

A Community-Based Exploration on the Impacts of Land-Based Learning in an Urban Indigenous Community

by

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Author's Declaration

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Statement of Contributions

This thesis is the work of Danica Bui, under the supervision of Dr. Hannah Neufeld. The work includes input from her committee members Dr. Jennifer Yessis and Dr. Kelly Skinner. I, Danica Bui, am the sole author of Chapters One, Two, Four, and Five, which were written under the supervision of Dr. Hannah Neufeld and were not written for publication. Chapter Three was written with the contributions of Elisabeth Miltenburg and Dr. Hannah Neufeld.

My thesis work was supported by a Social Sciences and Humanities Research Council (SSHRC) Partnership Engage Grant (PEG) that was awarded to Dr. Hannah Neufeld from 2023-2024. Partnerships with White Owl Native Ancestry Association (WONAA) and the Wisahkotewinowak Collective (WC) included the support of the following individuals who have supported this project: Dave Skene, Laura Peach, Sarina Perchak, Sydney Keedwell, and Aryawna Isaac. The research team was composed of Dr. Bryan Grimwood and Dr. Rhona Hanning, who were co-applicants on the grant, and Elisabeth Miltenburg, the project manager. Project collaborators who have provided advice and guidance throughout the project include: Jean Becker, The Associate Vice-President of Indigenous Relations; Savannah Sloat, the Manager of Science Indigenous Initiatives in the Faculty of Science; Myeengun Henry, Indigenous Knowledge Keeper with the Faculty of Health; Emma Smith, the Interim Director of the Waterloo Indigenous Student Centre, and Savanah Seaton, the former Director of the Waterloo Indigenous Student Centre. University staff and community members affiliated with WONAA and WC also contributed input on the study design during the planning meetings.

The interviews were done as a part of the PEG and were included as data for this thesis. Elisabeth Miltenburg and I conducted six interviews with workshop participants, including community members, WISC students, and WONAA summer students. Elisabeth and Dr. Neufeld conducted 11 interviews with project collaborators and university staff. I conducted the two focus groups, with Dr. Neufeld attending the first focus group. All interview and focus group recordings

were transcribed by me. The transcripts were then shared with and amended by Dr. Neufeld and Elisabeth. Reflexive thematic analysis for the interviews was initially completed collaboratively by Elisabeth, Dr. Neufeld, and I. Afterwards, each research team member coded 4-6 interviews and came together afterwards to discuss initial codes and emerging themes. The focus group data was coded and analyzed by myself. All data was also subsequently shared with the larger research team including collaborators prior to presenting more formally at the final Knowledge Sharing feast.

Abstract

Background

Connection to the Land is essential for Indigenous Peoples' health and well-being. Indigenous Food Sovereignty works towards regaining control over traditional food systems. There is a need for sustainable, Indigenous-specific, and accessible urban community Land-based practices. Done in partnership with White Owl Native Ancestry Association (WONAA) and the Wisahkotewinowak Collective (WC), four seasonal Land-based learning events were held. Each event involved a workshop, meal, and gathering at the University of Waterloo's North Campus Community Gardens.

Aims

Guided by the interests of project partners, WONAA and WC, the overall purpose of this thesis is to explore and evaluate the impacts of Land-based learning on the local Indigenous and university communities and the PEG project's effectiveness in establishing networks to facilitate ongoing research and learning to establish a permanent Land-based learning space on campus.

The overarching research questions that guided the research are:

1. What are participants' and facilitators' perceptions of the Land-based engagement process?
2. What is the effectiveness of Land-based workshops in identifying and prioritizing collaborative Land-based opportunities for learning and research?
3. To what extent can the seasonal workshops establish a local network to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space on the UW campus?

Methods

Appreciative Inquiry and Community-Based Participatory Research approaches were used for this thesis. Following each of the events, participants and project collaborators were recruited to participate in interviews. The data for this evaluation was collected through 17 semi-structured interviews with project collaborators and community partners (n=6), urban Indigenous community members (n=6), Indigenous youth and students (n=2), and UW staff (n=3), two focus groups with WONAA and WC staff members (n=5) that were involved with the workshops, and a document review. Reflexive thematic analysis was completed using NVivo for the interview and focus group transcripts, and the documents were analyzed to determine if the budget and timelines were met.

Results

Overall, participants, collaborators, and facilitators of the Land-based learning events had positive perspectives of establishing a Land-based learning space on campus. The three key themes from the interviews about the Land-based learning events and their potential for building connections to establish a permanent Land-based learning space include: (1) participants' growing support of Land-based learning (2) creating connections and building relationships and (3) institutional support and project sustainability to support of the development of a permanent urban Indigenous Land-based learning space. The findings from the outcome evaluation, including the interviews, focus group, and documents reflect these themes and include (1) workshop feedback (2) project partners goals, and (3) identifying opportunities to move forward. These findings show that the community, including project partners, participants, and collaborators, found the Land-based learning events to be a welcoming and positive experience that should become integrated into university curricula to support the university and local community.

Conclusion

Participants enjoyed the Land-based learning events and supported the establishment of a permanent Land-based learning space at the North Campus Community Gardens. Attending the events and being

involved in the project generated ideas for learning and research opportunities, with many participants sharing future workshop ideas and identifying ways to integrate Land-based curricula and research opportunities. The events also connected the local urban- Indigenous community to the university community and helped to strengthen pre-existing relationships between the attendees. Through these connections, the desire for the North Campus Community Garden to become a space for Indigenous learning, teaching, and research, strengthened. Overall, the interview and focus group participants had positive perspectives of the events and the establishment of a permanent Land-based learning space at the North Campus Community Gardens, shared that Land-based learning was a need in the urban Indigenous and university community, and emphasized that further support from UW, longer-term funding, and physical and social infrastructure was needed for the project's sustainability.

Acknowledgements

To my supervisor, Hannah thank you for your guidance and support through my two years at UW. I am also grateful for the introduction to the PEG project, WONAA, and WC. I am very lucky to have been able to conduct my evaluation within your project.

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Liz, thank you for your support and car rides throughout the research process and your leadership throughout this project.

To my committee members Dr. Yessis and Dr. Skinner, thank you for your advice and feedback and for sharing your evaluation expertise which has further inspired me to pursue the evaluation field.

Land Acknowledgement and Positionality Statement

I acknowledge the connections of Indigenous Peoples to their Lands as well as the knowledges of Indigenous Peoples who are the original caretakers of Turtle Island. My background gives me a particular lens through which I interpret the world and this work, and my positionality influences the design, implementation, and analysis of my research, the people that I work with, and my understanding of the contexts of the communities that I work in. I am a first-generation immigrant woman of Vietnamese ancestry. My father was a refugee of the Vietnamese war and arrived in Canada in the 1980s. He returned to Vietnam after some time and started a family there. Our family moved to Vancouver, which is on the unceded territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səlilwətał (Tsleil-Waututh) Nations, where I was introduced to the culture, art, and foods of the First Nations of the Pacific Northwest. I then moved to Tkaronto, which is situated on the Land of the Huron -Wendat, the Seneca, and the Mississauga's of the Credit, to attend the University of Toronto. I am now living in Waterloo, which is situated on the Haldimand Tract, the Land granted to the Six Nations that includes six miles on each side of the Grand River, to pursue an MScPH degree. I acknowledge that I have and continue to benefit from colonial institutions, languages, and social systems that were built on Indigenous Land by pursuing post-secondary degrees and job opportunities nationally and internationally.

My thesis project was introduced to me by my supervisor, who holds a long-standing relationships with White Owl Native Ancestry Association (WONAA) and the Wisahkotewinowak Collective (WC), the project partners. WONAA is a local Indigenous

community agency based in the city of Kitchener that provides culturally appropriate counselling support, youth and family programming, and Land-based education, including Land-based workshops, food processing, art-based reflection, and intergenerational learning (Grantee Highlight: White Owl Native Ancestry Association, 2022). WONAA works closely with WC to produce food and medicines for the WONAA Food Share. Together, they strive to strengthen Indigenous food sovereignty locally (Wisahkotewinowak, n.d.).

I have learned about Indigenous history by taking courses on Indigenous health and social justice courses that highlighted Indigenous Peoples' oppression during my undergrad, but these courses were taught at colonialist institutions by non-Indigenous people and rarely went beyond learning about the true colonial history that Indigenous Peoples continue to endure. Additionally, since I moved to this area for my Master's, I was not particularly knowledgeable about the Indigenous communities around me. The Indigenous wellbeing course I took as part of my Master's coursework provided the opportunity to learn more about the local Indigenous community and the strengths and resiliencies of Indigenous Peoples. I was still initially hesitant to join the project since I am not Indigenous and had no previous experience with Indigenous research, but I felt that it was important to focus on Indigenous wellbeing and resilience, as opposed to focusing on health disparities, so I took on this evaluation as a learner with the desire to hold a supporting role in the project. Despite my lack of knowledge and experience, I do, however, understand the importance of Indigenous foods and food preparation practices in culture, and healing as medicine for Indigenous people. I also feel disconnected from my own culture and cultural practices, and food is one of the ways that can make me feel reconnected. Since moving to Canada, I have

not lived near any Vietnamese communities. The only exposure I had to Vietnamese culture was through what my parents had chosen to retain, which was quite loosely traditional. Now that I no longer live with my family, I often feel even more culturally disconnected. As a way to feel more connected to my culture, I am relearning traditional recipes and learning about the holistic health approaches to food.

Through my involvement with this project, I am learning about Indigenous resilience, maintaining cultural practices around food, and the importance of community. I have educated myself on the responsibilities of doing research with Indigenous Peoples while not being Indigenous myself. Attending the seasonal workshops, planning meetings, and knowledge sharing events as part of this project made me happy to see others connecting over food, and it exposed me to the need for Land-based learning. My time on the Land in the gardens amongst the participants and WONNA and WC staff supporting the seasonal events feel more connected to the community. Supporting and participating in the Land-based learning activities gave me the opportunity to meet community members and connect with university staff that were outside of my own personal circles. Although I was not a member of the local urban- Indigenous community, nor was I involved in Land-based initiatives, I felt welcomed by everyone, and I felt that my evaluation was supported by the community.

Through the overall participatory and appreciative approaches of the project and my own research, I am grateful to be guided by the community and project partners, along with other members of the research team with experience in Indigenous research and who hold existing relationships with the project partners and local urban Indigenous community. I am

also grateful to be able to learn from community collaborators of Métis, First Nations, Inuit, and settler ancestries. I still continuously reflect on how my experiences affect how I planned, collected, and analyzed the data, but prioritizing Indigenous perspectives and aligning with the goals of Indigenous communities always takes precedence in this evaluation as it was approached and how the results will be shared.

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List of Abbreviations

AI	Appreciative Inquiry
CBPR	Community Based Participatory Research
CTE	Centre of Teaching Excellence
PDG	Partnership Development Grant
OIR	Office of Indigenous Relations
PEG	Partnership Engagement Grant
SSHRC	Social Sciences and Humanities Research Council
TRC	Truth and Reconciliation Commission
UW	University of Waterloo
WC	Wisahkotewinowak Collective
WISC	Waterloo Indigenous Students Centre
WONAA	White Owl Native Ancestry Association

Chapter 1: Introduction

1.1 Urban Indigenous Context

Indigenous Peoples within Canada are becoming increasingly urbanized, with over half of the now living in urban settings (Senese & Wilson, 2013). The population of Indigenous Peoples in urban settings grew from 13% in 1961 to 52% in 2016 and increased to almost 60% in 2016 (Hossain & Lamb, 2020). Indigenous people tend to move to urban areas for reasons such as employment, healthcare access, housing, and education (Urbanization and Indigenous Peoples in Canada, 2021; Snyder & Wilson, 2015). For these reasons, the urbanization of Indigenous Peoples is not just a result of individuals and families moving from rural and reserve to urban areas, but from a combination of moving within urban areas and migration between urban, rural and reserve areas (Norris & Clatworthy, 2011). Snyder & Wilson (2015) found that while migration can create some health-related challenges, it can also potentially create a positive impact on holistic aspects of health through cultural and spiritual support networks within urban areas. Meanwhile, mobility within urban settings is often involuntary, and driven by factors such as housing conditions, tenant-landlord relations, and issues with neighborhood safety (Snyder & Wilson, 2015). Consequently, mobility within urban settings can potentially result in challenges to the overall health and wellbeing of urban Indigenous Peoples (Snyder & Wilson, 2015). According to the 2016 Census, over 22,000 Indigenous people reside in the Kitchener - Cambridge - Waterloo tri-city region (Government of Canada, 2018). The population of Indigenous staff in the area have also grown with the University of Waterloo's (UW) Indigenizing efforts (Goel, 2023).

Through the processes of colonization and environmental dispossession, Indigenous Peoples have been separated from their Lands and waters, which provided them with food

and medicine, and places where local culture and knowledge were shared and practiced (Tobias et al., 2013). Environmental dispossession, the processes through which Indigenous Peoples' access to the resources of their local environments has been reduced, has affected communities in direct and indirect ways (Richmond & Ross, 2009). Some of the many processes of direct environmental dispossession resulting from colonization include displacement, unprecedented resource extraction, pollution, environmental contamination, and Land rights disputes (Tobias & Richmond, 2014). Industrial development in the early 20th century, such as intensive forestry and logging, extractive mining, hydroelectric generation, railroad networks, and recreational tourism, contributed to restricted access to much of their territory, and the transformation of traditional lifestyles, such as hunting, fishing and trapping practices. These factors contributed to changes in identity and cultural foundations rooted in their relationship to the land.

Indigenous communities are also affected by indirect processes of environmental dispossession that disrupt the relationship that Indigenous Peoples have with their Land¹ through processes of displacement and assimilation (Tobias & Richmond, 2014). Some examples of this include federal policies such as the Indian Act, residential schools and the Sixties Scoop (Tobias & Richmond, 2014). The Indian Act, which displaced Indigenous Peoples to rural locations and onto reserves, continues to legally define and fragment Indigenous peoples (Bhawra et al., 2015). Snyder & Wilson's (2015) found that Indigenous

¹ Throughout this thesis, Land will be capitalized in certain contexts when referring to Land in relation to Indigenous Peoples and Land's role in Indigenous health, wellness, and education. Land is capitalized to acknowledge the sovereignty of Land. Miltenburg (2021) and Gilpin & Hayes (2020) also use this capitalization to indicate this.

mobilization rooted in the effects of assimilationist policies was intergenerational.

Residential schools forcibly removed Indigenous children from their homes and impacted their connections to their families and communities (Snyder & Wilson, 2015). Removing Indigenous children from their families without consent and placed in non-Indigenous homes throughout North America from the 1960s until the 1980s also has ongoing effects on Indigenous communities (Snyder & Wilson, 2015). The majority of Snyder & Wilson's (2015) respondents were impacted by experiences with residential schools and state-run child protection agencies and spoke about being involuntarily mobile as children and how they continued to move frequently in their adult years. Urbanization and mobility affect the health and wellbeing of Indigenous peoples by distancing relationships that Indigenous Peoples have with their Land, reducing their ability to access support, and increasing the physical strain of living in unstable housing and the financial strains of moving affecting access to food (Richmond & Ross, 2009; Tobias & Richmond, 2014; Snyder & Wilson, 2015).

Policies and environmental dispossession stemming from colonization has and continues to interfere with local and Indigenous food systems, often resulting in higher rates of food insecurity within urban Indigenous communities and a need to reconnect people to their food systems (Cidro & Martens, 2015). Indigenous Peoples experience disproportionately higher rates of household food insecurity, a measure to assess the severity of hunger, poverty and malnutrition, compared to non-Indigenous people ((Kamal et al., 2015; Grann et al., 2023). This is also true for urban-Indigenous populations, where 28.2% of households were food insecure, compared to 12.7% of non-Indigenous households (Tarasuk & Mitchell, 2020). Urban Indigenous people face a range of unique food insecurity issues,

such as access to Land, limited quantities of healthy and affordable food due to high costs of living, limited access to cultural foods, and feelings of disconnection and dispossession from communities, families, and cultural practices (Cidro & Martens, 2015; Skinner et al., 2016; Snyder & Wilson, 2015) The need to balance food purchasing with other financial obligations is also a common issue for urban Indigenous Peoples, and unexpected fluctuations in the cost of living reduced the amount of income available for food purchases (Skinner et al., 2016). Kerpan et al. (2015) had similar findings when speaking with urban Indigenous youth, who stated that income was the greatest barrier to healthy food purchasing.

