentially be addressed through post-secondary education and skill development through capacity building. In the next chapter, I discuss the methods and methodology used in this research study.

Chapter 3: Research Methods

This chapter discusses the research methods I used to study Wikiwin’s education partnership’s impact on sustainable livelihoods and community development. I provide information about the research design, participants, and methodology.

3.1. Introduction

I undertook quantitative methods to research the impact of Wikiwin on the sustainable livelihoods of the Indigenous students in the Wikiwin program. This research adopted the quantitative paradigm to systematically collect and analyze data for patterns, trends, and relationships (Creswell & Creswell, 2018; Mohajan, 2020).

I applied a longitudinal survey design. The longitudinal study design is commonly used to investigate changes in an outcome over time within the same group (Simkus, 2023). To further analyze changes in the assessment of intervention effectiveness, I conducted comparisons between the pre-intervention and post-intervention periods. Table 3.1 connects my objectives to the specific research methods applied to meet those objectives.

Objectives	Method
1. To analyze the impact of the Wikiwin education partnership on the sustainable livelihoods of students in the Wikiwin program.	Quantitative Analysis using the Work-Integrated Social Enterprise (WISE) Longitudinal Evaluation National survey (Ethics protocol: HS21434).
2. To assess community development resulting from the Wikiwin education partnership.	Documentation is limited to meetings, newsletters, photos, and videos.

Table 3.1: My research objectives and methods for studying the impact of the Wikiwin education partnership

This chapter discusses the research methods used to study the sustainable livelihood and community impacts of the Wikiwin educational partnership. The chief and the community engaged the Mino Bimaadiziwin partnership in participatory research to build capacity, housing and share the Wikiwin story. The YFFN community's approval for this research was obtained prior to starting the research. I actively engaged in various meetings, namely the Mino Bimaadiziwin Partnership meetings, the Wikiwin weekly meetings, and some workshops by Quality in the Built Environment.

My thesis proposal was developed and presented to the Wikiwin stakeholders, including YFFN's chief and a community member, during a stakeholder meeting in April 2024. The feedback and approval from presentations and meetings with Wikiwin program partners ensured my research process followed the OCAP protocol. My research activities occurred only after approval from the community meeting. The University of Manitoba Human Research Ethics Board approved the ethical protocol (HS21434), which required informed consent and participants to be at least 18 years old.

The chief and the community requested participatory research to build capacity, to build housing, and to share the Wikiwin story. I, with Dr. Thompson, collected data following the Ownership, Control, Access, and Possession (OCAP) protocol to co-develop this research with the chief and the community. I, with Dr. Thompson, provided findings at each stage and co-publishing with the chief, keeping individuals' identities confidential.

The OCAP protocols establish how First Nations' data and information were collected, protected, used, or shared (First Nations Information Governance Centre (FNIGC), 2023). Following the OCAP protocol, this research was started by seeking approval from the YFFN community to study their community-led intervention to bring education home. This formed the

Wikiwin education partnership with the University of Manitoba, with its theory of change goals in Table 3.2 to bring: 1) education home, which is expected to increase students' sustainable livelihoods and 2) partnerships with postsecondary institutions to give capacity to transform housing and community economy (Simeone et al., 2023).

IF	THEN
Wikiwin brings home community-led applied post-secondary education	Students' sustainable livelihoods (financial, human, social, physical, and cultural assets) will increase
Wikiwin partners with postsecondary education institutions for teaching and research in the community.	Housing and community economic development will be improved by increased capacity.

Table 3.2: Theory of Change applied in the Wikiwin program

3.2. Research Instruments

Research instruments for this study were:

- 1) The Work Integration Social Enterprise (WISE) longitudinal survey was a nationally verified survey for at-risk youth that had been applied successfully to First Nations' homebuilding programs (Oni et al, 2023). This survey measured sustainable livelihoods, specifically financial, social, human, and physical assets. The assets were measured by perception of satisfaction levels on a scale of 1-5. (1=very dissatisfied and 5=very satisfied), with a few open-ended questions. The pre-survey was done in 2023 or 2024, and the follow-up survey was taken in 2025 under the ethical protocol (HS21434), which required informed consent and that participants be at least 18 years old.
- 2) Participatory research with the Wikiwin Partnership in meetings regarding discussions, decisions, and action items, providing access to public documentation.

As part of the participatory research process, I attended the Wikiwin Partnership meetings as a recorder. My responsibilities included documenting decisions and action items, preparing formal meeting minutes, and distributing the minutes to stakeholders. The meeting minutes and related documents were analyzed as secondary data sources to understand the implementation and collaborative processes of the Wikiwin program.

3.3. Research Participants

3.3.1. Pre-Surveys

This longitudinal survey of student participants in the Wikiwin program tracked changes in sustainable livelihoods over time. All participants who took the survey met the same criteria. All the survey respondents were: 1) Indigenous, 2) living in York Landing, 3) between 18 and 35 years old, and 4) provided the same honorarium amount (\$40/pre-survey and \$60/post-survey). The pre-survey respondents were all 20 Wikiwin students (n=20) to provide a census survey of all Wikiwin students at that stage. Thus, 20 Indigenous youths living in the YFFN community of York Landing participated in the pre-survey in person between 2023 and 2024. The students took courses and homebuilding internships through the Wikiwin program.

3.3.2. Post-surveys

Post-surveys were undertaken after the students had been in the Wikiwin program for a year. In 2025, the post-survey was conducted. Some had moved or were unavailable to complete the post-survey. The lack of network services, without YFFN having satellite services, and the remoteness of the YFFN community made collecting post-surveys difficult.

The post-survey was completed by 17 of the 20 Wikiwin students. The response rate for the Wikiwin students was 85%, as shown in Table 3.3. The pre- and post-surveys were analyzed to compare the impact of the Wikiwin program on students and to help establish whether changes

recorded over time in Wikiwin students were due to the Wikiwin program intervention. All participants are First Nation youth presently living in the YFFN community, with some originating from Garden Hill, Nelson House, War Lake First Nations, and Winnipeg.

We compared the pre- and post-surveys using a paired t-test. This within-group analysis of the impact of Wikiwin was the focus. Only participants with pre- and post-survey responses were included in the paired t-test analysis.

Participants	Pre-Survey	Post-Survey
Response	20	17 (85%)
No Response	0	3 (15%)
Total	20	20(100%)

Table 3.3: Participants' response rate for pre- and post-survey responses.

3.4. Data Collection Process

The data collection process primarily involved collecting the surveys. The WISE pre-survey was primarily conducted in person in 2023 or 2024, shortly before or after the student joined the Wikiwin program. The post-survey was mostly conducted via Zoom in 2025. I engaged with several participants during various workshops held at the University of Manitoba, in the Thompson community, and in Winnipeg.

Throughout these workshops, seminars and meetings, I became familiar with the participants. I was actively engaged in helping Wikiwin students with their enrollment and course registrations at the University of Manitoba. The post-survey followed ethical protocols, contacting them through the contact route mentioned in the pre-survey. I facilitated follow-up by reaching out and scheduling a mutually convenient day and time. For participants I could not reach, due to geographical distance, Dr. Thompson (Principal Investigator) contacted them using their contact information.

3.5. Ethical procedure and approval of research by the community

All survey participants read or were read the ethical protocol consent forms and asked if they understood before signing the form. This ethical protocol was the WISE Longitudinal Evaluation project (HS21434). The survey had its consent form. Consent was followed before, during, and at every stage of this research study. The data collected during this study were stored safely in accordance with ethical considerations. The ethics offered confidentiality, so that no participation was identified. Participants signed consent forms (see Appendix C for the survey consent forms). I obtained the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) certificate and was a co-investigator on the ethics.

To ensure confidentiality and community control, survey data were password-protected and accessible only to authorized personnel designated by the community. Survey data was temporarily stored on the institution's OneDrive and not on the researcher's laptop. All survey data were stored and shared in accordance with OCAP principles.

3.6. Data analysis

The data were compiled in Microsoft Excel for Microsoft 365 MSO (version 2506) and analyzed by the Statistical Program for Social Sciences (SPSS) software, version 27.0.1. Descriptive analysis of demographics and sustainable livelihoods was undertaken. Inferential statistics using hypothesis tests (paired t-test) were used to determine any differences in outcomes (satisfaction levels) before and after participation in the Wikiwin program. In a paired t-test, each respondent's pre-survey is compared with their post-survey (Odejinmi, Thompson, & Wastesicoot, 2025).

The Work Integration Social Enterprise (WISE) longitudinal survey, under ethical protocol HS21434, was applied in a paired t-test design for both pre-survey and post-survey for the Wikiwin group. This paired t-test design looks for a statistical difference between the same group at different

points in time. Descriptive analysis of demographics and sustainable livelihoods was undertaken. Inferential statistics using hypothesis tests (paired t-test) were used to determine any differences in outcomes (satisfaction levels) before and after participation in the Wikiwin partnership (Egger, 2017). In a paired t-test, each respondent's pre-survey is compared with their post-survey. This design was applied to the Wikiwin group, which was analyzed for the mean differences near the beginning of each student's entry into the Wikiwin program and after at least one year in the Wikiwin program. The paired t-test determines whether there is a statistically significant difference between the means of two dependent samples after the Wikiwin education intervention. A t—test compared the mean differences of the Wikiwin pre- and post-surveys. See an illustration of the study design in Figure 3.1.

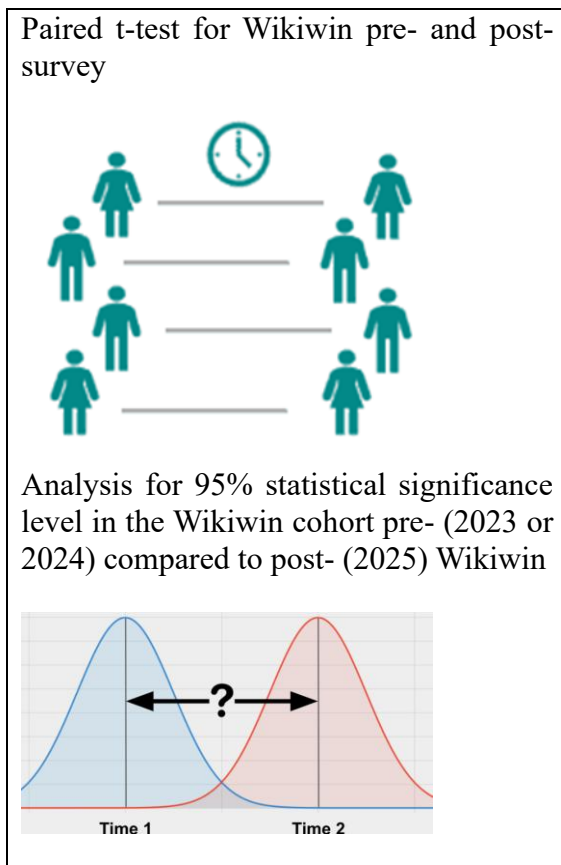


Figure 3.1: Analysis of Wikiwin impact applying a paired t-test for the Wikiwin group.

This WISE longitudinal survey was appropriate and verified for measuring the impacts of work programming for at-risk youth (Oni et al., 2023). This survey had previously assessed homebuilding programs for First Nations (Oni et al., 2023) and other at-risk youth groups. This survey measured satisfaction with sustainable livelihoods, specifically financial, social, human, and physical assets, on a scale of 1-5 (1 = very dissatisfied and 5 = very satisfied). The pre-survey was conducted by Dr. Thompson with Wikiwin students soon after their acceptance or start in the Wikiwin program, whether that start occurred in 2023 or 2024 (Odejinmi, Thompson, & Wastesicoot, 2025).

The paired t-test was employed to determine the mean differences and statistically significant levels of satisfaction across various areas of sustainable livelihoods. The paired t-test analysis evaluated the impact of Wikiwin Education program on four (human, financial, physical and social) out of the six sustainable livelihood assets (Human, financial, physical, social, natural and health) of the youths in the YFFN community. Since all assumptions of the paired t-test were met, including assumptions for outliers (Hsu & Lachenbruch, 2014), the data were analyzed using the paired t-test. The Shapiro-Wilk test for assessing normality was also conducted. The Shapiro-Wilk test indicated normally distributed data for both pre- and post-surveys for the Wikiwin students.