Indigenous Peoples living within urban centres are often displaced from their ancestral territories and seek opportunities to reconnect with their culture and identity through Land and food (Miltenburg et al., 2022). There is a concern that urban environments have led to de-skilling, the removal of the need of a skill, among Indigenous youth (Mundel & Chapman, 2010). Urbanization has resulted in a decrease in intergenerational teachings of cultural practices, leading to the reduction of harvesting, planting, and preparation practices of Indigenous foods (Ford et al., 2019). Indigenous Peoples trying to balance urban living with traditional values and learning may have little opportunity to learn traditional food skills and knowledge and may be geographically separated from their territories (Mundel & Chapman, 2010). A study by Grann et al., (2023) that examined the barriers and supports to traditional food access in Mi'kma'ki (Nova Scotia) found that barriers, such as knowledge transmission, lack of community, Land access, cost, programs and policies, and identity loss, outweigh supports, such as community engagement, consultations and partnerships, and strength of cultural values, in both magnitude and number. Similarly, Richmond et al. (2020)

found that barriers to food access that affect urban Indigenous Peoples most significantly is income, along with time for food provisioning and food preparation, and distance. These barriers that prevent urban-Indigenous Peoples from engaging with opportunities to reconnect with their culture and identity must be addressed to reduce food insecurity and cultural disconnection (Richmond et al., 2020)

1.2 Indigenous Food Environments

The barriers to cultural practices stemming from environmental dispossession and urbanization have and continue to impact urban Indigenous Peoples' access to traditional food (Richmond et al., 2020; Ford et al., 2019; Grann et al., 2023). Urbanization has resulted in a decrease in intergenerational teaching of cultural practices, resulting in the reduction of planting, harvesting, and preparation of Indigenous foods (Ford et al., 2019). Food consumption plays a central role as a cultural foundation for Indigenous Peoples (Cidro & Martens, 2015). Food insecurity, the lack of access to healthy affordable food, is a strong determinant of health among Indigenous Peoples (Skinner et al., 2016; Tarasuk et al., 2019). The decreasing access to Indigenous foods has led to the gradual replacement of these foods with non-traditional or pre-manufactured products, which continues to have negative impacts on the health, well-being and cultural identities of Indigenous communities (Neufeld et al., 2017; Cidro, 2015). For Indigenous adults living off-reserve, food insecurity is strongly associated with lower self-perceived health and wellbeing (Tarasuk et al., 2019). There is a need to reconnect people to their food systems because maintaining cultural connections in the city is critical to urban Indigenous well-being and identity (Cidro & Martens, 2015).

Cidro (2015) argues that food security for Indigenous Peoples in urban environments should be addressed through improving Indigenous Food Sovereignty (IFS). This restorative framework is central to self-determination and decolonizing initiatives utilized by Indigenous Peoples globally (Coté, 2016). Food sovereignty is defined as the right to maintain and develop one's own capacity to produce basic foods that respect cultural and productive diversity (Kamal et al., 2015). Food sovereignty differs from food security through its rights-based political framework that looks beyond the fundamental causes of hunger (Kamal et al., 2015). IFS goes beyond food security and is interconnected with Indigenous political, social and cultural resurgence, which centre on Indigenous relationships with Land (Cidro et al., 2015; Grey & Patel, 2015). Through self-determination efforts and Indigenizing strategies, IFS shapes, nurtures, and fosters healthy and sustainable communities (Coté, 2016). IFS works to reduce dependence on Western food systems by connect people to their traditional foods and food systems through sustainably revitalizing Indigenous food practices and knowledge systems as they regain control over their own foods and practices (Coté, 2016). Indigenous people in Yukon interviewed about their consumption of traditional food indicated that eating them “in tune” with nature, facilitated sharing, and allowed adults to display responsibility for their children and to practice spirituality (Cidro & Martens, 2015). There is also a strong link between food and medicine for Anishinabek people in Ontario (Cidro & Martens, 2015). Cidro and Martens (2015) found that participating in traditional and Land-based food activities contributed to feelings of working towards IFS in urban Indigenous Peoples. Although IFS initiatives are supported, recipients of IFS efforts have been found to prefer Indigenous programs and resources (Kerpan et al., 2015). Kerpan et al.

(2015) found that for food programs to be appropriate, existing cultural social, political, economic, and gender power dynamics must be considered. Despite the support by community members and positive outcomes and of IFS initiatives, efforts to support IFS, such as re-introducing traditional Land-based practices and food systems, often rely on irregular funding from government initiatives, pilot-projects, and short-term research grants (Loukes et al., 2021). Therefore, the need for Indigenous-specific and accessible urban community support supporting Land-based and food sovereignty practices is paramount.

1.2.1 IFS Efforts within Canada

Indigenous communities have responded to these challenges of urbanization and barriers to traditional foods through a resurgence of relationships between Peoples, Land, food, and education (Robin, 2019). There is a growing emergence of IFS initiatives across urban centres within many regions of Canada (Miltenburg et al., 2023). IFS initiatives include, but are not limited, to reclaiming Land, the transmission of Indigenous Knowledge, food production, governance, and the protection of natural resources. Grassroots movements such as British Columbia's Working Group on Indigenous Food Sovereignty, and Food Secure Canada's Indigenous Circle of Advisors have fought for Land redistribution and Land reform legislation to ensure that Indigenous Peoples had access to food from their Land (Robin, 2019). The O-Pipon-Na-Piwin Cree Nation community-based food program called Ithinto Mechisowin ('food from the Land') focuses on traditional food access and education (Kamal et al., 2015). The community renovated the community's food handling area and bought industrial freezers to store wild food and medicine (Kamal et al., 2015). During the first four months of the program, the number of families receiving food from the program grew from

five to 390 families (Kamal et al., 2015). Food collected through program activities was labelled, stored in freezers, and distributed once a week to single mothers, low-income families, and Elders. Their youth programs consist of hunting, fishing, berry picking, preparation of wild food, gardening, and education on the health benefits of different wild foods and involved Elders who teach youth about Cree principles. Community members found the program to be supporting the long-term healing of the community and work towards Indigenous cultural regeneration (Kamal et al., 2014). Another IFS program that had positive outcomes was the Urban Garden Project in Brandon and Winnipeg, Manitoba (Moscou, 2022). Indigenous youth (18-29 years) participants reported that gardening contributed to a healthy lifestyle by providing physical and nutritional benefits, and shared that urban gardening provided them with not just a solution to food security, but also a way to connect to themselves, the Land, their culture, and to others (Moscou, 2022).

Locally, within Kitchener-Waterloo region, Land and food-based practices such as seed saving, growing and gathering food, hunting and fishing, processing and preserving food, and sharing and distributing food, are facilitated by White Own Native Ancestry Association (WONAA), the Wisahkotewinowak Collective (WC), the Waterloo Region Indigenous Food Sovereignty Collective, Waterloo Indigenous Student Centre (Shatitsirótha), and the North End Harvest Market (Miltenburg et al., 2022). These efforts have been found to create community and strengthened individuals' self-determination (Miltenburg et al., 2022). As part of their food-based practices, these local organizations contribute to Land-based education through providing Land-based learning opportunities for high school and post-secondary students, mentoring and educating future hunters, supported

food-based programming for Indigenous students with foods harvested from the gardens (Miltenburg et al., 2022).

1.3 Land-Based Education

One of the core elements of IFS and Indigenous wellness overall is Land (Hatala et al., 2019). Many Indigenous healing practices draw on spirituality, ceremony and time spent with others and in nature to promote health and healing (Mundel & Chapman, 2010). Land-based learning happens when human beings are in a reciprocal relationship with all of creation on the Land (Bowra et al., 2021). Reconnection to Indigenous culture through Land-based education can be effective in reclaiming spiritual, physical, and psychological health (Johnson & Ali, 2020). Although Indigenous Peoples' relationships to Land are diverse, the relationships themselves are the loci of Land-based learning (Bowra et al., 2021). Land-based learning activities that are initiated by Indigenous communities are often involve Elders, knowledge leaders, community consultations, and youth (Bowra et al., 2021). Because of the importance of intergenerational knowledge transfer within Indigenous teachings, the involvement of community members is vital for Land-based education (Bowra et al., 2021). Land-based education in urban contexts can be about story-making, listening to the Land-based teachings, and interpreting these teachings in relation to one's own life (Hatala et al., 2019). As Indigenous Peoples became increasingly urbanized, urban organizations began to develop and flourish across Canada (Cidro et al., 2015). Senese & Wilson's (2013) study found that the majority of their urban- Indigenous participants made efforts to maintain and explore their cultures in Toronto. The importance of engaging with culture and the role of Indigenous service organizations in facilitating connections are

significant aspects of urban-Indigenous Peoples' experiences in urban settings (Senese & Wilson, 2013).

Several Indigenous Land-based education initiatives have been established either within urban areas or with peoples living in urban areas in Canada. A Land-based cultural immersion program in Kitcisakik introduced non-Indigenous students from urban areas to Indigenous ways of knowing by showing students how to live off the Land and sharing introductory knowledge required to live in a respectful relationship with the Land (Arellano et al., 2019). Students participating in the program shared that they gain more knowledge in a week on the Land than years in the classroom learning about Indigenous history and culture (Arellano et al., 2019). The Indigenous facilitators also benefited from the program and shared that they valued the 'healing moments' they spent with students attentively listening to their personal and emotionally stories (Arellano et al., 2019). The students spent several days alongside Knowledge Keeper, and both acknowledge their experiences were both transformational and therapeutic (Arellano et al., 2019). Youth-led Land-based learning can also be impactful for their facilitators and participants. Like Arellano et al.'s (2019) findings, Johnson and Ali (2020) also found that sharing and listening was meaningful to youth and mentors. Johnson and Ali's (2020) study involved Métis and Indigenous graduate students from the University of Manitoba and inner-city Indigenous youth that developed and participated in an outdoor adventure-based canoe trip in Quetico Provincial Park. In addition to the hands-on skills that here learned on the Land, the youth also found a sense of self-discovery and accomplishment in learning life skills (Johnson & Ali, 2020).

Through engaging in traditional food practices, Indigenous Peoples are able to share cultural knowledge and practices and help create food sovereignty among their communities (Bowra et al., 2021). Sustenance practices such as hunting, fishing, growing, and food preparation are common forms of Land-based education (Bowra et al., 2021). These activities allow people to engage in cultural traditions and to reconnect and revitalize Indigenous knowledge (Bowra et al., 2021). Land-based sustenance practices can also foster cultural pride, self- confidence, physical activity, and positive nutrition practices among participants (Bowra et al., 2021).

1.3.1 Post-Secondary Land-Based Efforts

Since the 2000s, in response to a Western educational system that has ignored, and at times erased, Indigenous histories and knowledges, Land-based pedagogy has emerged in Indigenous higher education systems to re-establish the relationships between Indigenous Peoples and their territories (Drouin-Gagné, 2021). A master's program in education with a Land-based focus has been offered since 2011 at the University of Saskatchewan, making it one of the first of its kind in Canada (Drouin-Gagné, 2021). Developed by Alex Wilson, the program includes online courses and 2-week intensive courses within Indigenous communities s (Drouin-Gagné, 2021). Other Canadian post-secondary institutions began creating Indigenization strategies and developing Indigenous teaching and gathering spaces as responses to TRC's Calls to Action beginning in 2018 (Brant, 2023; Gaudry & Lorenz, 2018; Mashford-Pringle & Stewart, 2019). The University of Victoria and the University of British Columbia, for example, have developed Indigenous law courses that were community-based and had land-based perspectives. (Drouin-Gagné, 2021). Following the

development of the courses, in 2018, the University of Victoria then launched an Indigenous law program directed by Anishinaabe law professor John Borrows where law students and professors learn about Anishinaabe juridical principles with community knowledge holders and Indigenous law professors (Drouin-Gagné, 2021). Another example of a Land-based education initiative is the University of Winnipeg's initiative that engaged Indigenous Land stewards from Wabaseemoong Independent Nation and students (Zurba et al., 2022). The students were used to Western classroom settings and found that participating in Indigenous-led outdoor Land-based activities and learning was transformative (Zurba et al., 2022). A student also found empowerment in learning traditional skills and viewed this as a reciprocal act while giving their own time and energy to the process (Zurba et al., 2022).

Several post-secondary institutions have established on-site Indigenous-led gardens and found positive results within the community (Mundel & Chapman, 2010; Peach et al., 2020). For instance, the Urban Aboriginal Garden Project at the University of British Columbia found the garden to be a decolonizing experience for participants because it helped reduce dependence on Western food systems (Mundel & Chapman, 2010). The Indigenous Garden at Western University in Ontario has also provided a vitally important space for the campus Indigenous community to practice, share and strengthen Indigenous Knowledges and practices, even though the broader university structure has challenged the Garden's sustainability and limits its potential usage and growth (Peach et al., 2020). Similar to other university environments, the reconciliatory impacts of Indigenization projects, policies or plans for decolonization, such as creating garden spaces, relies heavily on the strength of the relationship between the local Indigenous community and University Administration, with

the ability of Indigenous people to be self-determining in these spaces of primary importance (Peach et al., 2020).

Several academic institutions within Canada are in the process of building multi-purpose Land-based facilities. The University of Toronto, for example, is currently in the process of building Indigenous House that was developed in partnership with the University of Toronto Scarborough's Indigenous Elders' Circle, Indigenous stakeholders and community group, and Native Child and Family Services Toronto. The design will feature offices for Elders, gathering spaces, a community kitchen, outdoor spaces, and Indigenous artwork (Indigenous House at the University of Toronto Scarborough, 2023). The space was designed to allow Indigenous teaching models that prioritize hands-on, Land-based, and experiential learning, to flourish (Indigenous House at the University of Toronto Scarborough, 2023). Another facility that is in progress is Nokom's House, an Indigenous Land-based research facility at the University of Guelph's Arboretum (*Nokom's House*, 2021). The facility will house research projects that advance wellness for all, led by led by Indigenous female faculty from the Department of Family Relations and Applied Nutrition, the School of Environmental Design and Rural Development and the Department of History (*Nokom's House*, 2021). These responses to the Calls to Actions should continue to be upheld by Canadian post-secondary institutions and sustain partnerships with Indigenous communities to continue to share knowledge to further support and promote Indigenous wellness (Peach et al., 2020).

1.4 Indigenization Efforts of the University of Waterloo

The University of Waterloo (UW) began using the TRC Calls to Actions to inform and guide the work of indigenization, decolonization and reconciliation since 2017 (*Background*, n.d.). UW started to respond to the Calls to Action as part of its latest Institutional Strategic Plan, which highlights the commitment of learning about the rich history and culture of Indigenous Peoples, and importance of building stronger relationships with the local Indigenous community (*Connecting Imagination with Impact: 2020-2025 Strategic Plan*, 2020). UW also responded to the TRC's Calls to Action by launching a five-year Indigenous Strategic Plan for 2023-2028 that will assist in guiding the university towards its goals of Indigenizing and decolonizing the institution (Brant, 2023). The Indigenous Strategic Plan includes the five themes of: reconciliation, research, services and supports, lands and waters, and building community. These documents respond to Call 63 iii: "*Building student capacity for intercultural understanding, empathy, and mutual respect*" (Government of British Columbia, 2015, p. 7). UW has initiated this work by growing the Office of Indigenous Relations and hiring 22 new Indigenous-focused staff and six Indigenous faculty, thereby increasing the number of Indigenous staff and faculty at UW to 44 (Goel, 2023). As part of these on-going reconciliation efforts, UW also re-commits each year at commitment ceremonies attended by nearly 400 members of the wider campus community beginning in 2022 (*Commitment Ceremony Signals New Beginning for Indigenous Peoples and the University of Waterloo*, 2022). In September of 2023, UW also announced full tuition waivers for current and incoming students from the Six Nations of the Grand River and the Mississaugas of the Credit First Nation, whose territories the University is situated upon (*Tuition Waiver for Eligible Indigenous Students*, n.d.). UW also offers domestic tuition rates

for Indigenous students from elsewhere across North America (Turtle Island) and will continue to waive the application fee for potential students who identify as First Nations, Métis and Inuit (*Tuition Waiver for Eligible Indigenous Students*, n.d.). It is important to consider that these steps to recruit more Indigenous students, staff, and faculty, and should also integrate strategies and initiatives to retain and support them (Peach et al., 2020). Additionally, these reconciliation and Indigenizing efforts should be evaluated to determine if they meet the needs of the campus Indigenous community and beyond (Peach et al., 2020).