3.7. Limitations of the study

The small sample size and low response rate are important considerations. The response rate among the Wikiwin students did not reach 100%, with an 85% completion rate for the post-survey. Given the limited sample size of 20 participants, the response rate may significantly impact the findings, as not all potential responses were recorded. The low response rate signifies there was a “dropout rate,” often a characteristic of longitudinal surveys. The dropout rates in longitudinal

surveys can be attributed to several factors, such as personal circumstances and geographical challenges, which often introduce nonresponse bias (Asendorpf et al., 2014; Eisner et al., 2018). To mitigate these limitations, Future studies should aim for larger sample sizes to account for potential attrition and ensure a more representative sample.

Another limitation of this study is the limited internet access during follow-up data collection. As indicated in Table 3.3, the response rate was 85% for Wikiwin students, signalling that the follow-up via Zoom yielded satisfactory results. I encountered difficulties reaching out to the participants who were not part of the Facebook Messenger group, as many participants do not have a functioning phone and lack internet connection.

Another limitation is that my quantitative surveys did not yield many quotes. Other researchers are undertaking qualitative research for the Wikiwin cohort, and thus, I limited my research to the quantitative survey. Additionally, access to documentation from the YFFN community was limited to the material YFFN permitted us to access. Future studies could benefit from incorporating a mixed-methods approach to enrich the analysis and provide a more holistic perspective.

3.8 Summary

This chapter documented the methodology employed in this study. The Wikiwin students are the focus of this study, and a paired t-test was conducted to see the impact of the Wikiwin program. The WISE longitudinal survey and documentation provided by YFFN limited the findings to quantitative. The ethics guidelines were followed, with informed consent from participants aged 18 or older. The next chapter documents the results and findings of this study.

Chapter 4: Findings

4.0 Introduction

This chapter presents findings from the pre-/post- satisfaction ratings (1-5 scale) on human, financial, physical, and social assets for Wikiwin students (n=17) from York Factory First Nation (YFFN), comparing pre- and post-surveys. The Wikiwin homebuilding education program intervention was evaluated for its impact on the sustainable livelihoods of youth in the Wikiwin program (Research Objective 1) and community development outcomes of Wikiwin programming (Research Objective 2). The results are organized according to the four sustainable livelihood assets. Each section reports the descriptive and paired t-test analysis, including the statistical significance of each sustainable livelihood asset.

4.1 The Wikiwin -University Participatory research at York Factory First Nation.

The Wikiwin Polytechnic Institute was created through a YFFN-university partnership in 2023 to bring education home. Wikiwin was modelled after the successful Mino Bimaadiziwin (Mino) Homebuilder program in Wasagamack and Garden Hill First Nations (Oni et al, 2023). Prior to becoming the YFFN chief, Darryl Wastesicoot was the Homebuilder instructor at Anokiwin Training Institute and the Mino Bimaadiziwin (MB) partnership, with 30 years of experience as a construction engineer. After becoming YFFN chief, Chief Wastesicoot partnered again with the University of Manitoba, as “this program really works” (Hill & Thompson, 2023). The Wikiwin Education program was led by the YFFN community, with participatory research engaging Dr. Thompson, the Wikiwin students’ academic supervisor, and myself. Before the impact can be analyzed, the intervention will be described clearly, which was documented through participatory research.

4.1.1. The Wikiwin Program Intervention

The Wikiwin program needed a holistic analysis to better understand how it improves student and community benefits. Towards this end, a sustainable livelihoods analysis was conducted. The survey analyzed human, financial, social, and physical livelihood assets before and after the Wikiwin students started the Wikiwin program. Twenty YFFN youth gained admittance to courses and internships at the University of Manitoba in the Wikiwin cohort program. Courses started for ten students in winter 2023 but grew to 20 students later in 2024. Students typically took two courses per year. Wikiwin students attended specific university courses from diverse departments as a cohort in the fall and winter terms from January 2023 to 2025, as shown in Figure 4.1. Plans are in place for further courses in 2026.

All 20 Wikiwin students were hired by the University of Manitoba through a MITACS internship with Kawéchiwasik Development Corporation (KDC), which is owned by YFFN. The youth worked with the YFFN employment training program and KDC in 2024 and/or 2025 to deliver homebuilding employment training. This training included supervision, meaningful housebuilding work, support, and training for the Wikiwin students. Further, Dr. Thompson provided academic supervision for the Wikiwin students. The Wikiwin internships were a partnership between YFFN and the University of Manitoba, with MITACS tripling the training dollars through their Access program. Thus, these 20 students were paid to “earn as you learn” in internships that built and repaired homes while taking one University of Manitoba course per term (CMHC, 2023; Hill & Thompson, 2024; Eco-Health Circle, 2023).

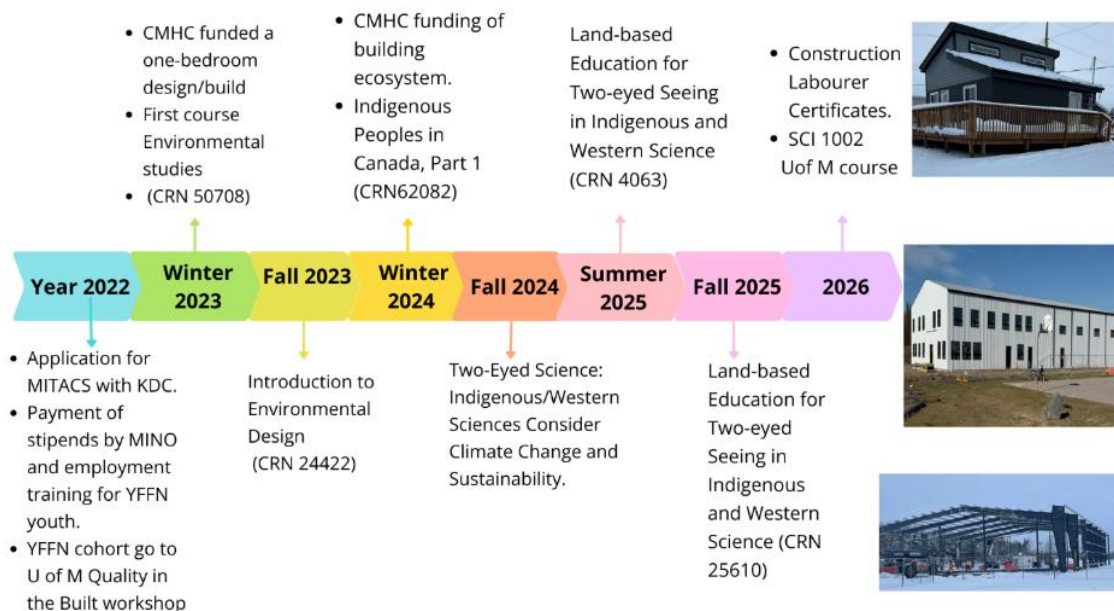


Figure 4.1: The timeline for the Wikiwin-University program components from 2022 to 2026

4.2. Human Assets

Human assets include schooling, training, job skills, motivation, optimism, stress management, and other aspects that increase employability (SLC, 2021). The human assets of the Wikiwin students improved dramatically after Wikiwin. See Figure 4.3 showing the enhanced outcomes of the Wikiwin students group pre-Wikiwin compared to post-Wikiwin across all factors except satisfaction with job skills, showing a very slight increase. Table 4.1 shows that the Wikiwin post-survey had a large, statistically significant mean difference for formal school (MD = 1.0, $p < 0.05$) and training apart from school (MD = 1.3, $p < 0.05$). All Wikiwin students attended the University of Manitoba on a part-time basis. All Wikiwin students received hands-on homebuilding training through an “earn as you learn” MITACS internship supervised by YFFN employment training. Wikiwin students learned carpentry skills, building houses and installing helical piles, under the guidance of an Indigenous expert trainer and various contractors. Wikiwin provided both formal and informal learning pathways for the Wikiwin students.

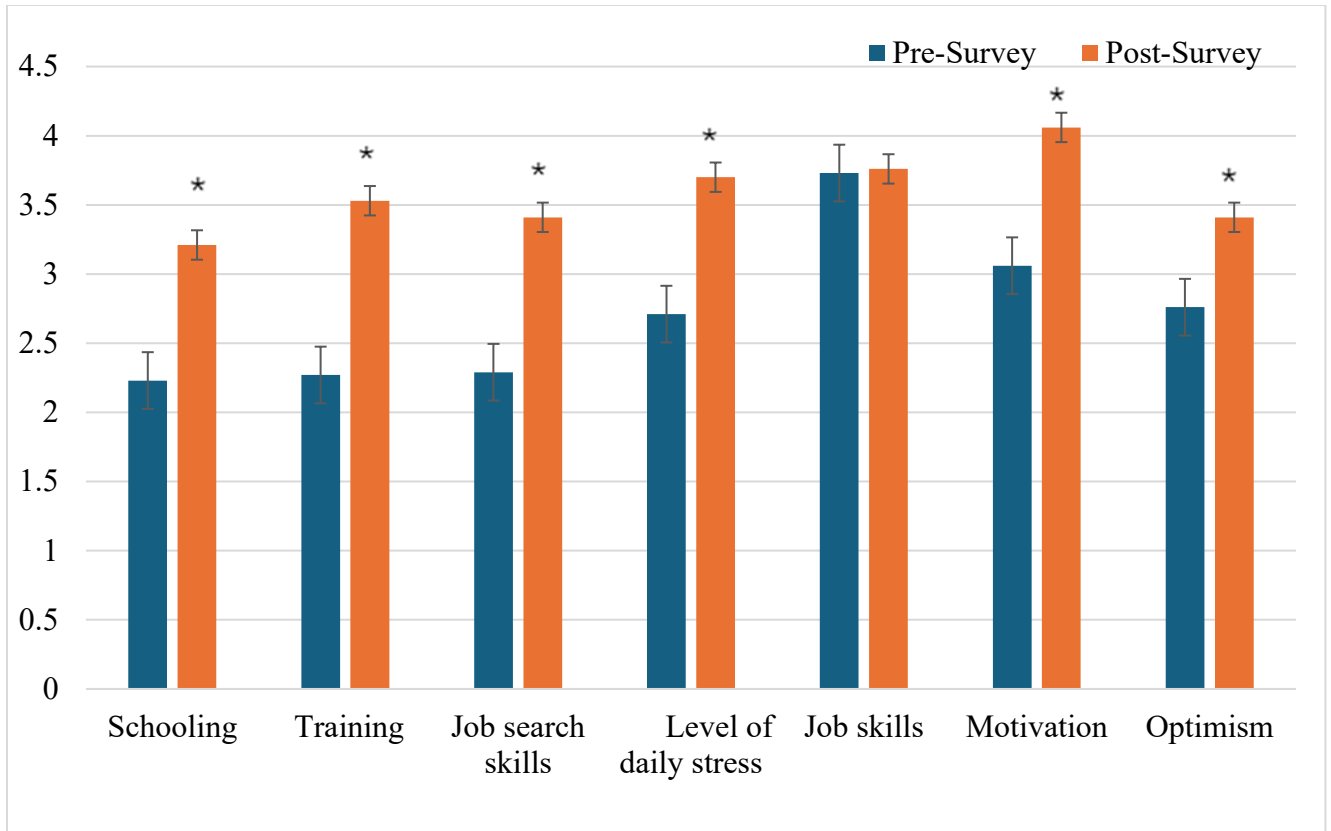


Figure 4.2: Human asset satisfaction level pre- and post-survey for Wikiwin students

Human assets rating on a 1-5 satisfaction scale.	Wikiwin students (n=17)		
	MD	SD	Sig. (p)
Schooling or formal education	0.98	1.47	.014*
Training apart from school	1.25	1.46	.003*
Job search skills	1.12	1.93	.030*
Stress management	0.99	1.77	.034*
Job skills	0.03	1.20	.911
Motivation	1.00	1.00	.010*
Optimism	0.65	1.17	.037*

Table 4.1: Wikiwin partnership's mean difference (MD) and standard deviation (SD) for Wikiwin students for Human Assets. * Sig = statistically significant at <0.05.

The mean difference in pre-survey and the post-survey satisfaction with job skills was the least (MD = 0.03), which can be explained by prior job training before the pre-survey. Thus, the small mean increase from 3.73 to 3.76 post-Wikiwin was not significant. A more positive outlook

for Wikiwin students post-Wikiwin is notable. A high, statistically significant increase was observed post-Wikiwin in motivation (MD= 1, $p<0.05$), optimism (MD= 0.7, $p<0.05$), stress management (MD= 1, $p<0.05$), and job search skills (MD= 1.1, $p<0.05$). The significant observations suggest that the increased satisfaction levels in the Wikiwin student group are likely due to the Wikiwin program.

4.2.1. Improved Student Access, Improved Student Attainment

The Wikiwin program improved students' educational attainment, as shown by the higher educational attainment levels in Figure 4.2. An increase occurred from 18% to 100% Wikiwin participants having some postsecondary education post-Wikiwin. All Wikiwin students succeeded in diverse university-level courses. This success was despite most being unable to complete high school because the YFFN school only went to grade ten. University courses, delivered by distance or in the community, resulted in major changes, with all post-Wikiwin students attending post-secondary education (88% having some post-secondary and 12% college certificates) as their highest education attainment. This rate increased from 30% (18% having some post-secondary and 12% college certificates), which was the highest attainment. Prior to the pre-Wikiwin students' highest education attained, as shown in Figure 4.2, were roughly at the same level as the earlier generation of their caregiver: the highest education level was some elementary for 6% and some secondary for 41% compared to their parents/grandparents or other caregivers at 15% and 44%. Thus, both generations had around half with an education below a high school degree. The low educational attainment is explained by the lack of access to secondary and postsecondary school, as the local YFFN school only went up to grade ten until 2021. In addition, many caregivers attended the residential school system, which created a stigma around education and impacted not only themselves but future generations.

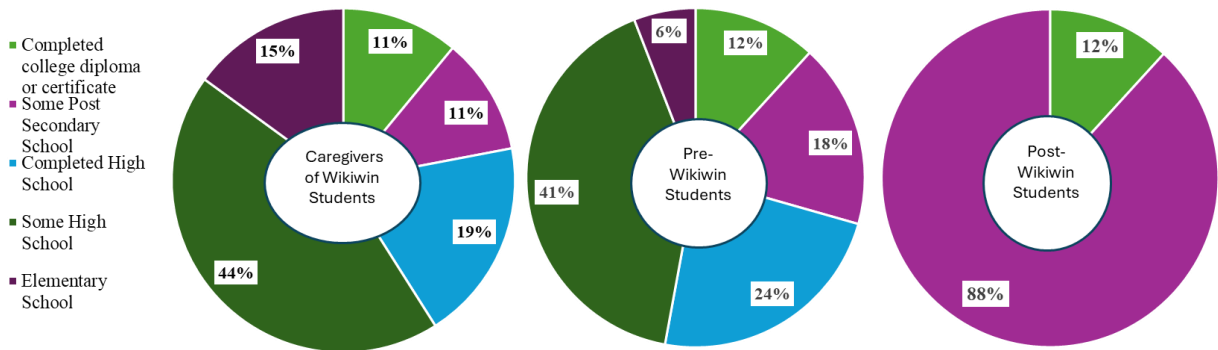


Figure 4.3: Highest education level of caregivers of Wikiwin students (n=28) and Pre-Wikiwin students (n=20)

Wikiwin students succeeded in diverse courses, including distance and community-based courses. Hands-on community-based courses were preferred. These in-person courses included Inineu stories, language teachings, and land-based activities that explored and shared Indigenous knowledge. Two-eyed seeing approaches involving housing and school inspection labs using thermographic cameras and different air quality monitors in one course. Another course had students build a giant aeroponic system to grow fresh vegetables for YFFN and install an air-quality monitoring system. The relevance and hands-on aspects engaged the youth, as shown in Figure 4.4.



1.3 Fall 2023 Timetable

The table below shows the work plan of activities for everyday of the week from September 18, 2023, to December 22, 2023.

	9 – 10:30am	10:30 – 10:45am	10:45 – 12pm (Noon)	12 – 1pm	1 – 3pm	3 – 3:15pm	3:15 – 5pm	6 – 7pm	Total Hours
Monday	EVDS 1600 Tutorial	Short break on site	EVDS 1600 Tutorial	Lunch break	Work on site*	Short break on site	• Work on site*	-	7
Tuesday	Work on site*	Short break on site	Work on site*	Lunch break	Work on site*	Short break on site	• Work on site*	-	7
Wednesday	Work on site*	Short break on site	Work on site*	Lunch break	Work on site*	Short break on site	• Work on site*	EVDS 1600 Workshop	7
Thursday	EVDS 1600 Tutorial	Short break on site	EVDS 1600 Tutorial	Lunch break	EVDS 1600 Workshop - Skitship Tutorial	Short break on site	• Work on site*	-	7
Friday	Work on site*	Short break on site	Work on site*	Lunch break	Work on site*	Short break on site	• Work on site*	-	7
							• Cleanup site		Total Hours 28

Figure 4.4: Wikiwin students taking the University of Manitoba two-eyed seeing and land-based education science courses and other courses in York Landing. A) Certificates for participating in course to celebrate successes throughout B) Classroom presentations. C) Checking out raw materials for granite countertops and stone buildings. D) AIQ Air Monitors-installing first air quality in Manitoba First Nations. E) Tutorials and classes each day with homebuilding “earn as you learn”. Learning Ininew language and land-based knowledge outside at York Landing with Dr. Stewart Hill. Photo Source: Thompson.

The community-based courses evolved as a solution to the barriers of distance courses. Distance courses were offered to these Wikiwin students. Initially, Wikiwin students took a few distance courses, including environmental science, Indigenous studies, and architecture design. These distance courses are asynchronous, self-learning courses, which lack any Inineu content in their films and readings. Many Wikiwin students struggled with the amount of reading and its relevance. To foster interest and understanding, infographic materials, stories, jokes and working together on designs and pre-tests occurred, with coaching from university partners in Wikiwin.

Many educational barriers had to be circumvented. For example, the Environmental Design course required the expensive computer-aided design (AutoCAD) software, which was not affordable. To provide an alternative, the Wikiwin program hired an Indigenous engineering student to teach a non-proprietary software called SketchUp. With SketchUp, people could create great designs, as shown in Figure 4.5.



Figure 4.5: Environmental design drawn by a Wikiwin student

Many students became so proficient in SketchUp that they later sold their 3D objects. Students really enjoyed this application, as shown by the quote from one student below:

Recently, we started using a program to render a 3D model of a house or design that you've been thinking of. Also, in the program, we were able to have all the dimensions visible for everything, so that you can scale your house down to the inch as you want it. And that was a pretty good workshop, first time doing something like that (Eco-Health, 2024).

Every Wikiwin student passed each university course. This required lots of coaching and support, particularly for those without grade 12. A few Wikiwin students got A grades, with most getting B, C, and a few D grades. This range of grades is normal for any university class. However, all Wikiwin students passed.

Wikiwin students reported many positive outcomes from the hands-on training program. After accomplishing home renovations, Wikiwin students took on increasingly complex building projects. One Wikiwin student explained their skill building in drywall, electrical, plumbing, air circulation, and foundations:

Our first couple of weeks' work, all we did was renovations up and down the reserves. Learning how to drywall and rewire some of the wires in my house. And some of the plumbing and some of the vents. From there, we started building a house as soon as it started warming up, and we were able to dig. We had a foundation dug out down by the six-plex on one side of the town. And we started building from there (Eco-Health Circle, 2024).

Wikiwin students learned how to plan and organize work from instructors and contractors, according to one student's statement below:

There are three locations that everybody's working at. There are three houses that went up. And there are two new ones just down the road from my house. We have been learning a lot to build a house. We took maybe two months to put up a house ourselves, and we had some contractors come in and put one up in about two weeks, which gave us an idea of what we should be doing and planning for." (Eco-Health Circle, 2024).

The YFFN newsletter in June 2025 from the chief and council spoke about the significance of the Wikiwin community education. They shared that Wikiwin Polytechnic Institute represents "bringing education home", a good life (Mino Pimatisiwin in Ininew) and self-determination:

As we honour your (graduate) achievements, we are also reminded of our collective vision to Bring Education Home. The establishment of the Wikiwin Polytechnic Institute is a bold step in that direction, creating opportunities for lifelong learning, self-determination and Mino Pimatisiwin right here on our land (YFFN, 2025).

The wave of “bringing education home” has started (YFFN, 2025). Prior to 2022/23, no pathway existed to get your secondary school diploma at the YFFN community at York Landing. Before 2022/23, a student could not finish secondary school, so the mature high school in-person evening program resulted in record numbers of high school graduates. The mature student program increased from one secondary school graduate out of 25 in 2022/2023 to eight graduates in 2023/2024 and 15 graduates in 2024/2025. The mature program began with a push from the chief, who asked the school and community to prepare to benefit from the Wikiwin Polytechnic Institute.

The first trades course is set to run at the Wikiwin Polytechnic Institute next year in 2026. A Construction Labourer Certificate is planned for spring 2026 with curriculum leased from the Manitoba Institute for Trades and Technology (MITT). Further, YFFN became the learning hub for the Mastercard Foundation EleV Program (ELEV) in 2024. This ELEV Learning Hub provides education for 11 Ininew communities, which are part of the Keewatin Tribal Council (KTC), providing technology, classroom support, and paying for a half-time education coordinator.

4.3. Financial assets

Financial assets refer to earnings, savings, credit access, and financial security, including financial entitlements from governments. The YFFN population, according to statistics from the census, had low incomes, shaped by high unemployment (11%) and low employment rates (27%) stemming from being a remote Indigenous community without market access (Harding & St-Denis, 2021; Statistics Canada, 2022b; Statistics Canada, 2023c). This low employment rate reveals a huge, untapped potential for employment expansion (Sargent, 2023).

Most Wikiwin students were unemployed prior to Wikiwin. Figure 4.7 shows that most Wikiwin students (69%) have no work income, with 50% receiving government income only and 19% having no income. Only one-quarter (25%) had full-time (greater than 30 hours) employment income, and 6% had a seasonal job. These youth had a median income of \$8,880 pre-Wikiwin. At \$8,880, their median income was lower than the Indigenous population's average median income of \$41,760 (aged 25-64). Further, pre-Wikiwin students' median income was much lower (one-sixth) than that of non-Indigenous Canadians (aged 26-64), at \$50,400 (Indigenous Services Canada, 2023).

Despite this low income, their young age and poverty level, most Wikiwin students had children to raise. Most (65%) of Wikiwin students had children. For example, one Wikiwin youth had six children. Wikiwin improved financial assets through an earn-as-you-learn program. The KDC development corporation of YFFN partnered with Dr. Thompson to be the Wikiwin students' academic supervisor for an MITACS internship, which tripled their training funds.

Post-Wikiwin median income increased to \$45,576. Post-Wikiwin, students' median income was higher at \$45,576 than the Indigenous population's median income of \$41,760 (Indigenous Services Canada, 2023). Additionally, post-Wikiwin median income increased from one-sixth to nine-tenths of the non-Indigenous Canadian (aged 26-64) median income of \$50,400 (Indigenous Services Canada, 2023).