1.4.1 Educational Programs and Changes to Curricula

UW has also started to integrate Indigenous Knowledges across curricula and create Indigenous programming for students, staff and faculty (Goel, 2023; McAlmont, 2024). The School of Pharmacy, for example, has built connections with Indigenous healthcare providers and educators and created an Indigenization strategy for the faculty housed within the School of Pharmacy (*Indigenization on Campus*, n.d.). One of the affiliated colleges at UW, United College, also launched its Diploma in Indigenous Entrepreneurship in 2023. The program offers courses taught by Indigenous instructors and focuses on the unique needs and priorities of Indigenous entrepreneurs from different Nations and communities in partnership with other Canadian post-secondary institutions (Goel, 2023). A new Indigenous Science Centre, established in the Faculty of Science at UW, has also developed Indigenous curriculum modules for all first-year students in collaboration with Indigenous staff and community members (McAlmont, 2024). The faculty has included a traditional ecological knowledge module in required courses within the faculty (McAlmont, 2024). The Centre of Teaching Excellence (CTE), under the leadership of Indigenous educator, Dr. Leslie Wexler (Senior

Educational Developer, Indigenous Knowledges and Anti-racist Pedagogies) who was hired in 2021, is working on departmental and faculty-wide Indigenization, Anti-Racism, and Decolonization efforts in curriculum and pedagogy, discipline-specific consultation and facilitation of educational development, and initiatives related to Indigenization, decolonization, and reconciliation work of the CTE (*Leslie Wexler, n.d.*).

1.4.1.1 Indigenous Facilities at the University of Waterloo

To support these educational efforts, various facilities have been built and announced at UW as a response to the TRC Calls to Action and the Indigenous Strategic Plans. The Faculty of Health has reflected these changes, recently establishing an indoor Indigenous Gathering Space (*Indigenous Teachings and Resources, n.d.*). An outdoor space for teaching and celebrating Indigenous Peoples and cultural practices will be completed in Fall 2024 (*Breaking Ground on the Road to Reconciliation, 2024*). The outdoor space was designed by an Indigenous design studio, in consultation with the Indigenous campus community (*Breaking Ground on the Road to Reconciliation, 2024*). A 500-bed residence building with a targeted opening of fall 2026 was also recently announced. The residence was designed in collaboration with an Indigenous-owned architecture firm, *Two Row*, and alongside the Office of Indigenous Relations with plans to include a community healing garden, gathering spaces equipped for smudging and ceremonies, and spaces to allow for live-in Elders to meet with students (*University of Waterloo to Build New, 500-Bed Residence Prioritizing Indigenous Design Principles, 2023*). The Faculty of Health is Indigenizing the spaces in its buildings by establishing an indoor Gathering Space. The Indigenous Gathering Space provides a space for healing, learning, community building, and can also be used for events

for Indigenous Peoples and guests, and a studying space for Indigenous students. In addition to the gathering space, sacred items and flags have also been put on display throughout the Faculty of Health buildings to embrace Indigenous knowledges and cultures (*Indigenous Teachings and Resources*, n.d.). These facilities overall are intended to support current and incoming Indigenous students, staff, and faculty, and educate others in the UW community. However, there is still room for further developing and supporting spaces and places that can integrate Land-based pedagogy and curriculum within the institution to address UW's 2023-2028 Indigenous Strategic Plan's Goal 1.4, to designate resources to support the work of Indigenization and Goal 3.2, to create and promote physical spaces (*Goals*, n.d.).

1.5 Study Objectives and Contexts

The reciprocal relationships between Indigenous Peoples and their Lands have been disrupted by colonial systems (Ford et al., 2019). The urbanization of Indigenous peoples, due to environmental dispossession rooted in colonization, and the separation of Indigenous peoples from their communities and lands due to harmful policies has resulted in feelings of cultural disconnection and increased rates of food insecurity (Ford et al., 2019; Neufeld et al., 2017; Cidro, 2015). Barriers that prevent urban-Indigenous Peoples from engaging with opportunities to reconnect with their culture and identity must be addressed through IFS to reduce food insecurity and cultural disconnection. Physical spaces and outdoor places out on the Land are important for the health and wellbeing of Indigenous Peoples from a variety of geographical contexts (Hatala et al., 2019; Miltenburg et al., 2023). Integrating land-based learning into the spaces Indigenous people occupy within cities and institutional settings can facilitate Indigenous-lead learning, healing, and cultural reconnection (Arellano et al., 2019;

Bowra et al., 2021; Mashford-Pringle & Stewart, 2019; Zurba et al., 2022). Within the local setting of present-day Kitchener-Waterloo, it is therefore important for both the university community at UW and the local urban Indigenous community to establish a Land-based learning space to help support and retain Indigenous students, staff, and faculty. UW commits to creating safe spaces where everyone feels supported, feels like they belong, and are connected to the land and waters (*Approach*, n.d.). The relationships can be fostered between UW and the local urban Indigenous communities to facilitate cultural reconnection and exchange. An establishment of a Land-based learning space on campus will also allow the Indigenous community off campus to have ceremony space in the city and to provide a safe space to connect with UW staff, students, and faculty.

This research was conducted with the intent of supporting the creation of longer-term partnerships and collaborations with the local urban Indigenous community and UW. Like the University of British Columbia's Garden Project, providing a space and place for the Indigenous community locally to discuss and educate others about their experiences while celebrating and engaging in cultural teachings and practices can decolonize health promotion and facilitate healing (Mundel & Chapman, 2010). The research and evaluation activities will provide evidence to support more learning spaces for urban Indigenous people.

This research will affect the Urban Indigenous community in the Kitchener-Waterloo region, community partners such as WONAA and WC, and the UW community, including faculty, Indigenous relations groups, and Indigenous students. By adopting Community-Based Participatory Research (CBPR) and Appreciative Inquiry (AI) approaches, which will include the invaluable voices of the community and highlight the strengths of this project.

The research and evaluation outputs can inform funders, UW, other post-secondary institutions, and communities interested in Land-based learning.

This research will also fill a gap in the literature to support future Land-based learning initiatives. There is a lack of research on urban Indigenous health and Off-reserve Indigenous people in general. Indigenous people living off-reserve are underrepresented in food security studies, and existing data may underestimate the magnitude of food insecurity within urban Indigenous communities (Grann et al., 2023). In addition to the lack of statistical data on urban Indigenous peoples, Shafiee et al. (2023) identified a gap in the literature regarding the specific circumstances of food insecurity of urban Indigenous peoples. Unique issues exist for urban Indigenous people, such as difficulties in accessing traditional food gathering practices because of limited Land access, and feelings of disconnection and dispossession from communities, families, and cultural practices (Snyder & Wilson, 2015), but there is still little research around this area. Much of the literature in health promotion underemphasizes the role of the natural environment in health (Mundel & Chapman, 2010). Less is known about what food sovereignty movements look like in specific places and how their expression is largely shaped by the local environments and communities (Desmarais & Wittman, 2014). The lack of urban Indigenous health studies has been noted in the academic literature, and the reasons given for this gap may also explain why there are so few urban Indigenous food security studies (Kerpan, et al., 2015). Information has also been sparingly shared about the work of IFS efforts (Robin, 2019). Many IFS initiatives are embedded in their local communities, and there has been little opportunity for communities to share and learn from each other (Robin, 2019).

In addition to the gap in literature about urban Indigenous peoples and IFS efforts, there is also a greater need for research and evaluation of Indigenization efforts at post-secondary institutions. Since the release of the Final Report of the Truth and Reconciliation Commission of Canada, Indigenization efforts at post-secondary institutions in Canada have grown. There have been cluster hires, curriculum overhaul, and the creation of Indigenous spaces (Peach et al., 2020). Despite this important shift, the meanings and tensions associated with these efforts have not been well documented in research (Peach et al., 2020). The response from post-secondary institutions to the calls for reconciliation needs to be researched and evaluated to support the projects, share knowledge, permanently establish these sites, and to ensure that these efforts are not tokenistic.

1.6 Aims and Objectives of the Thesis

This thesis will address these research gaps by exploring and evaluating the impacts of Land-based learning on the local Indigenous and university communities along with the project's effectiveness in establishing networks to facilitate ongoing research and learning to establish a permanent Land-based learning space on campus. As such, the overarching research questions that guided the research are:

- 1) What are participants' and facilitators' perceptions of the Land-based engagement process?
- 2) What is the effectiveness of Land-based workshops in identifying and prioritizing collaborative Land-based opportunities for learning and research?

- 3) To what extent can the seasonal workshops establish a local network to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space on the UW campus?

1.7 Research Location and Community Partnerships

This research was conducted alongside a larger Social Sciences and Humanities Research Council (SSHRC) funded project entitled, “Cultivating Place and Space for Land-Based Learning” in partnership with community research partners White Owl Native Ancestry Association (WONAA) and Wisahkotewinowak Collective (WC). The project’s goal was to build on existing partnerships between WONAA, WC, and UW to explore opportunities for a land-based learning space at the campus Environmental Reserve. As project partners, WONAA and WC provided expertise in developing and leading a land-based activities for the local urban Indigenous community and the UW community at the North Campus Community Garden at the University of Waterloo’s Environmental Reserve. WONAA and WC’s partnership with the North Campus Community Garden began in 2018, and the space is used to grow a large variety of produce and to hold gatherings within WONAA and WC.

1.8 Summary of Manuscripts and Distinctions between Chapters 3 and 4

This thesis consists of one manuscript written for publication, which is found in Chapter 3, and an evaluation report for WONAA and WC, our project partners, in Chapter 4. The manuscript included in Chapter 3 includes the findings from the interviews that took place with participants and the project collaborators. Chapter 3 focuses on the perspectives of the interview participants and discusses the themes of Land-based learning, connection and community and opportunities for learning, teaching, and research that have resulted from the

outcomes of the project. The chapter also explores the pathways to the project's sustainability such as infrastructural needs for the North Campus Community Garden and governance structure.

Chapter 4 is an Evaluation Report prepared for project partners, WONAA and WC. The outcome evaluation utilizes Appreciative Inquiry and Community Based Participatory Research approaches, and the findings focus on the impact of the Land-based learning activities, workshop participants' and facilitators' perspectives of the project activities, and the project output's ability to meet the projected outcomes. Chapter 4 includes data from participant interviews, focus groups, and a document review. The report differs from the manuscript in its target audience and usage. The evaluation report was made for the project partners' use and will therefore not be published.

The remainder of the thesis includes Chapters 2, and 5. Chapter 2 contains details on the methodologies and methods utilized for the thesis. Chapter 5 includes recommendations and conclusions for the overall work, followed by references and appendices. This thesis overall contributes to literature supporting Land-based learning uniquely within a post-secondary setting, which can inform urban-Indigenous communities and post-secondary institutions that are interested in pursuing Land-based learning, research, and teaching.

Chapter 2: Research Methods

2.1 Research Partnerships Methodologies and Approaches

2.1.1 Project Partners

White Owl Native Ancestry Association (WONAA) is a local Indigenous community agency based in the city of Kitchener that provides culturally appropriate counselling support, youth and family programming, and Land-based education, including Land-based workshops, land-based teachings at their Sugar Bush in Kitchener, food processing, art-based reflection, and intergenerational learning (*Grantee Highlight: White Owl Native Ancestry Association*, 2022). WONAA works closely with the Wisahkotewinowak Collective (WC) to produce food and medicines for the WONAA Food Share. WC focuses on growing intergenerational Land-based practices to nurture Indigenous well-being and create sustainable, healthy environments. WC manages four garden plots and began farming at Steckle Heritage Farm, an educational farm located in Kitchener, in 2017. The Three Sisters garden is used to grow tobacco, the Three Sisters (corn, beans and squash), and produce. The Tea Garden at the University of Guelph's Arboretum is home to plants used for traditional teas and medicines and became a part of WC in the same year. The partnership with the Waterloo Community Garden at the University of Waterloo's Environmental Reserve began in 2018, and the Produce Garden is now home to a large variety of produce. Lastly, the Teaching Garden in Blair, used to provide experiential learning opportunities, was established in 2019. Together, WONAA and WC strive to strengthen Indigenous food sovereignty locally (*Wisahkotewinowak*, n.d.). The two organizations offer a youth summer program which employs youth to tend to the gardens while participating in cultural activities and reflective artistic processes.

2.1.1.1 North Campus Community Garden

WC's Produce Garden is located at the University of Waterloo's North Campus Community Gardens, within the Environmental Reserve. These gardens are made up of individual and community plots, primarily for students, staff, or visiting scholars at the University of Waterloo. WC gained access to the North Campus Community Gardens in the spring of 2019. This site became WC's produce garden and is used to grow produce for WONAA's Food Share program, cooking and preserving workshops, and to contribute to the Waterloo Indigenous Student Centre's (WISC) weekly soup and bannock lunch.

2.1.2 Project Background

The project overall was built on existing relationships held by the research team and project partners WONAA, and WC to explore opportunities to establish a Land-based learning space on the north campus at the University of Waterloo's Environmental Reserve. In the fall of 2022, a planning and gathering session was held with members from WONAA, WC, community collaborators, and the grant's co-applicants at the North Campus Garden to identify potential objectives for a Social Sciences and Humanities Research Council Partnership Development Grant (SSHRC PDG). Those in attendance provided ideas about how a SSHRC PDG could build relationships between campus and community partners and what avenues of research could be explored. The decision to apply to a SSHRC Partnership Engagement Grant (PEG) was initiated as it had a later timeline. A project meeting was then held with project collaborators to gather further ideas about the PEG and to confirm their involvement in the project. The PEG was submitted in December 2022 and a notice of successful award was received in February 2023.

Thus began the “Cultivating Place and Space for Land-Based Learning” project. The one-year project was built on existing relationships held by the research team, WONAA, and WC to explore opportunities to establish a Land-based learning space at the University of Waterloo’s Environmental Reserve. The project aimed to explore collaborative opportunities for Land-based learning, research, teaching, and community engagement at the University of Waterloo by bringing together campus and community partners. The goal of the project was to engage diverse intergenerational and interdisciplinary audiences of Indigenous community members, Indigenous youth, UW students, and academic leadership within the Faculty of Health and OIR to develop pathways of partnership between the UW and the local Indigenous community. The project was introduced to me by Dr. Hannah Neufeld, my supervisor and the Principal Investigator, when the project began. I was invited to attend the partner lunch and planning session held on May 1, 2023. The idea to conduct an evaluation to gather evidence to support WONAA and WC’s goals of continuation of enhancing their capacities to continue their Land-based programming to work towards the establishment of a more permanent Land-based learning arose after the meeting.

2.1.3 Community-Based Participatory Research

This project therefore adheres to the principles of community-based participatory research (CBPR) in developing partnerships and opportunities for Land-based learning on campus. CBPR was used as a guiding methodology to create and collect dialogue on community-identified issues and needs (Crier et al., 2021; de Leeuw et al., 2017; Tobias et al., 2013). Using a community-engaged process is essential to explore complex issues, promote critical reflection, and establish successful long-term research partnerships (Castleden et al., 2012;

LaVeaux & Christopher, 2009; Saxinger & Dun, 2018). The CBPR approach provides information that is tailored to the community-identified needs of the diverse urban Indigenous communities (Herforth & Ahmed, 2015) and respects the goals and aspirations of the different partners involved in the project (Koster et al., 2012).