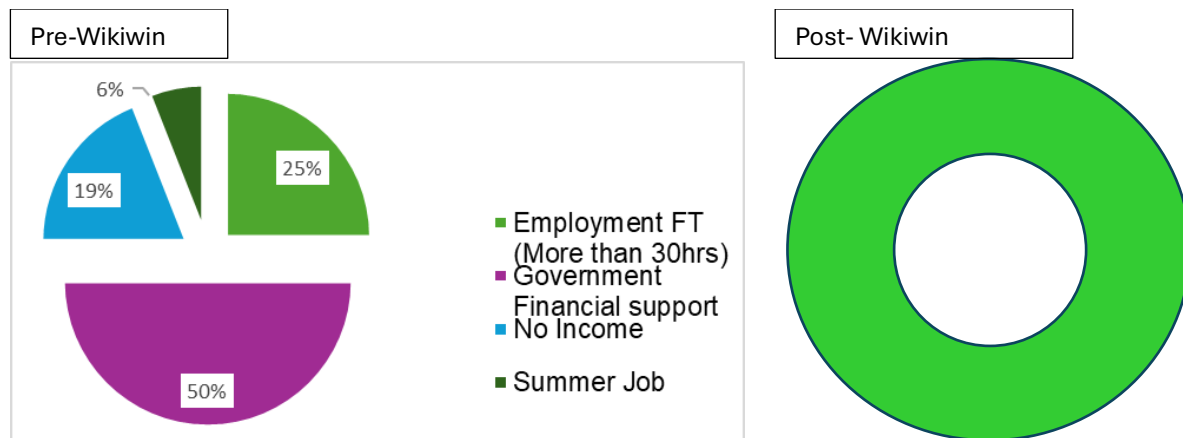


Figure 4.6: Income sources for pre- Wikiwin (n=20) and post-Wikiwin (n=17) students

The Wikiwin student financial assets improved post-Wikiwin. Figure 4.8 shows that increases in satisfaction were higher in the post-survey than in the pre-survey. Wikiwin students had a statistically significant increase in income satisfaction (MD= 1.4, $p < 0.05$), household incomes (MD=1, $p < 0.05$), ability to pay for food (MD 0.9, $p < 0.05$), housing (MD =1.5, $p < 0.05$) and bills (MD = 1, $p < 0.05$), but no significant increase in savings (See Table 4.2). The greater financial gains appear to be Wikiwin-driven, as Wikiwin students received a monthly stipend of \$2500.

Wikiwin improved financial assets through an earn-as-you-learn program. The MITACS funding paid the youth a \$30,000/year/ internship stipend. The internship stipend provided 80% of their income. The students were required to work 35 hours per week on housing and attend classes to receive the stipend. Figure 4.4E shows the work, tutorial, and class schedule for one term.

The Wikiwin students' incomes were transformed from lower than the average income for Indigenous and non-Indigenous Canadians to higher. This higher income is needed to match the higher costs of living in Northern Manitoba and the long work hours. This explains the statistically significant increase in the satisfaction of Wikiwin students with their personal and household

income and their ability to pay for necessities. Many held other jobs, such as security or carpentry work, in addition to their eight-hour Wikiwin homebuilding job.

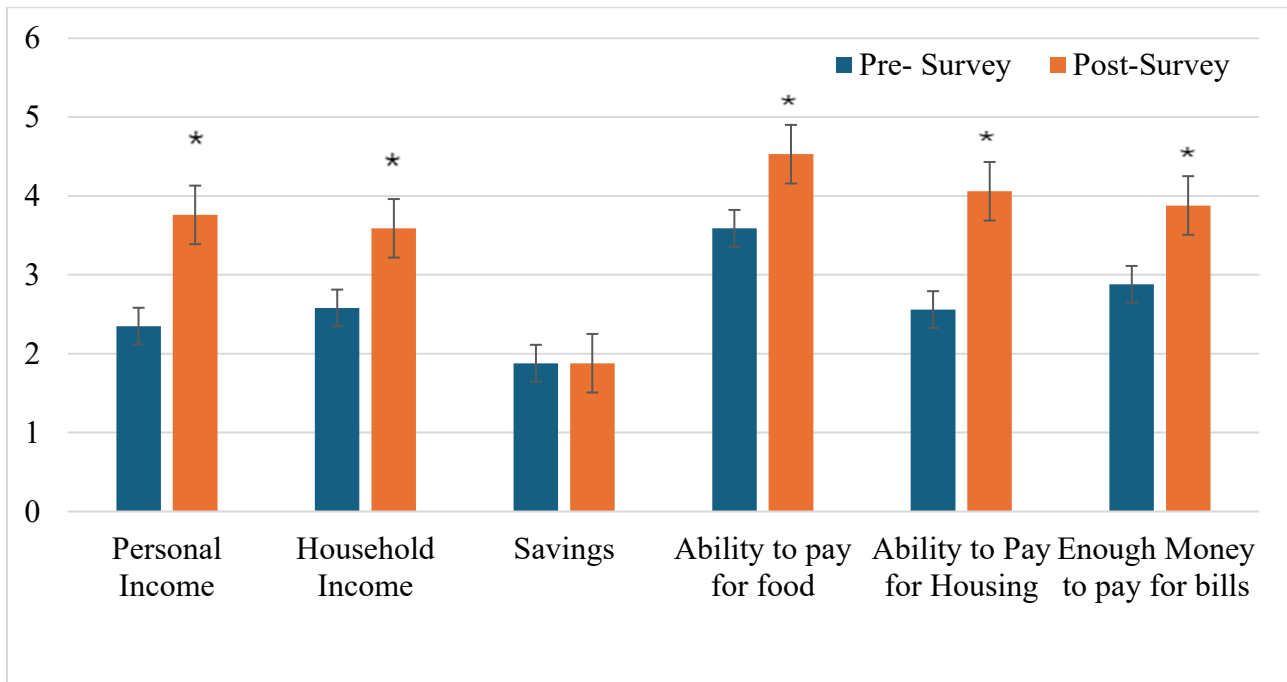


Figure 4.7: Financial assets satisfaction level change pre- and post-Wikiwin survey for Wikiwin students.

Financial assets Rating on a 1-5 satisfaction scale.	Wikiwin students (n=17)		
	MD	SD	Sig. (p)
Personal Income	1.41	1.66	.003*
Household Income	1.01	1.28	.01*
Savings	.000	1.66	1.0
Ability to pay for food	.94	1.14	.004*
Money Owed	1.09	2.31	.069
Ability to Pay for Housing	1.50	2.06	.01*
Enough Money to pay for bills	.99	1.54	.02*

Table 4.2: Pre- and post-Wikiwin partnership's mean difference (MD) and standard deviation (SD) for Wikiwin students for financial Assets. * Statistically significant at <0.05

4.4. Physical assets

Physical assets are the infrastructure in the community, including roads, houses and buildings.

Infrastructure is lacking at YFFN. Figure 4.9 shows the three major challenges to youth's

sustainable livelihoods due largely to the lack of infrastructure. The youth suffer from York Landing’s isolation, housing barriers, and the high cost of living (food, materials, clothing), without all-weather roads. The lack of housing prior to Wikiwin left a few Wikiwin students homeless, and the chief and many seniors had to stay at the motel, which lacked cooking facilities.

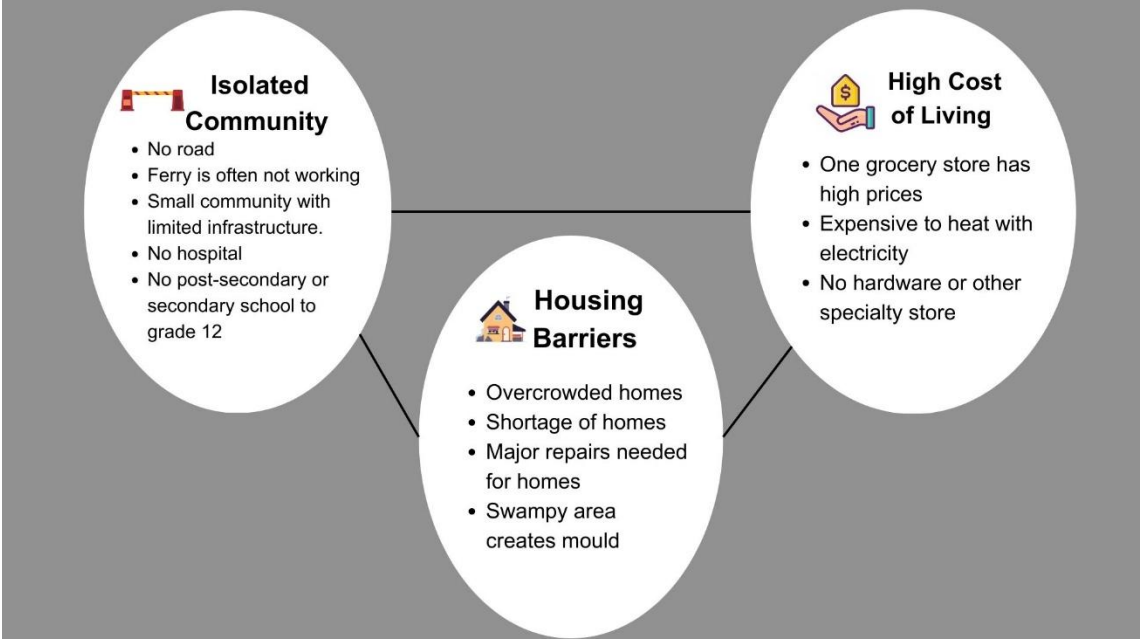


Figure 4.8: The York Factory First Nation’s Community Challenges according to Wikiwin youth

The transformative change needed for housing is local trades education, a local building ecosystem and community-led partnerships. The Mino Bimaadiziwin partnership wrote, with YFFN, a successful \$8.4 million funding proposal for the Canada Mortgage and Housing Corporation’s (CMHC) Housing Supply Challenge: Round 3 - Northern Access (CMHC, 2024b). The CMHC proposal criteria were to “Reduce the time, cost, and risk to access resources for building and maintaining appropriate northern and remote housing supply”. The proposal was called “Wikiwin Polytechnic Institute of York Factory First Nation: Building healthy homes with local resources.” The proposal promised to:

In collaboration with the University of Manitoba, the solution will include a comprehensive education model that includes a co-created curriculum, training programs, housing designs and research on building materials. Focusing on sustainable construction techniques using local stone and wood, the initiative promises to employ residents, cut production costs and enhance housing quality. Additionally, the creation of a year-round trades workshop and a dormitory for student families will boost the local labour force and offer hope to York Factory First Nation and other Indigenous youth.

As part of Stage 2 of the project, the project team will build the Wikiwin workshop. This will not only provide housing for homeless and underhoused students in a family dormitory but also facilitate their involvement in developing carbon-neutral home prototypes using local materials. This phase will also see the expansion of the educational curriculum in partnership with the University of Manitoba, ultimately increasing the labour force capacity of York Factory First Nation and creating more opportunities for its youth.

Wikiwin was successful in funding a housing education ecosystem at YFFN. The proposal included a trades centre, a dormitory to house students and four innovative designs for housing the instructors. This infrastructure is needed to train qualified tradespeople in northern First Nations. A steel building was constructed to deliver carpentry, welding, electrical, plumbing, automotive, and culinary training (See Figures 4.11 and 4.12). The training centre is massive at 150 long x 90 feet wide x 22 feet tall and was constructed by mostly Indigenous workers. The interior work is delayed because the beam could not be delivered due to the ferry cancellation, blamed on Manitoba Hydro lowering water levels on Split Lake.

The Wikiwin students were engaged in state-of-the-art building techniques and designs. Figure 4.10a shows the passive house new design built by the Wikiwin students. The first prototype design build was funded by the stage one of the CMHC rapid rural housing grant. Two others were built by York Landing, funded through other means.

Stage two funding from the proposal included a dormitory and a trades centre. The dormitory in Figure 4.10b is being built by Wikiwin students in 2024-2026, with ten

dormitory rooms, each with bathrooms, and a shared living room and kitchen to be completed in 2026, due to delays from ferry cancellations.



Figure 4.9: a) Home Wikiwin students designed and built; b) Dormitory Wikiwin students designed and are building. Source: Mino Bimaadiziwin, 2025

The trades centre planning meetings occurred weekly. Wikiwin students were invited to attend. These planning meetings involved architects, engineers, University professors, and students to design the building in its early stages. This was a busy time without a professional project manager, as the rush was on to order material shipped before the winter road ended. The steel building went up quickly with mostly Indigenous labour.



Figure 4.10: The Wikiwin Polytechnic Institute under Construction at York Landing in 2024



Figure 4.11: The Wikiwin Polytechnic Institute Shell completed at York Landing in 2025

Wikiwin students' housing situation improved for many. No longer were any Wikiwin students living in the hotel, without cooking facilities or in the old nursing station, which lacked any utilities. Wikiwin students became more independent, with fewer living rent-free in rough situations. See Figure 4.13. All Wikiwin students obtained rental housing and had improved housing affordability. These Wikiwin students are making a difference in housing supply by building good-quality houses, completing three in 2024/2025. These added to create a record number of YFFN houses built of 10 in 2025, which has resulted in less homelessness. The youth are also constructing the dormitory.