Diverse partners and collaborators such as WONAA and WC, our project partners, members of the urban Indigenous community, Indigenous youth and students, Elders and Knowledge Keepers, and UW staff representing teaching, research and curriculum development, specifically staff members from the Waterloo Indigenous Student Centre (WISC), the Office of Indigenous Relations (OIR), the Centre for Teaching Excellence, faculty, and administrators, were included in every step of the project. Project partners and community members were involved throughout the project and evaluation by participating in planning meetings, identifying goals and priorities, creating participant lists, and document reviews. They also contributed to Land-based learning and knowledge translation activities and were consulted at every stage of the research process. For example, the interview and focus group guides were created by the research team with the input of WONAA and WC staff and other project partners give ownership of the information to those most involved and most affected by the research outcomes to give rise to knowledge that will be generated into actions to create tangible changes within the local urban Indigenous and campus community.

2.1.4 Appreciative Inquiry

This evaluation uses an appreciative inquiry (AI) approach. This approach recognizes the strengths and focuses on the successes of organizations or programs to support future

organizational development (Babcock & Budowle, 2022; Murphy et al., 2004; Shrivastava et al., 2020). This evaluation uses an AI approach because it is a culturally responsive and cost-effective framework that encompasses the diverse perspectives and experiences of our project partners (Shrivastava et al., 2020), which is important for developing and strengthening partnerships and opportunities for Indigenous Land-based learning.

Other evaluation techniques often focus on deficits and may portray participant groups as needy or disadvantaged, which can reduce the motivation and confidence of those involved to initiate or partake in programs and initiatives (Murphy et al., 2004). The AI approach complements the CBPR approach by focusing on inclusive, empowering processes that build hope, trust and respect in the community and generate actions based on community strengths and achievements (Murphy et al., 2004). According to Babcock, & Budowle (2022), AI through Indigenous Food Security supports exploring, transforming, and rebuilding the industrial food system towards a more just and ecological model for all. AI is used to support the PEG project by highlighting the strengths of Land-based learning and research activities to collect evidence that can be utilized to attain more funding, inform decision-makers, and establish a permanent Land-based learning site on campus.

This evaluation follows the study phases of the AI approach outlined by Shrivastava et al. (2020) including discovery, which includes the planning stage with stakeholders such as UW Indigenous groups, faculty, administration, and community members; dream, which consists of workshops and interviews, focus groups, and document review; design, the data analysis stage; and destiny, which consists of knowledge dissemination, recommendations, next steps,

and information for future grants. The cycle will continue with the results of this evaluation being used to attain more funding to create and maintain more Land-based projects.

2.2 Outcome Evaluation

An outcome evaluation was used to provide evidence of the “Cultivating Place and Space for Land-Based Learning” project’s effectiveness of the Land-based learning workshops, and gatherings in cultivating community engagement and facilitating ongoing research, learning networks, and Land-based learning and work towards establishing a permanent Land-based learning space on campus that provides opportunities for Land-based learning. Outcomes are changes in development conditions that interventions are seeking to support (*UNDP Evaluation Guidelines*, 2021). Outcome evaluations can also be used to identify obstacles to the achievement of outcomes and highlight achievements (*UNDP Evaluation Guidelines*, 2021). This evaluation examined whether community-identified outcomes have been achieved, or the progress made towards it, and the project’s contribution to progress towards, or achievement of, the outcomes. Thus, this evaluation used CBPR and AI approaches to highlight the strengths and achievements of the project to ensure that the findings of the evaluation will support the project partner’s priorities of attaining funding and gathering evidence to support the establishment of a permanent Land-based learning space at the North Campus Community Garden.

By providing a place for urban Indigenous Peoples to share experiences while celebrating and engaging in cultural teachings and practices, new and existing relationships can be cultivated by connecting communities through Land and food. A logic model outlining the theory of change can be found in Figure 1.

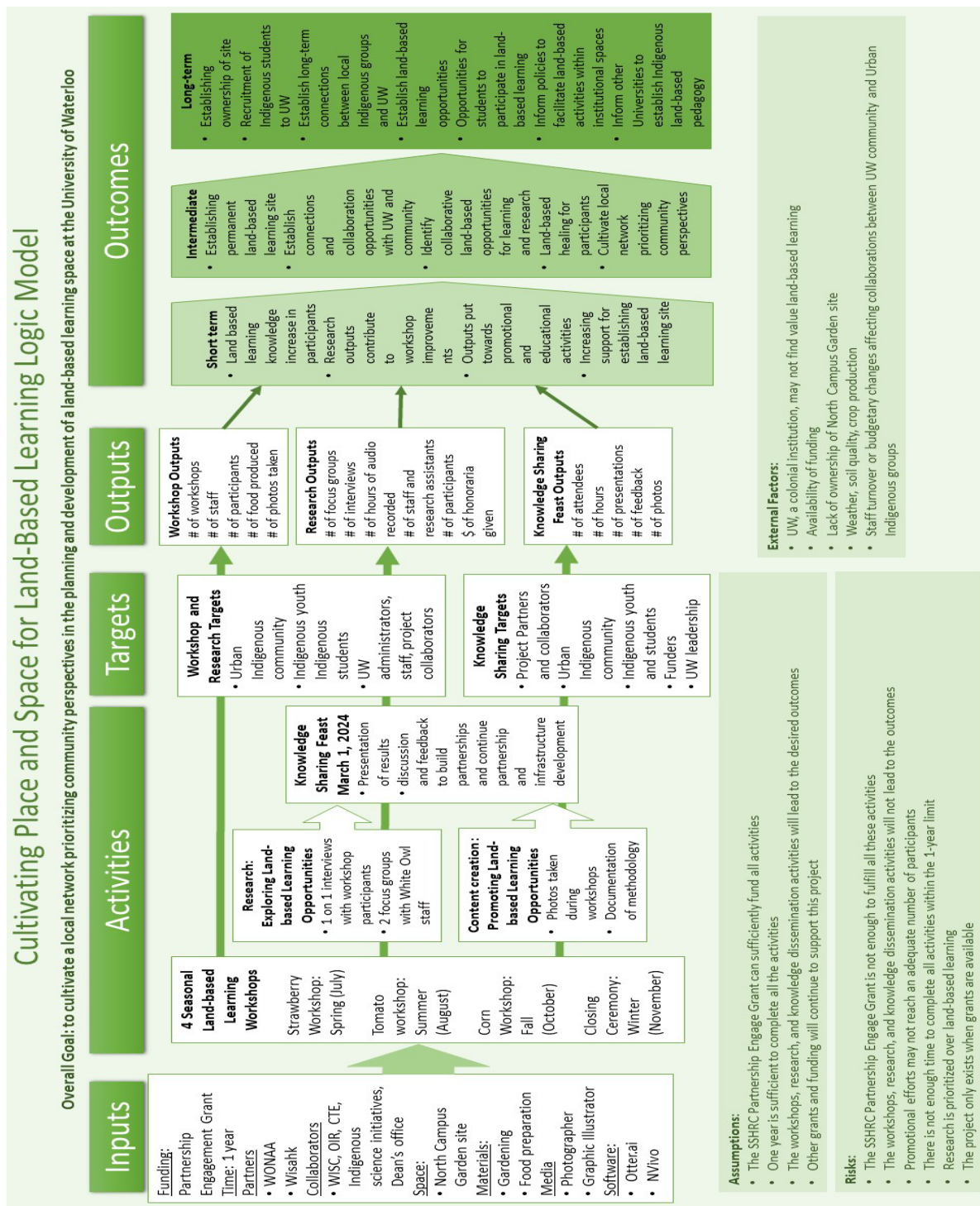


Figure 1: Cultivating Space and Place for Land-based Learning Logic Model

To meet the short-term outcome of increasing Land based learning knowledge in participants and increasing support for establishing a Land-based learning site, the Land-based learning activities will include teachings from Elders or Knowledge Keepers, and a hands-on workshop activity. Having access to Land allows urban Indigenous people to discuss and educate others about their experiences while celebrating and engaging in cultural teachings and practices (Mundel & Chapman, 2010).

These activities will also lead towards the long-term goal of establishing connections and collaboration opportunities with UW and the community. The event and research activities will help attain and share an understanding of the mission of the garden space between the urban Indigenous community and UW community members (Peach et al., 2020). Contributions towards the improvement of the Land-based events at the North Campus space and at other post-secondary institutions can also be attained through the learning and research activities. The Land-based activities, research, and knowledge dissemination will provide further evidence that delivering teachings on the Land and using Indigenous pedagogy is anticipated to improve the health and well-being of students and, over time, urban Indigenous Peoples' health and well-being (Mashford-Pringle & Stewart, 2019).

To provide opportunities for students and other members of the on and off campus communities to participate in Land-based learning and healing in the future, The activities will create connections to nature Land-based learning, research, and teaching. Land-based experiential learning and experiences are necessary for changing health behaviours and benefit all those involved in the learning experiences (Mashford-Pringle & Stewart, 2019). Activities that express cultural values, such as food sharing, were highlighted as supporting

access to traditional food and knowledge, and reinforcing identity (Grann et al., 2023).

Indigenous food can be used as a starting point to revitalize and strengthen the community (Grann et al., 2023). Forming these partnerships between Indigenous and non-Indigenous Peoples is necessary for the establishment of programs and initiatives within colonial systems (Grann et al., 2023).

2.3 Study Design

Four Land-based learning events were held from June to November of 2023 at the North Campus Garden. The workshop components were facilitated by WONAA and WC staff and Indigenous Elders or Knowledge Holders. Each event was planned for two hours in length. Each event included an opening circle led by an Elder or Knowledge Keeper, a workshop surrounding seasonal foods and teachings relevant to the season, and a feast.

To best identify the perspectives of the community and the priorities of project partners WONAA and WC and to gather rich data to answer the research and evaluation questions, methods such as purposeful sampling, semi-structured interviews, focus groups, fieldnotes, and a document review were employed. Purposeful sampling was used to gather a range of perspectives, and included voices from the urban Indigenous community, youth and students, UW staff, and project collaborators. A range of perspectives were collected to identify different experiences to construct a holistic understanding of the impacts of the land-based learning activities experienced by the diverse participants from varied contexts to support informed decision-making (Suri, 2011). Data collection used mixed methods with a focus on qualitative data collection. Interviews, focus groups and fieldnotes were used to collect rich data because it was important to understand the perspectives of both participants,

collaborators, and facilitators to encompass the different views of the urban-Indigenous community and those involved in Land-based learning or IFS locally. A document review was also conducted to evaluate the ability of the project to conduct its planned activities and reach its goals as planned within the specified timeframe and budget.

2.4 Research Process, Data Collection and Sources

2.4.1 Data Collection

Data collection used mixed methods, with a focus on qualitative data, to gather rich data. To gather the perspectives of the Land-based events and the potential of the project's learning, research, and knowledge sharing activities to establish a local network to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space, semi-structured interviews with event participants and project collaborators were conducted. Two focus groups were conducted with project partners, WONAA and WC staff after the second event and after the Knowledge Sharing Feast to determine goals for the project, collect perceptions of the Land-based activities, and identifying opportunities to move forward. Lastly, documents were reviewed to determine if the timeline was followed, whether the budget was sufficient, and to track event attendance. A model outlining the methods and how they intersect can be found in Figure 2.

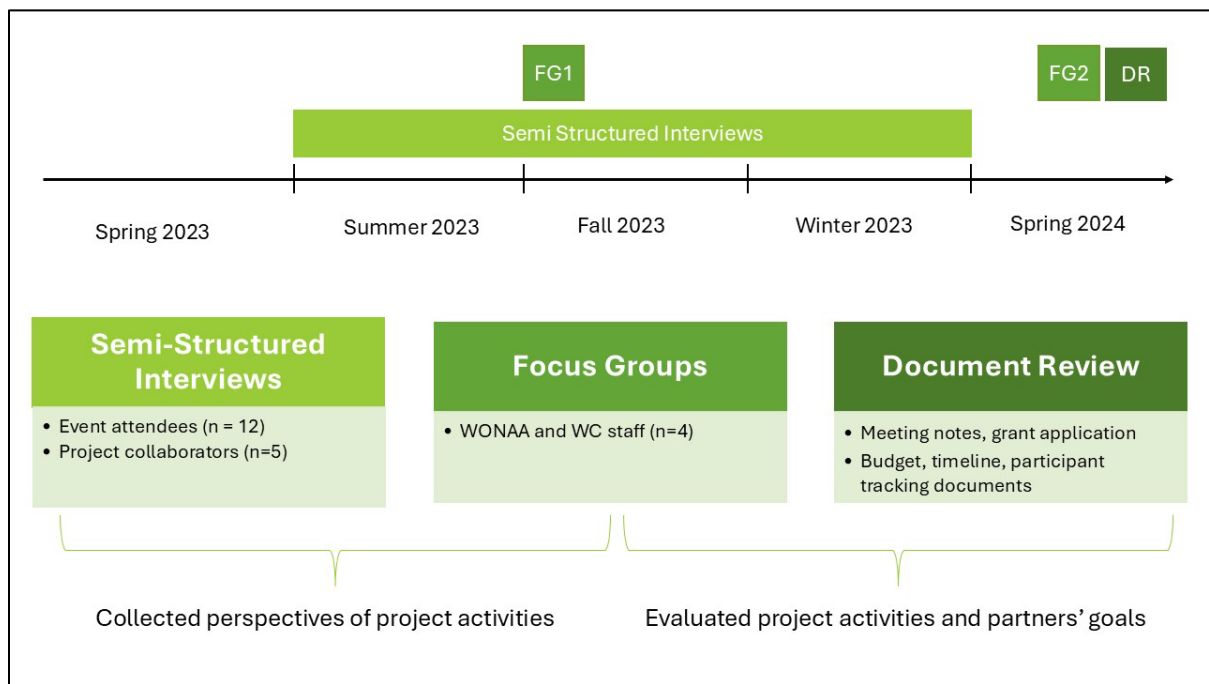


Figure 2: Methods Model

A total of 17 interview participants were recruited to reflect a diversity of perspectives. Five focus group participants were recruited from WONAA and WC to collect the perspectives of the project partners. A description of the participants can be found in Table 1.

Table 1

A description of the interview and focus group participants

	COMMUNITY MEMBERS	INDIGENOUS YOUTH	INDIGENOUS STUDENTS	UW STAFF
EVENT PARTICIPANTS	5	1	1	5
PROJECT COLLABORATORS	1	0	0	4
TOTAL	6	1	1	9

2.4.1.1 Spring 2023

An event planning meeting was held on July 10, where a list of event participants was generated by the research team, in consultation with WONAA and WC. Workshop participants included members of the local urban Indigenous community, such as representatives from other local Indigenous organizations such as Land Back Camp, WONAA and WC staff, members of the research team, Indigenous youth connected to WONAA as summer students, Indigenous students from the Indigenous Student Centre (WISC), UW staff representing teaching, research and curriculum development specialists from the Center of Teaching Excellence, the Office of Research, the Faculty of Science, the Faculty of Health, and UW staff representing the Office of Indigenous Relations. The inclusion criteria was: participants 16 years of age or older, living and/or working in Waterloo Region, are connected to one of the project partners, WONAA or WC, or research team members, interested in Land-based learning, teaching, or research at the University of Waterloo, and have either attended at least one of the seasonal Land-based events. The exclusion criteria was: people not living or working in the Waterloo region and individuals who are not affiliated with the University of Waterloo, or the research project partners, and those that have not participated in any events.

Invitations were sent out to the list of participants to attend the Spring Land-based learning event on June 23, 2023. The first gathering was held on July 18, 2023, and focused on strawberry teachings. Elder Banakonda opened the circle and shared the strawberry teachings. The workshop activities included a garden tour and making strawberry freezer jam (see Figure 4), which was shared and served with strawberry juice and bannock, which was prepared by WONAA Food and Nutrition Coordinator and Chef, Sydney Keedwell. There

were 36 participants in attendance including WONAA staff, WC staff, Indigenous youth, project team members, project collaborators, members of the UW Community, UW students, and community partners. A follow-up email was sent to all event participants to thank them for participating and to ask participants to reach out if they were interested in participating. An email recruitment script can be found in Appendix A. When the event participants expressed their interest in being interviewed, they were sent the information letter and consent form (see Appendix B).