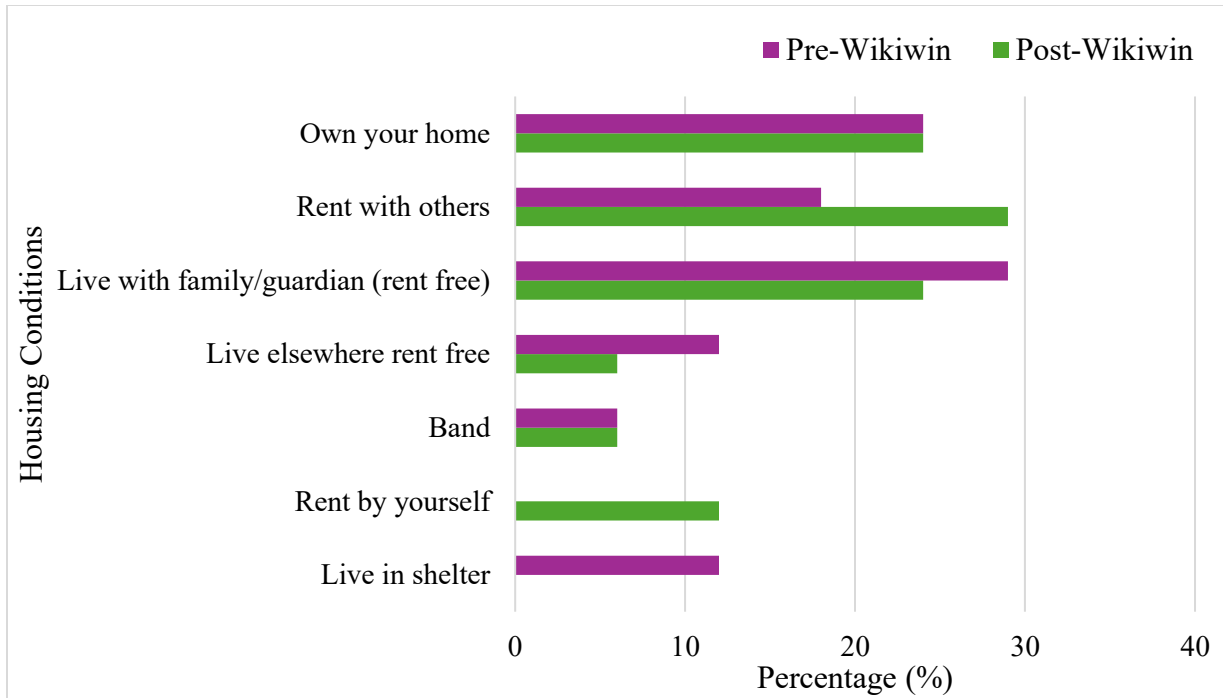


Figure 4.12: Wikiwin Students Housing Conditions Pre- and Post-Wikiwin Training



Figure 4.13: Radiant floor installation by Wikiwin students in their new passive solar design

The Wikiwin students are earning as they learn. Wikiwin students work with a job coach who is an experienced builder. The coach is providing hands-on experience and teaching about foundation construction, framing, insulation, drywall, siding, roofing (shingles), cabinets, interior finishing, painting, in-floor heating systems, deck construction, and stair construction. The Wikiwin students are confident in their ability to apply state-of-the-art techniques to build using some passive housing, fire-resistant building materials and in-floor heating (Figure 4.14).

The physical capital remains limited in York Landing, despite the many builds. Despite progress, many houses and the training centre remain incomplete because the ferry cancellation delayed the delivery of building materials. Although the ability to pay for housing statistically significantly improved (MD = 1.50, $p < 0.05$) (see Table 4.2), housing stability (MD = -0.33, $p > 0.05$) and grocery stores (MD = 0.04, $p > 0.05$) did not. See Figure 4.15 and Table 4.4. The lack of infrastructure without a ferry is negatively impacting housing and other infrastructure, as well as the youth’s sustainable livelihoods.

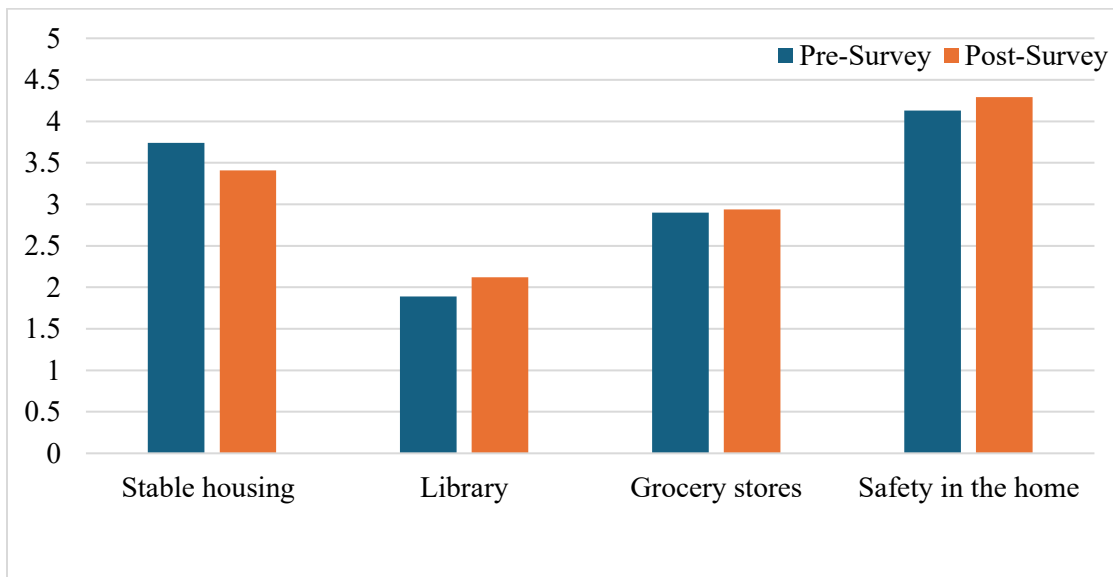


Figure 4.14: Physical assets satisfaction level pre- and post-Survey for Wikiwin students

Physical Assets Rating on a 1-5 satisfaction scale.	Wikiwin students (n=17)		
	MD	SD	Sig. (p)
Stable housing	-.33	2.22	.55
Library	.23	1.76	.59
Grocery stores	.04	.97	.86
Safety in the home	.17	1.77	.70

Table 4.3: Pre- and post-Wikiwin partnership’s mean difference (MD) and standard deviation (SD) for Wikiwin students for physical Assets. * Statistically significant at <0.05

4.5. Social assets

Wikiwin improved students' satisfaction with social assets. Wikiwin students experienced a large statistically significant gain in work networks (MD=+1.7, p<0.05). See Figure 4.16 and Table 4.5. The other social assets, including family support, friendships, relationships with mentors, skills in getting along with others and general understanding of issues, improved slightly (0.12 to 0.55) but not statistically significantly.

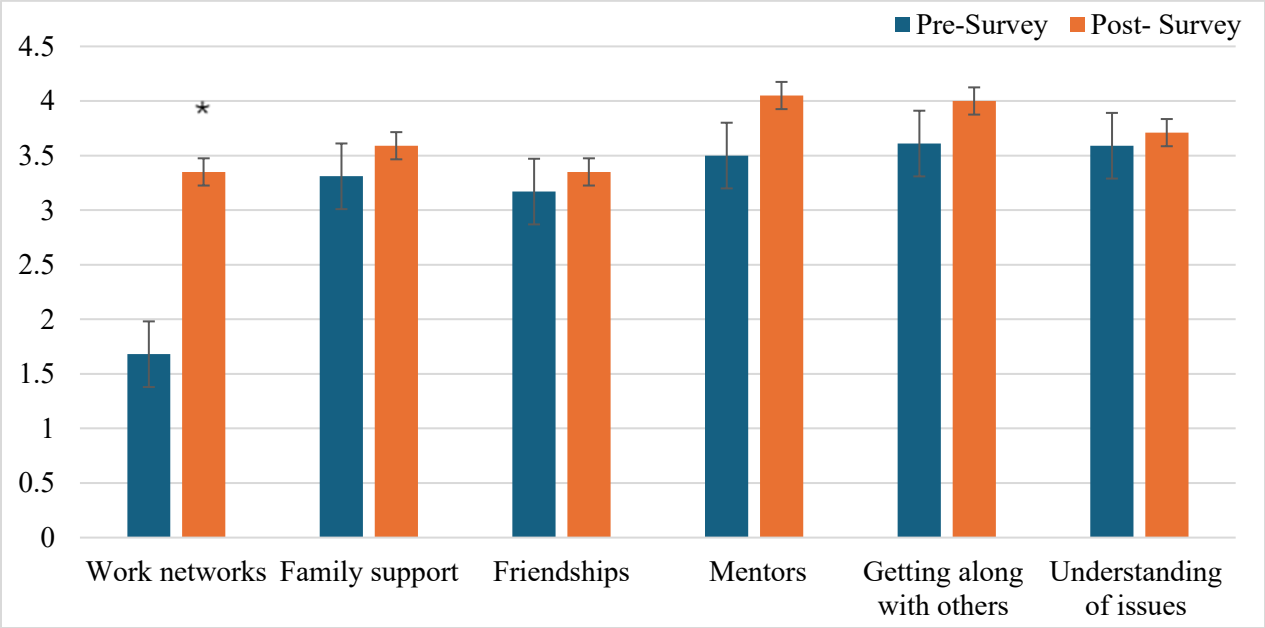


Figure 4.15: Social assets satisfaction level change pre- and post-Wikiwin partnership for Wikiwin students. * Statistically significant at <0.05

Social assets Rating on a 1-5 satisfaction scale.	Wikiwin students (n=17)		
	MD	SD	Sig.
Work networks	1.68	1.69	.001**
Family support	.28	1.25	.37
Friendships	.18	1.34	.59
Relationship with mentors	.55	1.17	.07
Skills in getting along with others	.39	1.08	.15
General understanding of issues	.12	.60	.43

Table 4.4: Pre- and post-Wikiwin partnership’s mean difference (MD) and standard deviation (SD) for Wikiwin students for Social Assets. * Statistically significant at <0.05.

4.6. Researcher’s Reflections

In assessing the impact of the Wikiwin education program, I recognized that my research journey evolved far beyond formal data collection. The interactions and relationships I built during this time significantly enriched the scope and impact of my research work. A significant aspect of my learning blossomed from the moments of interaction with the youths, where being present was key. Helping students access online resources and navigate their university applications, admissions, and course registration revealed barriers and challenges inherent among the youth.

These barriers include accessibility barriers, limited familiarity with digital platforms, internet connections and personal and emotional weight of asking for help. I was able to relate to their personal struggles in public speaking, anxiety, and other challenges they faced. The interactions granted me deeper insight into the challenges these students face, which would never have been visible through surveys alone. Over time, I gained their trust and earned their access.

Also, by attending meetings, taking minutes, and spending time in community spaces during workshops, where the students are present, I was constantly absorbing information about communication styles, decision-making processes, and the social dynamics that have shaped the Wikiwin Education program. These observations informed my interpretations just as much as the formal instruments did. They helped me understand why certain outcomes emerged, how

participants made sense of the program, and what structural challenges persisted beneath the surface.

Reflecting on this, I saw that my research design was not limited to surveys and document analysis. My research design was shaped by the relationships I formed, the responsibilities I carried, and the trust that allowed me to witness aspects of community life that my methodological design did not easily capture. Trust is not something granted automatically, but it is built through consistency, humility, and showing up in ways that matter to people. These moments taught me that research with and for First Nations communities is relational, requiring patience, humility, and responsiveness.

Research with Indigenous people is not just about collecting data. Indigenous research honours stories, respects processes, and understands that knowledge emerges through relationships. My relational and observational experiences strengthened my analysis. They grounded my claims in lived realities. This reflection has helped me appreciate the full scope of my role and the multiple ways I was gathering insight, even when I did not initially recognize those moments as part of the research itself.