In addition to the semi-structured interviews that took place with project collaborators and attendees of the seasonal events, five WONAA and WC staff were recruited in person following the first workshop using a verbal script (see Appendix C). They were invited to participate in two focus groups, the first after the first two events in October 2023, and the second after the final knowledge dissemination event on March 1, 2024. The focus group participants were given the information letter and consent form in person and through email (see Appendix D). When the focus group participants agreed to participate, either verbally or over email, a member of the research team followed up to schedule the focus groups.

2.4.1.2 Summer 2023

On August 3, 2023, invitations were sent out to the participant list to attend the Summer Land-based learning event on August 13, 2023. Dave Skene shared WC's history with the site to start the Tomato Gathering. Participants prepared and canned cooked and fresh salsa using the tomatoes, peppers and onions from the garden. The salsas were enjoyed with tacos prepared by Chef Sydney Keedwell. Attendees were also able to harvest and bring home produce from the garden including carrots, turnips, tomatoes, and chard. 20 participants were

in attendance, including WONAA staff, WC staff, Indigenous youth, project team members, members of the UW Community, and community partners. A follow-up email was sent to all event participants to thank them for participating and to ask participants to reach out if they were interested in participating. Individual participants were also contacted individually by email to participate in a one-on-one interview. Project collaborators that were unable to attend the events but were involved in the project were also invited to participate in an interview through email. A list of project collaborators that were unable to attend the Land-based learning workshops but have been engaged in the project as collaborators and attendees of previous planning meetings was developed by the research team.

Data collection for the one-on-one interviews began in July 2023. Event participants were asked to share their reflections on the event(s) that they attended and their perspectives on establishing a permanent Land-based learning space at the North Campus Community Garden site located at the University of Waterloo Environmental Reserve. The interviews were used to understand the ability of the learning, research, and knowledge dissemination activities in meeting to community identified goals and to understand priorities and perspectives to progress toward design and infrastructure needs that can be shared with research partners and university administrators. The interviews lasted approximately 30- 60 minutes in length and were held in person at the location of the participant's choosing or virtually on Zoom. The interview guide can be found in Appendix E. Interviews were audio-recorded with permission and field notes were taken after each interview.

Interviews with the project collaborators that did not attend the workshops contained the same questions about their perspectives on the partnership between UW and the urban

Indigenous community and the establishment of a permanent Land-based learning space. The same interview guide (Appendix E) was used for these interviews, but questions about their perspectives on the workshops and gatherings were omitted. The interviews lasted approximately 30- 60 minutes in length and were held in person at the location of the participant's choosing or virtually on Zoom. Interviews were audio-recorded with permission and field notes were taken after each interview.

2.4.1.3 Fall 2023

The first focus groups were held in October just prior to the Fall event with a total of five focus group participants. All the focus groups were conducted by me. The first focus group was conducted in person, at the WONAA office with four WONAA and WC staff in attendance and lasted approximately one hour on October 11, 2023. One focus group was conducted with one WONAA staff member over Zoom on October 26, 2023, due to scheduling, and lasted around 20 minutes. The first focus group focused on identifying participants' goals for the events and the potential of this project. The focus groups were audio-recorded with permission, and field notes were taken after each focus group to record the location, atmosphere, and takeaways of each interview. The focus group guide can be found in Appendix F. The focus groups were audio-recorded with permission and transcribed verbatim, and field notes were taken after each focus group.

Invitations were sent out on September 14, 2023, to participants to attend the Fall Land-based learning event that took place at the garden on October 16, 2023. Elder Myeengun Henry opened the circle and shared a song with the group. A corn nixtamalization workshop was held, and everyone sorted white corn kernels and sunflower seeds grown at

WONAA's Steckle garden site. Participants also harvested and brought home produce including peppers and beets. Three sisters soup was served to warm participants up from the cold fall weather. There were 17 participants, including WONAA staff, WC staff, project team members, collaborators, members of the UW Community, and community partners. A follow-up email was sent to all workshop participants to thank them for participating and to ask participants to reach out if they were interested in participating in a follow up interview. Participants were then contacted individually by email afterwards to participate in a one-on-one interview. Interviews with event participants and project collaborators continued between the scheduled events.

2.4.1.4 Winter 2023-2024

Invitations were sent out to participants on November 2, 2023 to attend the Winter Garden Closing Ceremony. The garden closing ceremony was held on November 5, 2023. The circle was opened and ceremony led by Elder Banakonda. The event included a sharing circle and a ribbon ceremony (Figure 7) to give thanks and reflect on our responsibilities to the garden for the growing season. Attendees brought food to share. The Closing Ceremony was attended by 17 people, including WONAA staff, WC staff, project team members, collaborators, members of the UW Community, and community partners. Participants and project collaborators were then contacted individually by email afterwards to participate in a one-on-one interview. Interviews with event participants and project collaborators continued until the end of December 2023.

2.4.1.5 Spring 2024

The Knowledge Sharing Feast was held on March 1 at United College and brought together project partners, project collaborators, research participants, UW faculty, staff, students, and wider members of the local Indigenous community. Melissa Ireland gave an opening greeting on behalf of OIR. Attendees then enjoyed a lunch prepared by Chef Sydney Keedwell of Aandanjige Cafe. Afterwards, Dave Skene, WC's co-founder, spoke about the Collective's history at UW's north campus community garden. Then, members of the research team shared the presentation of findings. Following the presentation, all attendees were invited to move into one of five breakout tables to reflect on what was shared and discuss the themes of workshop feedback, infrastructure, building and maintaining relationships, meaningful action, and general feedback. Dave shared some closing thoughts, reflecting on the importance of Land for identity and belonging for Indigenous Peoples, and thanked the Land for her continual gifts. With that, the event concluded as gifts of corn and sunflower seeds were shared with all who attended. A graphic illustrator was present to record and summarize the findings and discussions. Overall, 36 people attended the event.

The final focus group was held on March 28, 2024, after the knowledge dissemination feast. Due to the various availability of the participants, the second focus group was conducted with three WONAA and WC staff members over Zoom, with one separate interview taking place on Zoom afterwards with one participant on April 5, 2024, and one in-person interview took place with a participant at WONAA offices on April 2, 2024. The final focus group included perspectives on the events and input on the knowledge dissemination event's effectiveness in meeting the goals outlined in the first focus group and

during the planning meetings and ideas to work towards the continuation of the project. The focus group guide can be found in Appendix F.

The overall sample size included 22 participants in total, composed of 17 interviewees and 5 focus group participants, who participated in 2 focus groups. One participant, however, withdrew from the study and their data was not included in the final analysis. The Project Manager for the larger PEG grant, Elisabeth Miltenburg, and I conducted six interviews with workshop participants, including community members, WISC students, and WONAA summer students. Elisabeth and the Primary Investigator, Dr. Hannah Neufeld, conducted 11 interviews with project collaborators, including university staff. All interview participants received a \$100 gift card as remuneration. Focus group participants received two \$100 gift cards as remuneration for participating in each focus group.

Additional data sources for the evaluation were documents such as meeting notes, planning documents, the SSHRC PEG funding application, budget documents and timelines. These documents were compiled following the final focus group. The documents were contained in a shared folder that was created by the Project Manager for the larger grant. The documents were reviewed by me and used to evaluate the ability of the project to conduct its planned activities and fulfill the community-identified goals as planned within the specified timeframe and budget.

2.5 Data Analysis

Audio recordings from the interview and focus groups were transcribed after each interview from July to December 2023 and after each focus group from October 2023 until April 2024. The audio recordings were transcribed using Otter.ai and manually edited using the software

(*Otter.Ai*, n.d.). Field notes from the project along with the transcription files were then uploaded to NVivo, a qualitative analysis software (Swygart-Hobaugh, 2019) to support data management and analysis. Participants were assigned a unique ID that was applied to the interviews and transcript files. Those participants that consented to be referred using their names used had their names as identifiers, while those who chose to be anonymous chose to use a pseudonym. If a pseudonym was not chosen, the research team assigned a name. Qualitative data analysis was conducted using Braun and Clarke's Six Steps of Reflexive Thematic Analysis, as outlined in the sections that follow (Braun et al., 2018; Byrne, 2022).

2.5.1 Phase one: familiarization with the data

Otter.ai software was used to support the transcription process. Listening to the audio files while performing the manual transcription was useful to facilitate a deeper familiarity of the data, especially for the interviews where I was not in attendance. Pauses, changes in speaking patterns, and tones were incorporated into the transcripts and field notes were read alongside the transcripts to better understand the context and the impressions of the interviewee. At this stage, notes of initial takeaways from the transcripts were taken and potentially interesting and impactful quotes in the transcripts were highlighted to start to regard the data as data, and to adopt an active analytical and critical lens (Braun et al., 2018). The triangulation of multiple data collection methods and data sources, such as interviews from different participant groups, focus groups, field notes, and documents, also helped me familiarize myself with the context and the data. This step was done to immerse myself in the data by reading all the textual data that was available and listening to the audio data (Braun et al., 2018).

2.5.2 Phase two: generating initial codes

The research team used NVivo to develop an initial set of codes. Three members of the research team initially coded the interviews to start with. I coded six interview transcripts from community members, students and youth. Dr. Neufeld coded four interviews from UW staff and project collaborators, and Elisabeth coded six interviews from community members, UW staff and project collaborators. The process of coding was flexible and collaborative and evolved throughout the analytical process (Byrne, 2022). Progression through the analysis facilitated further familiarity with the data, by reading and re-reading the transcripts and the field notes, which resulted in the interpretation of new codes and patterns (Byrne, 2022). Codes were first created while reading through the transcripts within NVivo. Phrases and ideas were selected and placed into a new code. More codes were created as more transcripts were read, and the transcripts were revisited to add more references to the codes. After the initial coding process, the research team came together afterwards to compare codes and form themes from the interview data. A coding list was developed and discussed with the research team members to improve the consistency of the data interpretation and to reach an agreement with the coding strategy. The use of multiple coders is beneficial in a reflexive manner to sense-check ideas, and to explore multiple interpretations of the data and to enhance trustworthiness (Byrne, 2022; Shrivastava et al., 2020). Coding of the focus group data followed the same process and was completed by me.

2.5.3 Phase three: generating themes

The intention of the data analysis for this particular research was to reflect the experience of a social reality; therefore, an experiential orientation was adopted to consider the thoughts, feelings and experiences of participants (Braun et al., 2018; Byrne, 2022). An experiential

orientation was the most appropriate as the aim of the study was to prioritize participants and facilitators' own accounts of their experiences and opinions regarding their perceptions of Land-based learning (Byrne, 2022). When the relevant data has been coded in the interview and focus group transcripts, the codes were reviewed to determine how different codes could be combined according to overarching ideas. Mixed deductive and inductive approaches were used to generate the themes (Green, 2014). The interview questions were used to develop themes deductively, and emerging themes from the data were identified inductively after coding (Green, 2014). The research team met after coding independently to review the codes and discuss preliminary themes for the interview data.

The focus group data analysis was completed by me. The document review began following the coding phase, when the themes began to be formed using the focus group and interview data. As a part of the outcome evaluation, the collected funding, budget, and planning documents were reviewed by me to evaluate if the allocated budget outlined in the grant application was sufficient, if the planned timeline was followed, and whether goals established during the planning process were met. The goals that were outlined in the planning meetings and the first focus group were compared to the answers from the final focus group and referenced with the evaluation matrix (see Appendix G) that was prepared during the evaluation planning process. The focus group and matrix questions were used to develop themes deductively, and emerging themes from the data were identified inductively for the focus group and interview data for the evaluation (Green, 2014). The matrix helped to arrange the data into categories by using the data to answer the established questions and sub questions.

2.5.4 Phase four: reviewing themes

The multiple codes from the interview transcripts that shared similar concepts were categorized into overarching themes or subthemes (Byrne, 2022). Illustrative quotes and examples that fit the themes were also highlighted and discussed between the research team members. The individual themes were compared against the rest of the themes and the data to see whether the themes made sense in relation to the data (Braun et al., 2018). This was done by having the research team members read through the themes, ensuring that the research questions were addressed, and that there was no repetition between the themes.

The focus group, interview, and document review data compiled into categories for the evaluation by me. The codes from the interview and focus group transcripts that shared similar concepts were categorized into overarching themes or subthemes (Byrne, 2022). Illustrative quotes, examples, and the document review data that fit the themes were also organized into the themes. The individual themes were then compared against the rest of the themes to see whether the themes made sense in relation to the data (Braun et al., 2018).

2.5.5 Phase five: defining and naming themes

The themes were reviewed by the research team to provide a coherent narrative with the interview data (Braun et al., 2018). The themes were also refined to ensure that they did not overlap with other themes and determined to be unique and specific (Braun et al., 2018; Byrne, 2022). Some subthemes were combined into one overarching theme at this phase.

Following the garden closing ceremony, a knowledge-sharing event planning meeting with project collaborators was held in December 2023. The hybrid meeting was held at WISC and online, with 13 attending. The research team provided updates on data collection

and dissemination plans. Feedback was received about the list of stakeholders to invite and the knowledge-sharing event's agenda. In February 2024, the research team held a results feedback presentation. Overall, 14 project collaborators, partners, and members of the research team were present. Members of the research team presented initial findings and emerging themes, followed by a group discussion. Those in attendance weighed in on the relevance of the various themes and highlighted certain aspects to be emphasized for knowledge dissemination. The collaborators felt that focusing on the impact of the events and highlighting the partnership for the presentation at the Knowledge Sharing Feast was most important. Up to this point, the data analysis of the interviews had been initiated collaboratively with three research team members, Dr. Neufeld, Elisabeth, and I, to have findings to share within the one-year timeline of the PEG grant. The next steps of data analysis for the interviews and analysis of the evaluation data after the Knowledge Sharing Feast March 1, 2024, was then done by me.

For the evaluation, the themes and sub themes of the interviews, focus group, and document review were further refined to provide an interpretation of the data in relation to the research questions, evaluation matrix (see appendix G), and the common perspectives that were shared (Byrne, 2022). This was done by finding more supporting evidence in the form of quotes and the document review data and making sure to include practical details and feedback that were of interest to the project partners, which were identified during the knowledge sharing event. The themes were also reviewed to ensure that the themes were unique and were not repetitive (Braun et al., 2018).

2.5.6 Phase six: producing the report and manuscript preparation

Phase 5 and 6 often overlapped, as the writing and later stages of analysis occurred together.

As themes and sub-themes were adjusted over the course of the analysis, so did the writing (Braun et al., 2018). For the manuscript, the order of the categories and themes was determined to connect them in a logical manner to build upon previously reported themes and to create a narrative of the data (Byrne, 2022). The themes of the interviews were arranged in a temporal order, starting with the participants and collaborators experience with the Land-based events, then their perspectives about the opportunities that the events created, and moved into project sustainability and future plans.

The evaluation was organized to include the event feedback, the goals identified by the project partners, ideas to move forward with the project. The writeup included the data from the document review that was interwoven through the themes.

2.6 Ethical considerations

This study has been reviewed and received ethics clearance through the University of Waterloo Research Ethics Board (REB #45280). The interview and focus groups transcriptions were completed using Otter.ai. The Otter software utilizes best practices to protect data and works with independent experts to verify its security measures, and has achieved SOC 2 Type 2, which certifies controls to ensure the continuous security of Otter.ai's customers' data and meets international standards for data security (*Privacy & Security*, n.d.). Recordings and quotations from collected data were de-identified to ensure the participants' and communities' confidentiality. Participants were asked for permission to use their quotations every time a quotation is shared publicly.

Data collection and analysis were primarily completed by non-Indigenous people. This may result in a lack of understanding of the cultural context with the Indigenous participants' perspectives. To establish inclusion of important cultural contexts, diverse community members and collaborators were included in every step of the evaluation process and member checking was done. This participatory approach included voluntary participation in the data analysis process and had WONAA look over the interview and focus group questions and participant list for workshops to ensure that the process had the input Indigenous community members.

Chapter 3: “Head Stuff, Heart Stuff, Hand Stuff,” A Community-Based Exploration of the Potential Impacts and Growing Support for Indigenous Land-Based Learning at the University of Waterloo

3.1 Introduction

Indigenous Peoples within Canada are becoming increasingly urbanized. Populations of

Indigenous Peoples living in urban settings grew from 13% in 1961 to 52% in 2016.

Indigenous Peoples move to urban areas for reasons such as employment, healthcare access, and education (Urbanization and Indigenous Peoples in Canada, 2021). Colonization has led to processes of environmental dispossession and urbanization, which are associated with decreased intergenerational teachings of cultural practices, including access to cultural foods and foodways (Ford et al., 2019; Cidro & Martens, 2015; Snyder & Wilson, 2015; Tarasuk et al., 2014; Richmond & Ross, 2009). These factors have resulted in feelings of disconnection and dispossession from communities, families, and cultural practices and the reduction of planting, harvesting, and preparation of Indigenous foods (Cidro & Martens, 2015; Snyder & Wilson, 2015; Ford et al., 2019), particularly for those living away from their home communities (Neufeld et al., 2017).

3.1.1 Indigenous Food Sovereignty

The lack of access to Indigenous foods and associated cultural practices and protocols is linked with Indigenous Peoples in the city experiencing disproportionately higher rates of household food insecurity compared to the majority of Canadians (Cidro, 2015; Tarasuk et al., 2012). Food insecurity, or the lack of access to healthy affordable food (Skinner et al., 2016), is a strong determinant of health among Indigenous Peoples (Tarasuk et al., 2019).

The decreasing access to Indigenous foods has led to the gradual replacement of these foods with pre-manufactured products (Neufeld et al., 2017), which continues to have negative impacts on the health, wellbeing and the diverse cultural identities that exist within urban Indigenous communities (Cidro, 2015). The importance of maintaining cultural connections in the city is critical for Indigenous people living off-reserve as food insecurity is strongly associated with lower self-perceived health and wellbeing (Tarasuk et al., 2019). Food practices play a central role as a cultural foundation for Indigenous Peoples as there is a strong link between food and medicine for Indigenous Peoples across Turtle Island (Cidro & Martens, 2015).

Indigenous food sovereignty (IFS) has been proposed as strengths-based solution to address food insecurity within urban environments (Cidro et al., 2015). The four main guiding principles of IFS are Sacred or Divine Sovereignty, Participation, Self-Determination, and Legislation and Policy (Morrison, 2011). These principles outline that food should be free from dependence on grocery stores or corporations and cannot be constrained or recalled by colonial policies or institutions and suggests a restorative framework to promote practice of maintaining healthy relationships with the land and all living things that provide food (Morrison, 2011). IFS works to reduce dependence on Western food systems by connecting people to their Indigenous foods and food systems through sustainably revitalizing Indigenous food practices and knowledge systems (Coté, 2016). Food sovereignty moves beyond food security by promoting cultural restoration through self-determination and restorative frameworks, which all centre around relationship with the Land (Coté, 2016; Kamal et al., 2015; Grey & Patel, 2015). There is a growing

emergence of IFS initiatives across urban centres within Canada (Robin, 2019, Miltenburg et al., 2023). These initiatives include, but are not limited to, reclaiming Land along with the transmission of Indigenous knowledges, food production, and the protection of natural resources. (Robin, 2019; Kamal et al., 2015). Locally, within the Kitchener - Cambridge - Waterloo tri-city region within present-day southwestern Ontario, Land and food-based practices including hunting, fishing, seed saving, growing, preserving, and sharing food, are practiced by a number of Indigenous groups and agencies including: White Owl Native Ancestry Association (WONAA), the Wisahkotewinowak Collective (WC), the Waterloo Region Indigenous Food Sovereignty Collective, Waterloo Indigenous Student Centre – Shatitsirótha, and the North End Harvest Market (Miltenburg et al., 2022). These practices have been found to create community and strengthened individuals' self-determination (Miltenburg et al., 2022).

One of the core elements of IFS and Indigenous wellness overall is connection to Land (Hatala et al., 2019). Land is seen as the basis of all life, and all cultural teachings (Bowra et al., 2021). Indigenous Peoples living within urban centres are often displaced from their ancestral territories and seek opportunities to reconnect with their cultures and identities through Land and food (Miltenburg et al., 2022). Land-based education in urban contexts can be about story-making, listening to Land-based teachings, and interpreting these teachings in relation to one's own life (Hatala et al., 2019). Reconnecting to culture through Land-based education can be effective in reclaiming spiritual, physical, and psychological health (Johnson & Ali, 2020). The importance of engaging with culture and the role of Indigenous service organizations in facilitating connections are significant aspects of urban-Indigenous

Peoples' experiences in urban settings (Senese & Wilson, 2013). The desire for cultural connection is present, as seen in Senese & Wilson's (2013) study, where the majority of urban-Indigenous participants made efforts to maintain and explore their cultures within the city of Toronto. Although many participants described difficulties accessing Indigenous services and organizations when they first moved to the city, they indicated that once the connections were made, it became an important source of healing and support (Senese & Wilson, 2013).

A key part of engaging with culture is Land-based learning, which facilitates humans engaging in reciprocal relationships with all of creation on the Land (Bowra et al., 2021). Common forms of Land-based education such as hunting, fishing, growing, harvesting and food preparation involve cultural traditions and reconnect and revitalize Indigenous knowledges (Bowra et al., 2021; Kamal et al., 2015). Land-based sustenance practices can also foster cultural pride, self-confidence, physical activity, and positive food and nutrition practices, among participants such as consuming traditional foods and medicines, engaging in spiritual practices, and consuming healthy, nutritious foods that are carefully sourced, (Bowra et al., 2021; Burnette et al., 2018). Through engaging in cultural food practices, urban Indigenous Peoples are able to share knowledges towards supporting IFS self-determination within their communities (Bowra et al., 2021; Cidro et al., 2015; Mundel & Chapman, 2010).

For IFS programs to meet the needs of the communities they serve, existing cultural, social, political, economic, and gender power dynamics must be considered and that the programs and resources come from Indigenous communities or facilitators (Kerpan et al.,

2015). Many IFS initiatives are embedded in their local communities, and there has been little opportunity for communities to share and learn from each other (Robin, 2019). Less is known about what food sovereignty movements look like in specific places and spaces and how their expression is largely shaped by the local environments and communities (Desmarais & Wittman, 2014). Additionally, health promotion literature often underemphasizes the role of the natural environment in health (Mundel & Chapman, 2010).

3.1.2 Land-based Learning

In response to a Western educational system that has ignored and at times erased Indigenous histories and knowledges, Land-based pedagogy emerged in the early 2000s within post-secondary institutions to re-establish the relationships between Indigenous Peoples and the Land (Drouin-Gagné, 2021). A master's program in education with a Land-based focus that includes 2-week intensive coursework, for example, has been offered since 2011 at the University of Saskatchewan, making it one of the first of its kind within Canada (Drouin-Gagné, 2021). Other Canadian post-secondary institutions began creating Indigenization strategies and developing Indigenous curriculum along with teaching and gathering spaces as responses to TRC's Calls to Action that were released in 2015 (Brant, 2023; Gaudry & Lorenz, 2018; Mashford-Pringle & Stewart, 2019). In 2018, the University of Victoria launched an Indigenous law program where students and professors learn from community knowledge holders and Indigenous law professors (Drouin-Gagné, 2021). Another example is based at the University of Winnipeg's where students engaged in Indigenous-led outdoor Land-based activities are led by Indigenous Land stewards from Wabaseemoong Independent Nation (Zurba et al., 2022).

Several post-secondary institutions have established on-site Indigenous medicine and food gardens (Mundel & Chapman, 2010; Peach et al., 2020). For instance, the Urban Aboriginal Garden Project at the University of British Columbia that was established in 2005 found the garden to be a decolonizing experience for participants because it helped reduce dependence on Western food systems and that (Mundel & Chapman, 2010). The Indigenous Garden at Western University in Ontario has also provided a vitally important space for the campus Indigenous community to practice, share and strengthen Indigenous Knowledges and practices (Peach et al., 2020). Further research, however, is needed to explore whether these efforts are meeting the needs of the local and university Indigenous communities. Since the release of the TRC Final Report, there have also been cluster hires of Indigenous staff and faculty, tuition waivers for students, and the creation of other Indigenous gathering spaces within academic institutions (Goel, 2023; Peach et al., 2020; Styres et al., 2021). Despite these important shifts, the meanings and discourse associated with these efforts have not been well documented in research (Peach et al., 2020). The response from post-secondary institutions to these Calls to Action have yet to be researched and evaluated to share knowledge and permanently establish these sites to connect Indigenous communities and students to these spaces as places of learning, belonging and connection, and to ensure that these efforts are not temporary or tokenistic (Peach et al., 2020; Styres et al., 2021)

3.1.3 Study Context

WONAA is an Indigenous community agency based in the city of Kitchener that provides culturally appropriate counselling support, youth and family programming, and Land-based education, including Land-based workshops, food processing, art-based reflection, and

intergenerational learning (Grantee Highlight: White Owl Native Ancestry Association, 2022). WONAA works closely with WC to produce food and medicines for the WONAA Food Share. WC focuses on growing intergenerational Land-based practices to nurture Indigenous well-being and create sustainable, healthy environments. WC operates four gardens: a Tea Garden at the University of Guelph Arboretum, a teaching garden at the Blair Outdoor Education Centre, a Three Sisters garden located at Steckle Heritage Farm, and a produce garden at the University of Waterloo's North Campus Environmental Reserve. Together, they strive to strengthen Indigenous food sovereignty locally (Wisahkotewinowak, n.d.). The two organizations offer a youth summer program that employs youth to tend to the gardens while participating in cultural activities and reflective artistic processes.

UW staff and faculty were involved in the project as collaborators, and were involved in the initial meeting on April 2022, the grant application, and throughout the project. Like other post-secondary institutions across Canada, UW has also begun responding to the TRC's Calls to Action by launching a five-year Indigenous Strategic Plan that will assist in guiding the university towards its goals of Indigenizing and decolonizing the institution (*Commitment Ceremony Signals New Beginning for Indigenous Peoples and the University of Waterloo*, 2022); Brant, 2023). UW has initiated this work by growing the Office of Indigenous Relations (OIR), hiring new Indigenous staff and faculty, holding annual commitment ceremonies, waiving tuition for current and incoming students from the Six Nations of the Grand River and the Mississaugas of the Credit First Nations, implementing changes to curricula, and building facilities to support Indigenization (*Commitment Ceremony Signals New Beginning for Indigenous Peoples and the University of Waterloo*, 2022; *National Day*

for Truth and Reconciliation 2023, 2023; Tuition Waiver for Eligible Indigenous Students, n.d.). However, there is still room for further development of spaces that can integrate Land-based pedagogy and curriculum within the institution. One way of addressing this gap is through establishing an Indigenous Land-based learning space.

In April 2022, an initial meeting and walk around the Wisahkotewinowak (WC) gardens located at the North Campus Garden site brought together campus collaborators and members of WONAA and WC to begin conversations around infrastructure needs to better utilize the space. WC and WONAA's objectives at the time were to explore opportunities to formalize the establishment of a more permanent Land-based learning space to strengthen land-based learning, Indigenous food sovereignty (IFS), and urban Indigenous governance processes with UW. Thus, the Social Sciences and Humanities Research Council (SSHRC)-funded Partnership Engage grant called "Cultivating Place and Space for Land-Based Learning," began. As part of the larger study, four seasonal Land-based learning events were held from June to November of 2023 at the University of Waterloo's North Campus Garden. The workshop components were facilitated by WONAA and WC staff along with local Indigenous Elders and Knowledge Holders. Each event was planned for two hours in length and included an opening circle led by an Elder or Knowledge Keeper, a workshop highlighting foods and medicines grown in the garden and teachings relevant to the season. The events were held at WC's garden space, located at the University of Waterloo's North Campus Environmental Reserve, where WC has been gardening since the spring of 2018. Through this project, WONAA and WC aimed to enhance their capacities to build sustainable supports and infrastructure to continue their Land-based programming to work

towards the establishment of a more permanent Land-based learning space that will strengthen Land-based learning, IFS, and urban Indigenous governance processes within UW. WONAA and WC also hoped to explore opportunities to formalize their relationship with the space and UW to develop a partnership between the UW and the local Indigenous community.

3.1.4 Aims and Objectives

This research therefore aims to explore the impacts of Land-based learning on the urban Indigenous and university communities and the project's ability to establish networks to facilitate ongoing research and learning and establish a Land-based learning space on campus at UW. The questions that guided the research were:

1. What are participants' perceptions of the Land-based engagement process?
2. What is the effectiveness of Land-based workshops in identifying and prioritizing collaborative Land-based opportunities for learning and research?
3. To what extent can the programming instituted as part of the Land-based seasonal events help to establish a local network to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space on the UW campus?

3.2 Methods

As part of a collaborative research project with local project partners WONAA and WC and project collaborators from the UW campus Indigenous community, a qualitative research project was conducted throughout the growing season in 2023 with associated activities in

the form of Land-based workshops and teachings taking place at the Wisahkotewinowak garden space at the UW North Campus Environmental Reserve.

3.2.1 Research Approach

The research design was guided by the principles of community-based participatory research (CBPR) in developing partnerships and opportunities for Land-based learning on campus.

CBPR was used as a guiding methodology to create and collect dialogue on community-identified issues and needs (Crier et al., 2021; de Leeuw et al., 2017; Tobias et al., 2013).

Using a community-engaged process is essential to explore complex issues, promote critical reflection, and establish successful long-term research partnerships (Castleden et al., 2012;

LaVeaux & Christopher, 2009; Saxinger & Dun, 2018). The one-year research project was built on existing relationships held by the research team, WONAA, and WC to explore

opportunities and establish a Land-based learning space at the UW Environmental Reserve.

Diverse partners and collaborators such as our project partners, WONAA and WC, members of the urban Indigenous community, Indigenous youth and students, Elders and knowledge

Keepers, and UW staff representing teaching, research and curriculum development,

specifically staff members from the Waterloo Indigenous Student Centre (WISC), the Office of Indigenous Relations (OIR), the Centre for Teaching Excellence (CTE), faculty, and

administrators, were involved throughout the study by participating in planning meetings,

identifying goals and priorities, creating participant lists, and providing input on study

objectives, design, and data collection. Partners and collaborators also contributed to

dissemination meetings and the final knowledge sharing feast. It was intended that this

community-based approach would give rise to knowledge that will be generated into actions to create tangible changes within the local urban Indigenous and campus communities.

3.2.2 Data Collection and Analysis

To better understand the impacts of Land-based learning and the effectiveness of Land-based activities in identifying and prioritizing collaborative opportunities for learning and research, semi-structured interviews were conducted with event participants and project collaborators. A list of event participants was generated by the research team, in consultation with WONAA and WC staff on June 19, 2023. Event participants included members of the local urban Indigenous community, such as representatives from other local Indigenous organizations such as Land Back Camp, WONAA and WC staff, members of the research team, including students under the supervision of Dr. Neufeld, Indigenous youth connected to WONAA as summer students, Indigenous students from the Waterloo Indigenous Student Centre (WISC), UW staff representing teaching, research and curriculum development specialists from the CTE, the Office of Research, the Faculty of Science, the Faculty of Health, and UW staff representing the OIR. Invitations were sent out to the list of participants to attend each Land-based learning event on June 23, 2023. The invitations were sent to participants before each seasonal event. Following the events, an email was sent to all event participants to thank them for attending and to ask if they were interested in participating in a one-on-one interview. Project collaborators that were unable to attend the workshops, but were involved in the project were also invited to take part in an interview. The one-on-one interviews began in July 2023 and continued between the scheduled events

until December 2023. A total of 17 interview participants were recruited to reflect a diversity of perspectives (see Table 1 for more detail).

Table 1

A Description of the Interview Participants

	COMMUNITY MEMBERS	INDIGENOUS YOUTH	INDIGENOUS STUDENTS	UW STAFF
EVENT PARTICIPANTS	5	1	1	5
PROJECT COLLABORATORS	1	0	0	4
TOTAL	6	1	1	9

The audio recordings were transcribed verbatim using Otter.ai and manually reviewed and edited (Otter.Ai, n.d.). Data from the field notes and transcriptions were coded and analyzed both within and across cases using NVivo, a qualitative analysis software. Data analysis was conducted using Braun and Clarke’s Six Steps of Reflexive Thematic Analysis (Braun et al., 2018). The intention of the data analysis was to reflect the experience of a social reality; therefore, the thoughts, feelings and experiences of participants were considered (Byrne, 2022). This process was done by familiarizing with the data by reading and rereading the transcripts along with the fieldnotes, taking notes of the impressions and initial similarities across transcripts, and coding the transcripts line by line. More codes were created as more transcripts were read, and the transcripts were revisited to add more references to the codes. The data was reviewed to determine how different codes could be combined according to overarching ideas so that they may form themes. Matrix queries also assisted in further identifying relationships and patterns in the data.