4.7. Conclusion

This longitudinal survey showed what a difference Wikiwin is making. The pre-/and post-Wikiwin partnership results for Wikiwin students showed statistically significant increases in satisfaction across many assets. Wikiwin students increased their human, financial and social assets for many factors. The Wikiwin students' levels were typically higher across most assets in the post-survey compared to the pre-survey, indicating that the program was making a change. Mature students who had previously only attained some secondary school, passed university courses, and benefited

from job training that applied to their lives and home. The hiccup and delays of grade 12 students not being admitted due to grades and having to wait meant some students who wanted to be a Wikiwin student could not.

The YFFN community benefited from Wikiwin as well. The university PI of Mino Bimaadiziwin led the application for the \$8.4 million grant competition. This competition funded a state-of-the-art trades school building, four prototype housing designs, and dormitory facilities for postsecondary students. The YFFN was recognized as the regional learning hub of the eleven Keewatin Tribal Council communities. Funding from the partnership created a housing and education ecosystem that aims to scale up the number of programming types and the number of students in 2027.

Major infrastructure developments were built due to Wikiwin. A new design prototype for a one-bedroom, training centre, three other new prototypes for instructor/student family housing and a dormitory in three years. This training centre will produce homes year-round and provide ready-to-move housing for other communities in the future. Wikiwin created new healthy, culturally appropriate, resilient designs for single- and extended-family homes using local labour. These new designs used helical piles, passive solar design, and metal roofing/cladding/beams to be fire resilient.

4.8. Summary

This chapter documented the findings of this study. The paired t-test analysis was conducted only on participants with pre- and post-survey responses (n=17). Satisfaction across four sustainable assets (human, financial, social, and physical) was analyzed. The findings show a statistically significant ($p < 0.05$) increase in satisfaction across three of the four sustainable livelihood assets.

In contrast, physical assets were not statistically significant ($p > 0.05$). The next chapter focuses on the discussion, conclusion, and recommendations based on the findings of this chapter.

Chapter 5: Discussion and Conclusion

5.0. Discussion and Conclusion

The Wikiwin education program increased satisfaction with many sustainable livelihoods for Wikiwin students. I saw the difference this program was making in people's lives. The students seemed much happier and were more actively engaging with learning the further the students got in the Wikiwin program. Community-led interventions are critical to community development and self-determination in Indigenous communities (Hudson & Vodden, 2020). This study agrees with previous studies that post-secondary educational interventions in remote First Nation communities improved skills and employment outcomes (Oni et al., 2023; Melvin, 2023).

This study holistically evaluated Wikiwin's impact on the youth's sustainable livelihoods. The Wikiwin students' survey showed a statistically significant increase in human, social, and financial assets but not in physical assets. Human assets included improved educational outcomes and skills. The Wikiwin Partnership provides a transformative model for both housing and education systems in YFFN. Wikiwin's theory-of-change vision for education and community development was partly realized for the short-term goals. Building partnerships and educational programming resulted in housing improvements, partnerships to access additional resources and expertise, and increased educational attainment among students. Figure 5.1 shows how Indigenous community-led education can result in benefits to both the community and the students.

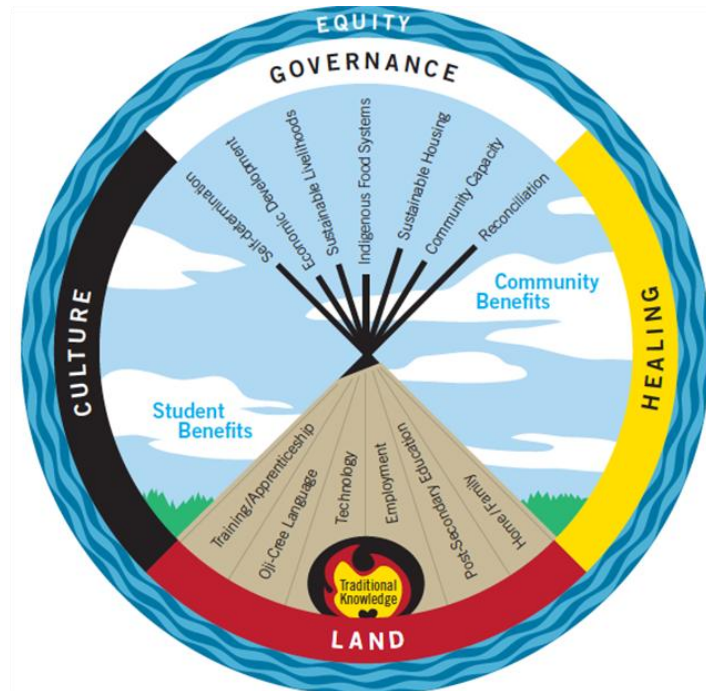


Figure 5.1: The Community-Student benefits of Bringing Education Home (Source: Mino Bimaadiziwin Partnership with permission)

5.1 Education

Wikiwin provided many educational benefits. The Wikiwin-University partnership provided a pathway for Indigenous students at YFFN to pursue university studies. This pathway not only provides access but also supports these students to succeed in university courses, while financing their schooling through financial internships. All Wikiwin students passed some University courses. Wikiwin students learned construction, carpentry, housing design, computer use, Indigenous knowledge, and workplace safety. This approach, practiced by Wikiwin, is known to be effective: Individuals participating in experimental, practical learning experiences retained more than 60% information when engaged in hands-on learning (Main, 2023).

Wikiwin’s hands-on approach is also considered effective: many studies have found that collaborative learning contributes to problem-solving (Almulla, 2020; Cain & Cocco, 2013; Gannar & Kilani, 2025). As Wikiwin students passed university courses and built houses, we have

evidence that the Wikiwin program equipped them with technical skills and educational success. Thus, the Wikiwin program is expected to enhance their employability, equipping them with problem-solving, job skills and educational outcomes necessary for success in the labour market (de Sousa et al., 2021).

This participatory research supported education for YFFN through the Wikiwin-University partnership. I helped youth sign up for courses. I noted many barriers, including technical barriers of the two-step verification methods and other aspects of distance education. Most of these youth lacked cell phones and needed assistance accessing the website to sign up. To improve access to education, more support is needed for First Nation youth in remote communities.

Education disparity among the Indigenous community reflects the systemic racism of colonial policies (NCCAH, 2017). Indigenous community-led solutions, such as the Wikiwin program, are needed to transform education and housing in Indigenous communities and address these systemic disparities. Replicating these educational programs offers hope that Indigenous solutions can address the unique challenges these communities face. Therefore, community-based postsecondary education is a promising approach to break down the educational barriers within the Indigenous communities (Quewezance & Street, 2025; CIC, 2024). These educational barriers include geographical barriers, racism, and intergenerational trauma from residential schools (D'Antimo et al., 2025).

First Nation youth are less likely than non-Indigenous youth to complete high school and to participate in postsecondary education (Statistics Canada, 2023a). These statistics for First Nation youth are worse for those living on-reserve, although completion and participation rates have been improving over time (Statistics Canada, 2023a, 2023b). Disparities in completion and participation rates are closely linked to barriers of geographic isolation, underfunding, limited

access to postsecondary institutions, and a lack of culturally safe environments (TRC, 2015; D'Antimo et al., 2025).

I witnessed how Wikiwin education transformed both education and housing at YFFN. These students took courses and passed courses without grade 12, while other students taking teaching at UCN were failing and dropping out. Wikiwin addressed barriers to education by bringing education home to the community, thereby removing geographical barriers for YFFN. Education interventions that integrate Indigenous knowledge with skills training to boost educational outcomes are valued in decolonizing education (Negahneewin Research Centre, 2020). I saw how Wikiwin links academic outcomes to hands-on skills training, fostering both human capital and community development that builds homes.

Wikiwin is one localized response to the calls to improve education for First Nation people with YFFN. The significant educational outcomes at YFFN show community-led education is effective. With low rates of high school completion and postsecondary participation among First Nations youth, there is a pressing need to improve high school completion, postsecondary engagement and learning supports for First Nations youths (Statistics Canada, 2023a, 2023b). Wikiwin's educational success addresses gaps in educational attainment among First Nations youth at YFFN. Wikiwin incorporated academic learning within a relevant, community-led approach, consistent with recent policies that emphasize First Nations control and representation in First Nations education and community-based postsecondary programming (Indigenous and Northern Affairs Canada, 2024; Indigenous Services Canada, 2024a). The Wikiwin model replicates other successful community-led models, including the Mino Bimaadiziwin Homebuilder Program in Wasagamack and Gardenhill First Nations (Oni et al., 2023), the Indigenous Trades training program in British Columbia, and the First Nations Technical Institute in Ontario

(Maclean's, 2024). These community-led Indigenous education examples teach practical skills in the community to improve educational outcomes and strengthen Indigenous self-determination.

The emergence of post-secondary institutions, such as Wikiwin Polytechnic Institute, marks a significant step toward bringing education home to First Nations for YFFN and northern Manitoba communities. A community-led approach to education that combines academic credentials with practical skill acquisition in First Nation communities has long been sought by First Nations in Canada (Employment and Social Development Canada, 2017; Loprespub, 2025). Wikiwin Polytechnic Institute is in the initial phases of providing this post-secondary education to YFFN and the region. Wikiwin is a regional learning hub for the Keewatin Tribal Council that partners with universities and colleges. Thus, education programs can be provided in YFFN's state-of-the-art facility, which will serve YFFN community members and Indigenous people in the Keewatin region.

5.2 Social assets

Social assets are essential elements of the sustainable livelihood framework (SLC, 2019). For First Nation communities, these assets are deeply intertwined with their cultural identity. Social assets play a crucial role in fostering trust and reciprocal actions (Mignone & Canadian Population Health Initiative, 2023). Social assets play a vital role in collective efforts toward common goals, promoting individual participation in community development (Mignone & Canadian Population Health Initiative, 2003).

This research found that the Wikiwin program improved YFFN students' social assets. This youth cohort provided collective participation in learning, with research showing social networks are enhanced through collective participation (Begay et al., 2024). This research agrees with other studies that community-led interventions have a positive impact on social connections among

students (Begay et al., 2024; Kincaid et al., 2021). Similarly, Oni et al. (2023) found that the Mino Bimaadiziwin Homebuilder program not only improved technical skills but also strengthened social ties. Social ties are improved through mentorship and intergenerational learning (Oni et al., 2023). Social ties boost students' sense of belonging and community identity, which are key elements of social asset satisfaction.

The Wikiwin intervention integrated social assets by encouraging mentorship, leadership development, and culturally grounded programming. This research agrees with other research that mentorship and peer support enhance students' engagement, promoting a sense of identity and creating inclusive experiences (Bentham et al., 2019; Reed & Diver, 2023). Social assets promote resilience, self-efficacy, and empowerment, often lacking in mainstream educational settings (Bentham et al., 2019; Reed & Diver, 2023). The inclusion of social assets in the Wikiwin program cultivated a positive educational environment, promoting teamwork, an essential component for achieving success and ensuring community sustainability.

Improved work networks among the Wikiwin students statistically significantly enhanced other soft skills integral to professional environments. I witnessed how the work network relationships helped overcome public speaking anxiety, contributing to increased motivation and optimism. The research showing enhanced satisfaction with social skills reinforces the idea that collaborative learning strengthens interpersonal bonds and teamwork (Han & Son, 2020). The social supports in the Wikiwin program resulted in a supportive, caring environment for people to learn, equipping individuals with the skills needed for future success.

5.3 Financial Assets

The financial assets within First Nation communities are critically low (Statistics Canada, 2022), including low incomes in YFFN. This disparity in economic resources for schools and

opportunities is a grave inequity that reduces access to quality education and housing (AFN, 2024). Reduced funding for schools on reserves and inability to mortgage homes on reserves creates infrastructure deficits. The infrastructure needs are estimated at \$350 billion and \$500 billion, with housing being a particularly critical area of concern (Addenda Capital, 2025). Additionally, the Indian Act restricts the First Nations' ability to engage in market borrowing for housing and other development projects (First Nations Finance Authority, 2023).

The lack of financial autonomy for First Nations poses development challenges. The unmet infrastructure demands for First Nations perpetuate a cycle of poverty. Limitations are linked to federal land tenure, which further prevents equitable access to capital markets (First Nations Finance Authority, 2023). Interventions are urgently needed to improve financial independence and address the infrastructural needs of First Nations.