To ensure the consistency of the data interpretation and validity, research team members reviewed the codes and discussed preliminary themes. The research team also held a knowledge sharing presentation and meeting where project partners and collaborators weighed in on the priorities and relevance of the various themes and highlighted certain aspects to be emphasized for knowledge dissemination. The feedback provided led to further refinement of the overall results, which are presented in the following section.

This study has been reviewed and received ethics clearance through the University of Waterloo Research Ethics Board (REB #45280).

3.3 Results

Three overarching categories emerged from the participants' and collaborators' interviews that took place during the seasonal Land-based learning events which included: (1) growing support for land-based learning (2) building relationships and bridging communities, and (3) institutional support and project sustainability. The relationships between these categories and their corresponding themes are metaphorically illustrated in a conceptual seed model (see Figure 1). This model takes the form of a bean seed, representing the significance of the project to the Land and gardens of the north campus as spaces and places of investigation and evaluation. The radicle, or the "baby root," of the seed represents how the events grew support for Land based learning throughout the project. The epicotyl, or the Land-based learning and teaching through food, will allow the seed to break through the soil. The relationship and community building aspects of the events and activities are represented as the beginnings of the first leaves of the plant. The institutional support, represented by the

earth surrounding the seed, provides the seed with the essential resources for growth. The results presented below greater detail to these categories and themes.

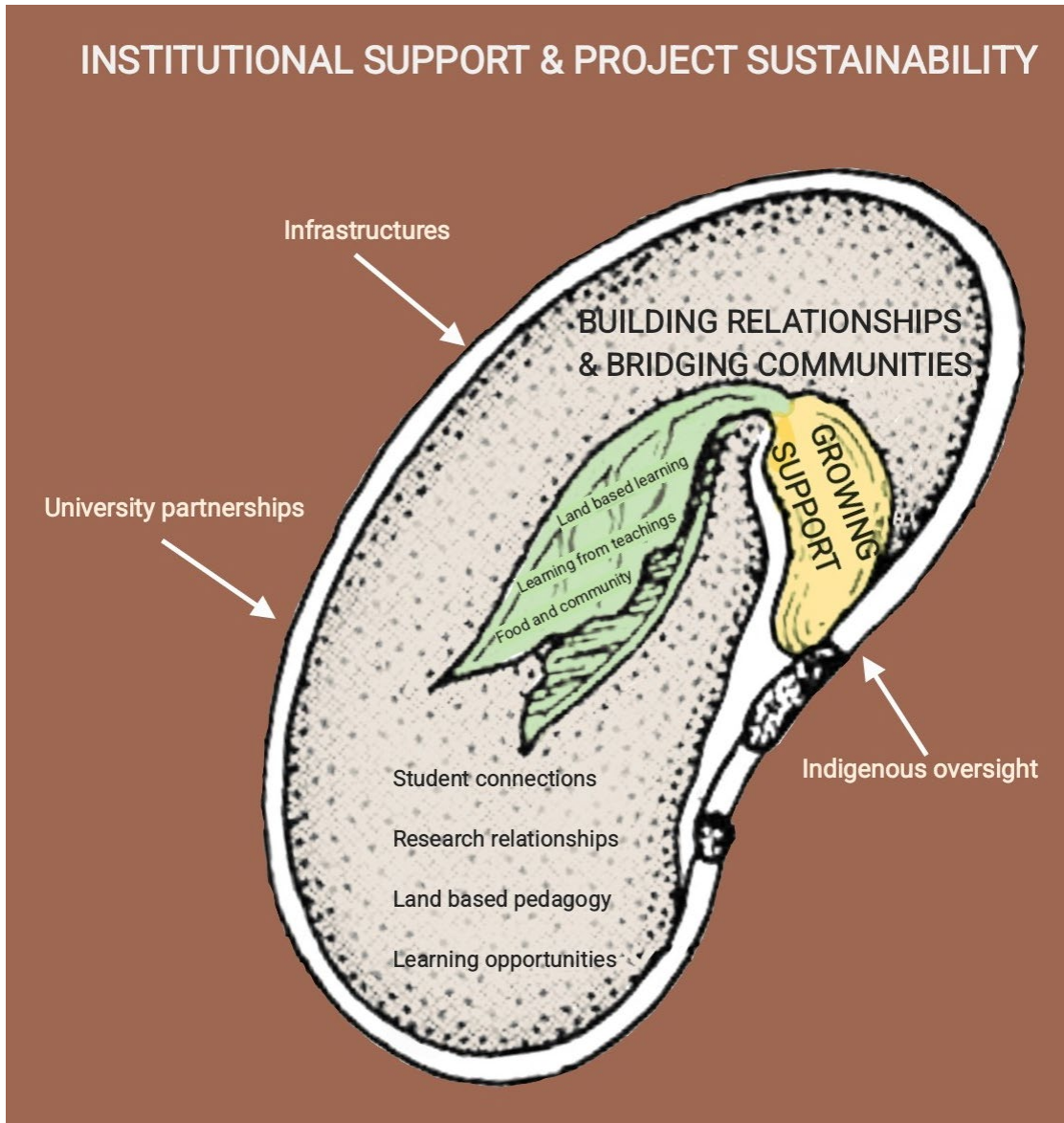


Figure 1. Conceptual seed model of categories and themes

3.3.1 Growing Support for Land-based Learning

As part of their interviews, everyone was asked about their experiences, favourite aspects, and takeaways from the Land-based events. Even though not everyone invited to be interviewed was able to attend the events, workshop attendees including collaborators involved in the planning process, shared unanimously positive feedback. For the 12 who attended in person (see Table 2), Alissa (community member), Kevin (UW staff, OIR), and WISC students, listed the hands-on workshops as their favourite aspect, while Payton (Indigenous youth) enjoyed taking in the teachings and spending time with the Knowledge Holders and Elders in attendance. Several participants such as Susan (UW staff, WISC) and Beth (community member) noted the laid-back atmosphere that allowed them the space and time to reconnect with community members and friends.

Table 2

Land-based Learning Event Attendees

Participant Name or Pseudonym	Participant Category	Data Collection Method	Total Number
Alicia	Community Member	Interview- Workshop Attendee	5
Alissa	Community Member	Interview- Workshop Attendee	
Beth	Community Member	Interview- Workshop Attendee	
Krystal	Community Member	Interview- Workshop Attendee	
Sven	Community Member	Interview- Workshop Attendee	
Bangishimo	Community Member	Interview- Community Member	1
Lieth	Indigenous Youth and Students	Interview- Workshop Attendee	2
Payton	Indigenous Youth and Students	Interview- Workshop Attendee	
Emma	UW Staff	Interview- Workshop Attendee	5

Kevin	UW Staff	Interview- Workshop Attendee	
Melissa	UW Staff	Interview- Workshop Attendee	
Susan	UW Staff	Interview- Workshop Attendee	
Thomas	UW Staff	Interview- Workshop Attendee	
Karol	UW Staff	Interview- Project Collaborator	4
Myeengun	UW Staff	Interview- Project Collaborator	
Sara	UW Staff	Interview- Project Collaborator	
Savannah	UW Staff	Interview- Project Collaborator	
Total Participants			17

The Land-based learning events and gatherings garnered positive perspectives, grew support for the establishment of a Land-based learning site on campus and highlighted the importance for UW to make the establishment of the site a priority. The garden space was unfamiliar to many people on campus and the seasonal events were often the first introductions to the garden site for participants such as Lieth (Indigenous student) and Melissa (UW staff, OIR). Thomas (UW staff, CTE) said, *“most people I talk to you on campus don't know that it's there. So I think you could really become a good hub for learning and sharing.”* Those who were aware of the garden space were still able to grow their relationship to the space. Emma (UW staff, WISC) stated:

“I think it's [the project] helped push and develop the conversation for a space out there... But I think it has been a big push and there's been a ton of progress and that conversation since it- So I think it's definitely beneficial for keeping up people's mind and radar, especially if it does develop into a space then people aren't like, ‘oh, where is that?’”

During the interviews, Payton (Indigenous youth) stated their initial uncertainty of the potential of the space to be a community space. When asked about whether participating in the workshops gave inspired ideas about how that space could be used, Payton said:

“I remember people mentioning before, like, oh, yeah, this would make a good community space and, like, I agreed but I didn't really see the vision, I guess. Whereas it was a little bit more clear when we were having those events and sort of seeing it in action.”

This excerpt illustrates Payton’s growing interest and support after attending the seasonal events. Melissa (UW staff, OIR) similarly learned more about the partnerships with WONAA and WC after participating in the events and saw firsthand the scope and potential of the garden space. Melissa described the takeaway from her experience:

“I learned that it was a like a vibrant, meaningful community that was striving to engage community in a good way. And so that's what I learned, I learned that it's not just a project that exists to exist, it's actually purposeful, and it's not-I felt like the end result, yes, there's going to be you know, academic papers and this and that, as a result I'm sure, but I learned that this is an authentic attempt to do Land based learning and engagement. And it was a beautiful thing happening on our campus.”

Melissa’s perspective shows that the Indigenous-led Land-based efforts was accepted by the local and campus communities and was seen as a purposeful effort. Attending the events and the knowledge-sharing feast introduced many to the garden site and showed participants the vision for a Land-based learning space.

By attending the events and through being involved with the project, participants were able to learn skills and build connections with community members over food. Participants described that learning on the Land and learning through the teachings and through community members highlighted the need for a Land-based learning space to be a permanent part on campus to provide this resource for Indigenous students, staff, and faculty, and for local urban Indigenous community members.

3.3.1.1 The Importance of Learning on the Land

One aspect that was underlined by several participants was the importance of learning on the Land. Having the events on the Land was an essential part of the learning and community for the participants. Alissa (community member) said:

“We went around and introduced ourselves, it was interesting to see two different organizations and like, where everybody was coming from [...] And I guess that's how you get to know your community a little bit more too, and then having that connection, to the Land and to Mother Earth and carrying that forward for the youth and then having the Elders too it was just really nice.”

In addition to getting to know the community and Mother Earth, Alissa went on to share that being on the Land can have positive effects on wellbeing, stating *“I think being able to have a place to go and connect with community and share stuff like that and be on the Land and learn from the Land is really important.”* The importance of having access to Land-based activities and a space to gather, learn, and spend time on the Land materialized through the events for several participants in attendance. Payton (Indigenous youth) shared a similar statement about the need for these activities to be based on the Land. When asked about how

attending the events changed their perspective about the establishment of a permanent Land-based learning space, Payton responded, *“now after [the events], I see it as essential. If I was to move anywhere, I'd need to have that connection with the land.”* Payton (Indigenous youth) highlighted the importance of having access to Land, and how attending these events led to these feelings of connection and belonging.

3.3.1.2 Learning through Teachings

In addition to being on the Land, another theme that arose from the participants' interviews was the importance of learning through the teachings from Elders and Knowledge Keepers and the hands-on aspects of the workshops. Participants acknowledged that having Elders present at the gatherings was a highlight, and expressed their enjoyment of the storytelling, even though some were already familiar with the teachings. The enjoyment of participants was visible for everyone, as Melissa (UW staff, OIR) said, *“I could tell by the other participants that they really enjoyed having her [Elder Banakonda] there and holding space together and what she had to offer.”* In addition to learning from Elders and Knowledge Keepers, attendees were also keen to learn through hands-on activities. Community members and university staff alike enjoyed the hands-on food preparation activities that were included as part of most of the workshop activities. Kevin (UW staff, OIR) shared their favourite moment and recalled:

“I like the jam making that was that was real good. And there was a moment there where somebody, like I consider myself to be a pretty positive guy, but this person was super positive and just grateful and a moment came where a beam of sun this person, and they just like stopped what they were doing and

took it all in like this beam of light. There's this beautiful smell in the air the smell of the strawberries and just the energy around. And that was for me the highlight of the day. Just vibing with that gratitude as we sat around there and did some work together to produce like something neat that you can consume, you know?"

An additional result of learning through the hands-on activities was the empowerment of students and new staff to take initiative and lead similar activities. For example, Melissa (UW staff, OIR) stated, *"it's more than a jar of jam,"* describing how one of the counsellors in her office attended the jam-making workshop and felt empowered to create Land-based programming to support student wellness. Similarly, after attending the first workshop and learning about jam-making, two students from WISC hosted their own peach jam-making workshop later that summer. Emma described the event and said:

"...they did a similar little workshop for canning peaches into jam, and then that we've now used as gifts to other folks. And so yeah. And that was all completely like, we let, you know, the students self-guide what it was they wanted to do for a few workshops, and they were very inspired by the work that you guys were doing. So it was nice to see the, you know, the growth of community land-based foods work."

These examples highlight the significance of learning from the Land and amongst community through organized events, the impacts of these teachings and their potential reach beyond the jars of jam that were lovingly prepared and consumed.

3.3.1.3 Community Significance of Food

These hands-on activities were a highlight for several participants and brought out the theme of significance of food to the community. As was vocalized by Emma (UW staff, WISC), *“I think food, like, you know, as Indigenous people gathering food and sharing knowledge around food is always really important.”* Krystal (community member) mentioned their enjoyment of harvesting and using the food during the summer event and said: *“it was a cool way to kind of fill out that circle, right? Like that it's not just about planting or planting and harvesting. It's about like using it for our community good in these like really beautiful ways.”* The focus on food was unique and as participants mentioned, was important for bringing together community.

In addition to learning from Elders and workshop facilitators, more informal learnings arose from conversations over food. Participants mentioned that food was a good draw for gatherings and cultural exchange. Lieth (Indigenous student) spoke about learning from community over food-based activities and the ability of food to bring people together. When speaking about their learning experience at the event, Leith (Indigenous student) said:

“I think it’s a really good way of demonstrating like a communal learning, where if we're all there for the strawberry workshop, but then we're all able to share our experiences and stories related to that, then we all, like, kind of cycle information with each other and learn more collectively, I think that that is really important, rather than it being like, ‘here is an instructor who's trained in nature, and they are the authority’...”

When speaking about the aspects of the event brought excitement, Emma (UW staff, WISC) spoke about cultural exchange over food, and reflected:

“So those are kind of the moments when that that oral history gets passed down to people often. So it's not always in ceremony. It's not always in a formal context. Sometimes it can be in those very informal just around food sharing. So I'm always excited anytime I see that.”

For many of the participants, food was seemingly a catalyst for cultural and relational exchanges that encouraged and supported the Indigenous community (on-campus and off-campus) to gather and share knowledge.

3.3.2 Building Relationships and Bridging Communities

The Land-based workshops and gatherings drew diverse and intergenerational audiences from the university and the community, including children, youth, Elders, members of the urban Indigenous community, and UW staff and students. Several participants spoke about how they enjoyed and appreciated the inclusion of local and university community members and the wide range of ages of the attendees. Alissa (community member) spoke about the significance of the events bringing together intergenerational audiences and fostering a connection with the Land stating:

"I guess that's how you get to know your community a little bit more too, having that connection to the Land, and to Mother Earth and carrying that forward for the youth and having the Elders too, it was just really nice"

Participants were able to learn from the Elders and Knowledge Keepers in attendance at all four seasonal events and enjoyed seeing younger participants and those who have not

experienced Land-based education learning about the garden space and the seasonal foods. Krystal (community member) said a highlight of the events was, “*seeing kids figure out, like, 'look at this beet. It's so big!' it was really great.*” Witnessing others learn helped participants see the significance of having accessible Land-based learning for all members of the local urban Indigenous and university community. The intergenerational and interdisciplinary nature of the events were enjoyed by many, and participants wanted those aspects of the seasonal Land-based learning events to continue.