The YFFN is actively working to counteract these barriers by creating local economic benefits with Wikiwin. Wikiwin trains and educates youth at YFFN who deliver housing and infrastructure projects, thereby reducing reliance on external contractors. By so doing, funds were circulated within the YFFN community to build both household and collective financial stability. Strengthening financial assets through skills training yields measurable improvements in livelihoods. Indigenous-controlled financial institutions under the First Nations Finance Authority (2023) have expanded borrowing capacity, but programs integrating education with trades remain essential to convert human capital into financial returns amid systemic inequities.

Bringing education home kept the education, training, and housebuilding funding in YFFN. Further, by building with local resources where possible, more funds could flow to the community and stay in First Nations. Typically, First Nations are described as a leaky bucket, as funds flowing in are spent mostly outside the community, with outside contractors and businesses benefiting.

However, Figure 5.2 shows how bringing education home transforms economic development to keep education and housing development dollars in YFFN.

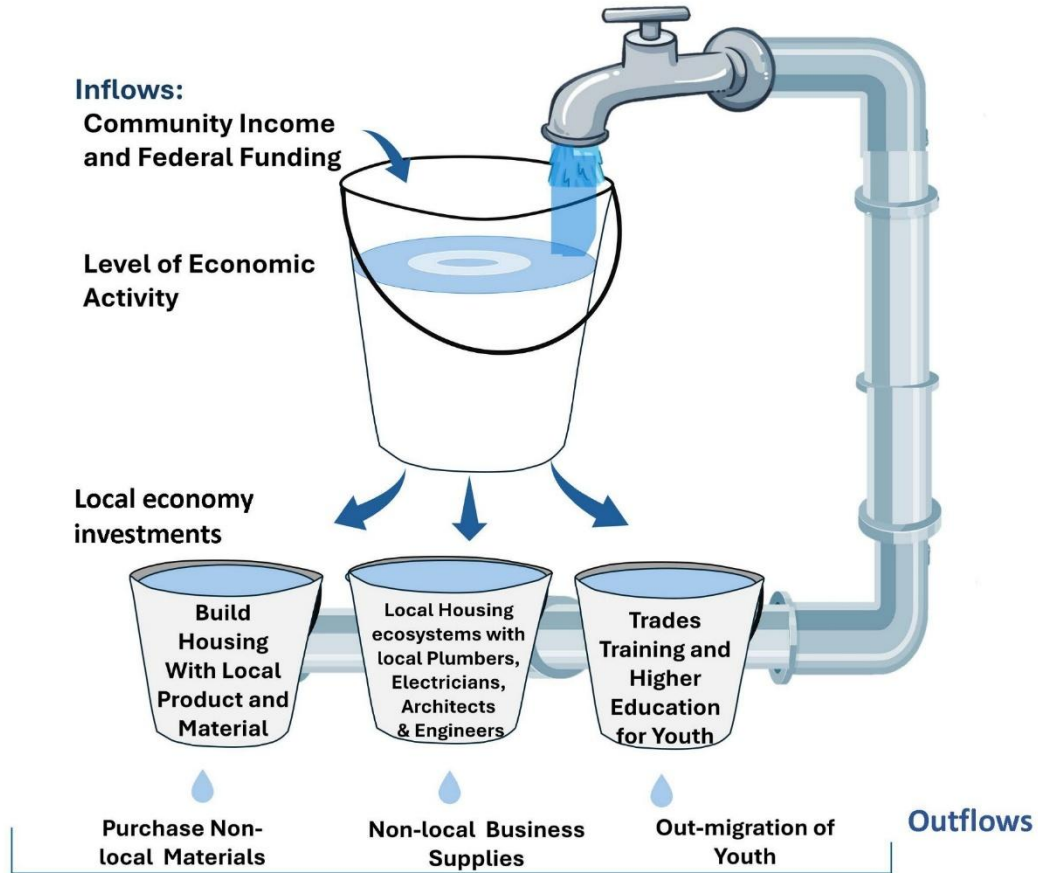


Figure 5.2: Bringing higher education home is economic development that solves the leaky bucket, so First Nations retain different budgets locally. Source: Thompson with permission.

Most remote First Nations, including YFFN, have persistently high unemployment rates, coupled with a lack of adequate infrastructure. The lack of income and facilities contributed to a constrained financial capital environment at YFFN. Employment rates are below 50% on-reserve, creating labour shortages and underutilizing local workforce potential (National Indigenous Economic Development Board, 2024; NCCIH, 2024).

Wikiwin youths' income, prior to Wikiwin, was very low. At \$8,880, the median income of pre-Wikiwin students was significantly lower than the Indigenous population's average median income of \$41,760 (aged 25-64) and one-sixth of the non-Indigenous Canadians' income of \$50,400 (aged 26-64). Post-Wikiwin, the median income increased to \$45,576, surpassing the median income of First Nations on-reserves (\$32,000) and the Indigenous population's income (averaging \$41,760). The post-Wikiwin income (\$45,576) is still below that of non-Indigenous Canadians (\$50,400), reflecting ongoing income disparities between First Nations and non-Indigenous Canadians (Indigenous Services Canada, 2023). Without tailored strategies addressing the specific needs and challenges faced by low-income individuals and families, the ongoing effects of poverty are likely to persist. Whereas Wikiwin tailored the strategies to address the needs and challenges during the study period to improve finances and well-being.

Wikiwin's project-based education program effectively addresses the financial gap. Students received a \$2500/month stipend. A higher rate than the Boreal Homebuilders in Wasagamack and Garden Hill (Oni et al., 2023). The Wikiwin program contributes to improved financial outcomes for students. Students gained financial stability through this intervention. Tailored interventions addressed the unique challenges faced by First Nation communities are crucial for supporting broader goals of economic empowerment and financial stability.

Apprenticeship at YFFN is wanted at the post-secondary and secondary levels. Apprenticeship education in First Nation secondary and post-secondary schools could be a game-changer. Apprenticeships in secondary school, to retain students who are kinesthetic learners. Apprenticeship education in secondary schools will allow more students to achieve their secondary school diplomas in their communities. The needs-based funding education policy was recently adopted for First Nations, which could provide funding for apprenticeships (AFN, 2024). With a

need for housing and capacity building across many First Nations, carpentry apprenticeship education should be funded in secondary schools on-reserve, as is done in off-reserve schools.

5.4. Physical Assets

The impact of Wikiwin on the youth's satisfaction with physical assets was limited. As this remote YFFN community has no road and had its ferry cancelled for most of two years, the youth experienced these physical assets blocking their ability to do work as part of the Wikiwin program and personally. Some housing material could not be shipped during the winter due to icy roads, and without a ferry, delaying building. Further, the in-person course was delayed a few times due to a lack of ferry and the limited access through the airplane, which, with a short runway, often cancels flights. The Wikiwin's success in such a harsh, isolated environment shows the power of a community-led education program to transform housing and education, particularly through postsecondary partnerships.

The YFFN-university partnership engaged academic collaborators to bring needed expertise, funding, proposal-writing skills, and educational resources. The Wikiwin partnership was critical in its success securing a \$8.4 million grant. This grant funded the construction of a state-of-the-art trades centre, which will also serve as a housing factory, allowing houses to be built all year round. Further, this grant funded a dormitory to house students, and four new designs for housing instructors, which were built with local labour.

To reconcile the housing crisis, the AFN recommends an Indigenous, human rights-based approach as the foundation of the First Nation Housing strategy (AFN, 2020). UNDRIP Article 23 demands an Indigenous-led approach, as Indigenous peoples have the right to determine and develop priorities and strategies for housing (AFN, 2020). Indigenous peoples have the right to be actively involved in developing and determining health, housing and other economic and social programs affecting them and administering such programs through their institutions. Learning

hubs in Manitoba and other provinces are a project funded by Mastercard Foundation ELeV, rather than the government, which is an important start until the government catches up to support this educational innovation.

Wikiwin was a pilot project that offered a model for First Nation-university partnerships that held promise. Based on the positive learning outcomes of Wikiwin and other community-led homebuilding education, community-led programs offer a viable approach to build First Nation capacity and housing. This approach should be seriously considered by First Nations and policymakers to address the gap of 150,000+ homes in First Nations. This approach advances education, social, and economic development, with promises of latent infrastructure impacts.

Wikiwin helped reduce the impact of the lack of roads on education. However, further access roads on First Nations reserves are needed to create a sustainable home-building ecosystem and decolonizing policy. The Indian Act creates inequitable housing, health crises, and human rights violations due to the shortage and inferior quality of IR housing stock. Due to discriminatory restrictions on housing on First Nation reserves. With this colonial government control, the housing is overcrowded and inadequate. The class action by Chief Flett of St. Theresa Point First Nation, which was found to be the funding intervention needed. The residents of St. Theresa Point First Nation and other class-action members should have had the federal government provide them with adequate housing on their reserves from June 12, 1999, until the present — the class period defined in the lawsuit (Chang, 2025). If the court decision agrees to provide the \$5 billion in damages for First Nations with unhealthy housing and the requirement for housing equity, this could fund community-led housing education and housing in many First Nation communities.

5.5. Conclusion

This research found that the Wikiwin program has significantly increased satisfaction with most sustainable livelihood assets for YFFN students. This study demonstrated the positive impact of YFFN's Indigenous community-led partnerships with the university for building homes and capacity. The Wikiwin program contributed to community development by addressing gaps in education and housing in the YFFN community.

These findings align with existing literature showing that community-led interventions are instrumental in upholding Indigenous self-determination, building capacity, and addressing disparities experienced by First Nations communities (Hudson & Vodden, 2020; Oni et al., 2023; Reed & Diver, 2023). Despite limitations from a small sample size (n=17) of Wikiwin students, the results highlight Wikiwin's transformative potential, akin to that of the Mino Bimaadiziwin Homebuilder program in Wasagamack and Garden Hill (Oni et al., 2023). Future research should expand longitudinal tracking to quantify long-term impacts on self-governance and policy alignment. Community-led post-secondary education that incorporates home building has the potential to improve the sustainable assets of the youths, and in return, promote community development.

5.6. Recommendations

This research recommends that:

1. Education should be brought home to provide opportunities for secondary and post-secondary education in First Nations. These opportunities should include trades and apprenticeships financed through needs-based funding.
2. Strategic partnerships between First Nations and post-secondary institutions, with others, should be implemented to build capacity. Alliances should be leveraged among First

Nations, post-secondary institutions, construction industries, partners, and non-governmental organizations to co-design scholarships, internships, and community-led research that drive sustained investment and knowledge sharing.

3. Canada's post-secondary institutions should incorporate two-eyed seeing approaches of Indigenous stories, Indigenous language, and land-based teachings and technical skills.

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Abbreviations

Abbreviations	Full text
CAD	Computer-Aided Design
CMHC	Canada Mortgage and Housing Corporation
KDC	Kawéchiwasik Development Corporation
OCAP	Ownership, Control, Access, and Possession
SLC	Sustainable Livelihood Canada
SLF	Sustainable livelihood Framework
SPSS	Statistical Package for the Social Sciences
TCPS	Tri-Council Policy Statement
WISE	Work Integration Social Enterprise
YFFN	York Factory First Nation

Appendix

Appendix A



UNIVERSITY
OF MANITOBA

Research Project Title: Northern Teaching Lodges: Learning Partnership for Community Development and Mino Bimaadiziwin in First Nation Communities

Oath of Confidentiality

I _____Mojibade _____ Odejinmi _____

(Print name)

understand that all of the information I have access to relate to the study entitled: Northern Teaching Lodges: Learning Partnership for Community Development and Mino Bimaadiziwin in First Nation Communities must be kept confidential. To ensure participant privacy and confidentiality of information, I agree that I will not disclose or discuss any information disclosed by study participants. My signature below indicates my pledge to maintain the confidentiality of all participants in the survey.

_____Mojibade _____ Odejinmi_____

(Signature)

_____2023/08/31_____

(Date)

Appendix B



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Research Ethics and Compliance

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AMENDMENT APPROVAL

September 11, 2023

Principal Investigator: Shirley Thompson
Protocol Number: HS21434 (J2017:126)
Protocol Title: *WISE Longitudinal Evaluation Project*

Human Ethics Office as designated by , REB2

Research Ethics Board 2 has reviewed and approved your Amendment Request submitted on August 31, 2023 to the above-noted protocol. The Human Ethics Office (HEO) is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans- TCPS 2 (2022)*.

This approval is subject to the following conditions:

- i. Approval is granted for this amendment only.
- ii. Any further changes to the protocol require subsequent amendment approvals from the HEO before implementation.
- iii. Any deviations to the research or adverse events must be reported to the HEO immediately through an REB Event.
- iv. Amendment Approvals do not change the protocol expiry date. Please refer to the original Protocol Approval or subsequent Renewal Approvals for the protocol expiry date.

Appendix C



APPENDIX B



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http://www.umanitoba.ca/academic/institutes/natural_resources

Research Project Title:

The WISE Longitudinal Evaluation Project: Survey about Individual Job Training Experience,
Follow-Up: Youth Job & Skills Training Survey

Principal Investigator and contact information:

Shirley Thompson
Natural Resources Institute, University of Manitoba
70 Dysart Road, Winnipeg, Manitoba, R3T 2N2
Phone [REDACTED]

Researchers:

Mojibade Odejimi, Natural Resources Institute, University of Manitoba Email:
[REDACTED]

Sponsor:

Social Sciences and Humanities Research Council (SSHRC)

This consent form, a copy of which will be left to you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned or information not included here, please feel free to ask. Please take the time to read this carefully.

The goal of this study is to follow up on your employment training experience to find its impact economically, socially and psychologically. You took your first survey a few months ago and this is the follow-up survey. We will contact you again to conduct another follow-up survey once a year for the next three years. We will provide compensation of \$60 in value for taking each of the surveys and compensation of \$70 in value for each of the interviews. The survey, which is estimated to be 25 to 30 minutes in length, is part of a project funded by Employment and Social Development Canada and is being conducted by researchers at the University of Toronto.

Your participation in this study and the data generated through the study are completely confidential. This means that your responses will not identify you. We ask you to insert your name and your contact information only so the leaders of the research team have a record of who has participated and for us to provide you with the compensation for your participation and to follow-up with you at a later time.

If you wish to be informed of the study's results please check the box on the consent form. Your responses will be stored on a secure server and/or an encrypted file on the researcher's computer during data collection and analysis. All survey responses, including those that were provided by respondents on paper, will become part of a dataset stored online



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At the end of the study the information you provided, which cannot be used to identify you, will become part of an open-access dataset that can be shared among researchers, policy actors, and other stakeholders who may also be interested in studying participant outcomes of work integration social enterprises in Canada. **To be clear, the information you provide will be made available to others but no one outside of the research team will be able to identify you from the information you provide.**

Even if you agree to participate, you can decline to answer any question on the survey by skipping over the question. You can also withdraw from the study without explanation at any time. If, after completing the survey, you decide that you would like to withdraw your results from the study, you may do so by emailing Dr. Shirley Thompson at s.thompson@umanitoba.ca. The same is true if you agree to a follow-up interview to the survey. All of this information will be explained to the individuals when we seek their consent to participate in the study. Your organization may also contact the University of Manitoba Ethics Office at humanethics@umanitoba.ca or (204) 474-7122 with questions relating to your rights as a research participant.

The possible benefit of this project is that it will provide longitudinal information regarding impacts of participating in skills/employment training programs for youth over time and provide a modest compensation for participation. I hope that you decide to participate. Thank you.

Sincerely,


 Shirley Thompson, PhD, M Eng., B.Sc.
 Associate Professor, Natural Resources Institute, University of Manitoba


<http://ecohealthcircle.com>

The research study you are participating in may be reviewed for quality assurance to make sure that the required laws and guidelines are followed. If chosen, (a) representative(s) of the Human Research Ethics may access study-related data and/or consent materials as part of the review and will be upheld to the same level of confidentiality that has been stated by the research team.

1. I _____ have read and understood the study description above and consent to participate in this study under the terms described above.

Yes
 No

(Need more information: Contact the researcher at the email address above.)

2. If you would like to receive a copy of the study's results, please provide an email address where we can forward the report: _____

Participant's Signature _____ Date _____ (MM/DD/YYYY)

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way



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does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the University of Manitoba Joint Ethics board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator at 204-474-7122 or humanethics@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

The following questions are similar to the ones you did in the baseline survey a few months ago. This is how we can follow-up on your changes over time.

**Remember you can choose to skip any questions you do not wish to answer*

For further details about the study, please contact us at [REDACTED]
The research study you are participating in may be reviewed for quality assurance to make sure that the required laws and guidelines are followed. If chosen, (a) representative(s) of the Human Research Ethics may access study-related data and/or consent materials as part of the review and will be upheld to the same level of confidentiality that has been stated by the research team.

1. I _____ have read and understood the study description above and consent to participate in this study under the terms described above.

APPENDIX C:

Qualifying Questions for Individual Survey

For this study you should be from age 18 to 35 and be entering a training program that will help you get job and life skills.

- 1. Do you fit the description above?
 Yes
 No

Personal Profile

- 2. Your year of birth: _____
- 3. How do you identify your gender (e.g., woman, man, transgender woman, gender fluid)? _____
- 4. Your country of birth? Canada/Outside of Canada
 - 4a. If born outside of Canada, where? _____
 - 4b. If born outside of Canada, what year did you arrive in Canada? _____



No

12. What is your highest level of schooling (circle one)?

- A. Some high school
- B. Completed high school
- C. Some post-secondary schooling
- D. Completed a college diploma or certificate
- E. Completed a university degree
- F. Completed a university professional degree
- G. Other (please describe): _____

13. Do you currently receive income from any of the following sources? (Check all that apply and provide estimates of the monthly amount)

<input type="checkbox"/>	Source of income	Approximate monthly amount (\$) after deductions
	Training (allowance)	
	Employment (F/T -more than 30 hrs)	
	Employment (F/T -less than 30 hrs)	
	Government financial support (e.g., disability pension, social assistance) Please specify:	
	No current income	
	Other sources of income (Please describe):	

14. Why did you enter this training program (circle all that apply)?

- A. To help get a job
- B. To earn more money
- C. To learn about career options
- D. To work towards returning to school
- E. To develop new skills
- F. To meet new people
- G. Mandated by government to participate in training
- H. Other (please specify): _____

15. Prior to joining your current training program, were you (circle all that apply):

- A. In school full-time
- B. In school part-time
- C. Working full-time
- D. Working part-time
- E. Looking for work
- F. In a formal job-training program or an apprenticeship
- G. A single parent out of the workforce
- H. Involved with the criminal justice system
- I. Not in school, not working or looking for work for personal reasons (e.g., anxiety, lack of education or experience)



J. Other (please specify): _____

16. During the past year, have you used the services of a food bank or a similar type of organization with free food to meet your needs?

1	2	3	4	5
Never	Occasionally	Often	Most often	Regularly

17. In your work / job search over the past year, please indicate which of the following challenges you have faced (circle all that apply)?

- A. Lack of schooling
 - B. Lack of job training including credentials
 - C. Lack of employment experience
 - D. Lack of Canadian experience
 - E. Language barriers
 - F. Lack of social contacts who can help you
 - G. Lack of know-how on how to apply
 - H. Anxiety in an interview, job searching or meeting new people
 - I. Lack of proper medical care
 - J. Mental health issues
 - K. Lack of affordable childcare
 - L. Lack of convenient transportation to potential job sites
 - M. Lack of a computer for an online application
 - N. Lack of clothes to dress properly
 - O. Lack of a workplace to meet your special needs such as a disability
 - P. Risk of losing social assistance support including disability pension benefits
 - Q. Criminal record
 - R. Experience of violence in the workplace
 - S. Problems resulting from alcohol/drug use or addictions
 - T. Experience of racism or racial discrimination
 - U. Experience of cultural disrespect
 - V. Experience of sexism
 - W. Experience of sexual harassment
 - X. Other (please explain): _____
-

The Future

18. Thinking ahead three years from now, what type of job would you like to be doing?

19. Thinking ahead three years from now, what income per hour would you like to be earning?

20. Thinking ahead three years from now, what level of schooling would you like to have achieved?

21. If your dreams were fulfilled, what type of job would you like to be doing? _____

22. How do you define success for yourself? _____

** Remember you can choose to skip any questions you do not wish to answer**

Satisfaction with Life

23. Evaluate how **satisfied** you are with each of the following areas of your life using a score of 1 to 5, where **1 is Very dissatisfied** and **5 is Very satisfied**. Select **N/A** if the area is **not applicable** to you. For each item, please circle the number that best describes your situation.

Financially	Very dissatisfied					Very satisfied
How satisfied are you with your						
Personal income	N/A	1	2	3	4	5
Household income	N/A	1	2	3	4	5
Savings	N/A	1	2	3	4	5
Ability to borrow money	N/A	1	2	3	4	5
How much money you owe others	N/A	1	2	3	4	5
Ability to pay for food	N/A	1	2	3	4	5
Ability to pay for housing	N/A	1	2	3	4	5
Enough money to pay bills	N/A	1	2	3	4	5
Personally	Very dissatisfied					Very satisfied
Motivation to get things done	N/A	1	2	3	4	5
Self-confidence	N/A	1	2	3	4	5
Ability to speak out	N/A	1	2	3	4	5
Optimism	N/A	1	2	3	4	5
Self-worth or how you feel about yourself	N/A	1	2	3	4	5
Level of daily stress	N/A	1	2	3	4	5
Health	N/A	1	2	3	4	5
Access to the Following Services	Very dissatisfied					Very satisfied
Stable housing (not at-risk of eviction or homelessness)	N/A	1	2	3	4	5
Library	N/A	1	2	3	4	5
Internet	N/A	1	2	3	4	5
Banking	N/A	1	2	3	4	5
Financial support	N/A	1	2	3	4	5
Grocery stores	N/A	1	2	3	4	5
Affordable transportation	N/A	1	2	3	4	5
Newcomer settlement services	N/A	1	2	3	4	5
Family doctor	N/A	1	2	3	4	5
Childcare	N/A	1	2	3	4	5
More schooling or formal education	N/A	1	2	3	4	5
More training apart from school	N/A	1	2	3	4	5
Your Skills	Very dissatisfied					Very satisfied



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Job search skills	N/A	1	2	3	4	5
Job skills	N/A	1	2	3	4	5
Skills in getting along with others	N/A	1	2	3	4	5
Problem-solving skills	N/A	1	2	3	4	5
Your general understanding of issues	N/A	1	2	3	4	5
Your ability to get a survival job	N/A	1	2	3	4	5
Your ability to get a good-paying job	N/A	1	2	3	4	5
Your leadership abilities	N/A	1	2	3	4	5
Family & Community Relations		Very dissatisfied				Very satisfied
Work networks	N/A	1	2	3	4	5
Neighbour relations	N/A	1	2	3	4	5
Family support	N/A	1	2	3	4	5
Friendships	N/A	1	2	3	4	5
Relationship with mentors (people you look up to and seek advice from)	N/A	1	2	3	4	5
Trusting relationships	N/A	1	2	3	4	5
Political participation	N/A	1	2	3	4	5
Safety in the home (e.g., absence of violence)	N/A	1	2	3	4	5
Neighbourhood safety	N/A	1	2	3	4	5

Thank you for completing the survey! (Just a few more questions)

Would you be willing to do an interview about your experience with employment and job training?
 Yes/No

Please select your preferred method to receive the compensation for your participation in this survey:

- a) Pick up at place of training/work
- b) Sent by mail (provide your mailing address below): _____

We'll be reaching out to you for a follow-up survey. What is the best way for us to get in touch with you?
 (e.g., phone, email, twitter direct message, text message, Facebook)

Please provide detail: _____

***If you wish to be contacted through Facebook, please messenger the project at **Shirley Thompson** (Winnipeg) before you complete the survey, if possible.

Would you be willing to provide the contact of another person (family, friend) we can reach you through, if we're unable to get in touch via the contact information you provided above? Yes/No
 If Yes, please provide name and contact information: _____

Thank you again for your participation. Your time is greatly appreciated.

Appendix D

PANEL ON
RESEARCH ETHICS

Navigating the ethics of human research

TCPS 2: CORE 2022

Certificate of Completion

This document certifies that

mojibade odejinmi

*successfully completed the Course on Research Ethics based on
the Tri-Council Policy Statement: Ethical Conduct for Research
Involving Humans (TCPS 2: CORE 2022)*

Certificate # 0000837249

26 August, 2022