The events created valuable and necessary opportunities for the community members and other local Indigenous organizations to build relationships with other campus and community partners. Participants expressed that the free-flowing format allowed them to freely participate in different activities and to connect with others. Susan (UW staff, WISC) shared:

“...our time is so precious that when you get in front of somebody, and it's like, ‘Oh, I haven't seen you for months, and I really wanted to, oh, we're both here, then we're gonna want to talk about all these other things’. So the community building aspect is huge, and I think valuable and needed.”

Across many of the interviews with workshop participants, it was clear how participants valued how the events brought people together and enabled time to be spent on the Land amongst the community. Building relationships and connections was not only an outcome of the events but was also a key reason why people were drawn to the project in the first place. Krystal (community member) said. “*I really appreciated just getting a chance to kind of see people use their experience and gifts and from all of these different, like little nooks and*

crannies across the city.” When asked about what excited them the most, Beth (community member) said:

“Probably when I saw the people that I know from being on the Land, that was very exciting to just have a space where we were gathering together and could sit and talk together about issues that we're all facing at the same time.”

Several participants described how the events facilitated new connections and allowed existing relationships to be strengthened because of the diversity of groups invited to the events. Melissa (UW staff, OIR) said that “*the sense of reconnection and community engagement and pride was really evident.*” Participants were happy about connecting, reconnecting, and strengthening their relationships, with Savannah (project collaborator, Faculty of Science), saying, “*Circles can always grow larger.*”

The atmosphere and the diversity of attendees also created a sense of belonging and community. This was important for community members who were not previously engaged with the garden, or who were new to the community or university. When asked why they think that establishing a permanent Land-based learning space was important, Beth (community member) shared:

“It's nice to know that there's a space where if there was nothing else available, I would hope that would be available to the growing community, whether they went to Waterloo, they don't go to Waterloo, they are affiliated with them, they aren't. But that's really good to know and that many different groups with different racial backgrounds could use that space and are

welcome there. And you could see that in the faces of everyone who gathered, it's beautiful.”

As Beth described, the events felt inclusive. Participants mentioned that the atmosphere allowed them to feel comfortable and felt that it was important to have space for the community to feel welcome, regardless of whether they were a part of the university or the community. Melissa (UW staff, OIR), said, *“it was a nice open, gathering space from a physical standpoint, but it was also like very warm and inclusive from a relational and community standpoint.”*

The events also helped to facilitate knowledge sharing between community members. Participants mentioned that by connecting with other community members, their learning experience extended beyond what was taught by Elders and facilitators. The events brought together community and university members, and both attendees and facilitators were able to connect with each other on personal and professional levels. Beth (community member), said:

“Yeah, working together. That's what I thought was so beautiful about that day, like White Owl was there, Conestoga was there, our garden was represented, what Nicola is doing with her growing work. All that was represented in that space, I'm sure there was more that I don't know about. But that, that I've never been at anything where that's happened before. And so I thought that was an amazing outcome of that date.”

This statement showed that the events brought people together who may not have otherwise had a chance to connect. Beth (community member) also shared that they were able to

discuss their hardships with their own gardens and share anecdotes. In addition to the formal teachings and the Land-based activities, the events also helped meet the community's needs to reconnect with community members and help share knowledge communally.

These relationships that were formed by attending the events and gatherings are important for the on and off campus communities, especially for Indigenous students. The connections that were made and strengthened through the events can be used to form partnerships to develop research relationships, Land-based pedagogy, and more Land-based learning opportunities.

3.3.2.1 Connections for Students

The importance of having Land-based resources for students to engage with the Land and community was discussed repeatedly. Emma (UW staff, WISC), Lieth (Indigenous student), Melissa (UW staff, OIR), and Myeengun (project collaborator, Knowledge Holder) all spoke at length during their interviews about the importance for those who were new to the university, such as students, to be connected to the campus and local urban Indigenous community. Myeengun (project collaborator, Knowledge Holder) said that the Land-based opportunities help *“new learners, people that have come here as students to take what they know and change the colonized policies in their fields.”* Indigenous students were identified as benefitting from these workshops because they come from different communities and feel culturally disconnected from their home as well as the local Indigenous community. Lieth (Indigenous student) said, *“I think that that's a really important having the space not only be like, connecting with the Land, but also connecting with each other because like, we're part of the Land as well.”* The importance of having an accessible Land-based learning resource

for students was agreed upon amongst the Indigenous youth, UW staff, and community partners. The events created a space for the growing Indigenous campus community to feel welcome, as stated by Leith (UW student), *"There's a valuable, more intangible social lesson that you learn when you're with community like that. It kind of helped me feel like, oh I belong here. People were accepting."* Lieth (Indigenous student) went on to say, *"I think that having a space where people can learn from each other and kind of have that relationship with the Land and also with each other is very important."* Karol (UW staff, OIR) also found the space beneficial to students, especially Indigenous students, by *"providing a place where they can connect to, to the Land and begin to understand their relationship with the Land that they have, even if they don't know they have it."* The benefits of Land-based activities on students' wellbeing were highlighted. The need for the integration of Land-based activities into various aspects of the institution such as research, teaching, and learning was also mentioned.

3.3.2.2 Research Relationships

Land-based research relationships and opportunities was another theme that arose from the interviews. Savannah (UW staff, Faculty of Science) emphasized the mutual benefits of research and said that it was important to consider, *"thinking about that community engagement and Indigenous folks and community members not being, you know, research subjects, but being research collaborators, which, you know, our ethics frameworks need to kind of catch up with."* Some research ideas that were identified were mutually beneficial research projects such as research on soil health, water, following the growing season, and environmental surveying. Karol (UW staff, OIR) suggested doing research on the native

foods that grow on the land and developing recipes to teach others. Karol (UW staff, OIR) also stated that research opportunities should not be limited to just health or environment, but faculties such as engineering could engage in Land-based research.

Additionally, Land-based research can support furthering Indigenous research frameworks and methodologies. The need for resources around research ethics involving Indigenous communities was identified as well. Savannah (UW staff, Faculty of Science) said, *“the issue is that we lack good examples to show folks or that they're all very specific instead of demonstrating like better, more promising practices and principles that we could use.”* The lack of existing literature that Savannah (UW staff, Faculty of Science) has identified allows this project to create frameworks and literature to contribute to resources for community-based research and Land-based learning. These events have identified opportunities to use this space for research that not only benefits other Indigenous communities and informs other Land-based learning efforts but can also promote better research practices by documenting and sharing the research approaches and processes.

3.3.2.3 Land-based Pedagogy

When asked about why establishing a Land-based learning site is important, Savannah (UW staff, faculty of Science) said, *“when we're talking about Indigenous learning, the key element to that is relationship to territory, and connection to Land. And at the moment, we don't have a lot of opportunities to take students out for on the Land learning.”* Participants overall were supportive of creating Land-based curricula bridging Indigenous pedagogies and ways of knowing and learning within existing curriculum and providing an interdisciplinary education that all faculties could participate in. Savannah (UW staff, faculty of science), for

example, went on to share that the relationships formed in the garden have grown the desire to integrate Land-based pedagogy. As she noted:

“I think there's a lot of interest from the Indigenous community on campus to be able to use this space, and really bridged that, like traditional learning framework with the institution. And so for me, and taking a holistic approach, I think more about like the methods and pedagogy and potential outcomes. And I personally feel that can apply to any faculty at the institution, which would make it a very unique space. And I also think it's beautiful that it's come out of this relationship with like the garden, and specifically like the territory, it's literally grown out of this connection to land, which is so beautiful.”

Lieth (Indigenous student) also mentioned the desire to have an interdisciplinary approach to Land-based pedagogy, and suggested to “*create programming that is very interdisciplinary, and invites people of all different areas of study to learn things in a unique way that's informed through their area of study.*”

To integrate Land-based pedagogy into UW, participants shared ideas about courses and curriculum building; Sara (UW staff) wanted to see an “*Indigenous research methodologies course, which currently does not exist in this institution,*” housed within the North Campus Garden space. Savannah (UW staff, Faculty of Science) suggested that Land-based practicums, field courses, and accreditation opportunities for students should also be explored. Inviting faculty and leadership to the garden site to educate them on the possibilities of running Land-based courses was an option that was identified. Sven

(community member) also suggested hiring experts to lead or assist in developing, integrating and teaching Indigenous Land-based courses and said, *“I think by definition, Land-based learning is supposed to be Indigenous led.”*

Participants have identified that special considerations must be addressed so that the Land-based teachings retain the needs of the local urban Indigenous community while also meeting the unique needs of a diverse population of Indigenous students. Savannah (UW staff, Faculty of Science) shared her considerations for bridging these diverse considerations and said, *“I think, really, when we're talking about Indigenous learning pedagogy, it's very important that we're not trying to bring in something and like, force it to fit with an institutional framework.”*

3.3.2.4 Learning Opportunities

The enthusiasm for more Indigenous-led Land-based learning opportunities was present in the feedback. Establishing a Land-based learning space on campus opens up possible learning opportunities for students, staff, faculty, and community members who do not have access to Land-based learning and connections between those from the university and the wider urban Indigenous community. The garden site situated on campus makes Land-based learning opportunities more accessible. Sara (UW staff) pointed out that having a Land-based learning site on campus was a *“really interesting opportunity, especially given the location because my understanding is that some of the other like Land-based learning sites at other institutions tend to be quite far away from their main campuses.”* In addition to having physical access to a Land-based learning space, having this space on campus means that

other members of the UW and local Indigenous communities can participate in Land-based learning as well.

The events were a catalyst for the countless ideas for Land-based learning. Many participants identified opportunities for future events. Alicia (community partner), Alissa (community partner), Karol (UW staff, OIR), and Kevin (UW staff, OIR) shared food-based learning ideas such as composting, tea-making, foraging, and following the entire growing cycle, from planting to harvesting to food preparation, accompanied by storytelling relating to the produce, the season, or the Land, and inviting community members that receive food boxes. Karol (UW staff, OIR) shared:

“One of the things we were told when the garden got up and running, and there was food being given to students, you know, food baskets, but then they didn't know what to do with the stuff. They get these raw carrots and turnips and whatever. And then they'd be like, "well what am I supposed to do with that?" [laughs] Yeah, they're used to popping open a box and tossing something in the microwave...”

Karol highlighted the need for IFS through education about growing and preparing the food and about culture, especially for community members and students receiving the food boxes to know where their food comes from and how to prepare or preserve the produce.

In addition to the food-based ideas, arts-based workshops like dye making, drumming, and printmaking using organic material were also suggested by Emma (UW staff, WISC), Lieth (Indigenous student), Myeengun (project collaborator, Knowledge Holder), and Payton (Indigenous youth). Beth (community partner) also suggested bringing

intergenerational voices together to discuss ongoing needs to, “*address various issues going forward with growing and what are some of the solutions people have found.*” Event attendees such as Payton (Indigenous youth), Krystal (community partner), Melissa (UW staff, OIR), Sven (community partner), suggested using forest area for learning activities such as “*owl prowls and workshops on like, tracking, like animal tracks and stuff to be able to tell, like, what's around here.*” The events inspired many ideas and urged participants to continue their engagement with Land-based opportunities.

3.3.3 Institutional Support and Project Sustainability

Research, pedagogy, and learning opportunities need institutional support to continue to grow. The need for UW to prioritize Indigenization efforts such as the establishment of a Land-based learning space was highlighted. When asked about what can be done at the institutional level to support the integration of Land-based learning into the institution, participants named infrastructure, university partnerships, and Indigenous oversight.

3.3.3.1 Infrastructures

When participants were asked about what infrastructure or resources would help support a Land-based learning space, there were many physical infrastructure ideas, along with considerations given to the social infrastructure related to the networks and processes supporting how people come together at the north campus site. Participants agreed that the space can be enhanced to support further Land-based learning opportunities and to engage users to cultivate a sense of belonging in the space. In terms of physical infrastructure, participants identified clear needs to enhance food sovereignty activities, workshops, and events already occurring on the Land, as well as structures which could create new

opportunities for future Land-based programming, teaching, and research. A full list of infrastructure ideas suggested by participants is presented in Table 3.

Table 3

A Full List of Physical Infrastructure Ideas

Ceremony	Food Sovereignty	Land-Based Education	Accessibility and Safety
Sacred fire	Storage shed	Outdoor classroom	Washroom
Sweat lodge	Greenhouse	Heated classroom space	Potable water
Teaching lodge	Garden expansion, Food forest		Seating areas with shelter from elements
	Food storage space		Paved pathways
	Outdoor and indoor kitchens		Hydro/internet

These categories of physical infrastructure needs that participants described pertained primarily to accessibility and safety. Potable water, bathrooms, and protection from the elements were identified as high-priority infrastructures that were critical to operations by participants and facilitators by community partners such as Alicia, Alissa, and Sven, UW staff like Emma, Kevin, Myeengun, Sara, Susan, Thomas, and Payton (Indigenous youth), who worked with WONAA at the North Campus Garden. These resources could allow those at the site to come and gather, learn, and work on the Land for longer periods. Melissa (UW staff) recognized the importance of how the space is designed and managed, stating, *“it’s spirit and heart work on the Land. How do we make it so that it is secure and it’s you know, not in view, but also at the same time safety needs are met.”* These points must be considered during the design of any infrastructure and in the continual operation and management of the space.

Across all participants, there was a consistently expressed need for ceremonial space. The most frequently mentioned aspect of this space was a sacred fire, recognizing the centrality of this for gatherings and the functionality of fire for warmth as well as outdoor cooking. Participants also identified the possibility of building a teaching lodge or sweat lodge on the Land, to address the need for more ceremonial spaces in the city for the urban Indigenous community. Karol (UW staff, OIR) shared the need for having a ceremony space, saying, *“we need it too, you know, staff and faculty, you know, to be able to offer some of those ceremonies to people will be, I think, can help to fill the kinder, more humane, kind of, environment throughout campus.”* If located on campus, the space could directly support Indigenous students and staff, and the broader community.

Participants also described ideas which could enhance food sovereignty efforts being led by WONAA and WC. Expanding the garden spaces along with the diversity of plants and medicines could provide further opportunities for Land-based education to support UW staff and students in addition to opening the space to other urban Indigenous organizations that exist within the broader community. Susan (UW staff, OIR), when speaking about the need for infrastructure to support for Land based learning, said: *“I couldn't dare quantify what that value would be of having more land-based learning opportunities, teaching lodges for different classroom settings. There's so many different examples.”* An outdoor classroom space and/or a heated classroom space were specifically identified as needs to allow Land-based education initiatives to take place year-round. Sara (UW staff) considered the possibility of having Land-based programming throughout the seasons and said *“thinking*

about our winters and thinking about our weather, I think it would be interesting to think about something that is at least year-round.”

3.3.3.2 University Partnerships

Participants urged UW to prioritize the potential of the North Campus Community Gardens to become a space for Indigenous learning, teaching, and research. Participants from the local community and the UW community both wanted UW to create a positive reputation for supporting improvements in the health and well-being of Indigenous communities. Sara (UW staff) said: *“it's really about like, how do we cultivate belonging, retention, whatever words we want to use. And I think this could be a real, concrete, actual action. That's not just get more Indigenous bodies here at UW.”* This statement urges the university to consider its reconciliation efforts beyond its recruitment of Indigenous staff and students. This project gives the institution an opportunity to fulfil several goals in its Indigenous strategic plan and contribute to the university's commitments to Indigenous reconciliation. The university could be responding to TRC calls to Action and inspiring change by educating new learners by supporting this project. Sara (UW staff) suggested that the project should *“frame the conversation as this is not just like a one project, it is integral to how we want this university to run.”* Sara (UW staff) went on to say:

“So I would love to see the university actually make this a priority. And that means not just funding, but also like giving different units on campus that would be responsible for helping the creation of this place, specific explicit direction that they must work on this.”

Many participants agreed that the university plays a large part in the sustainability of the Land-based learning events and that UW should ordain actionable policies or procedures to move towards the establishment of the space. Participants specified that the commitments should go beyond funding and Land acknowledgements and should continue to build on the work that has already taken place on the Land. Karol (UW staff, OIR) said:

“I think that, by designating land for Indigenous land based learning, it's, that is a concrete act of reconciliation, similar to the tuition waiver, where we're actually giving something to the Indigenous community we're not just, you know, making land acknowledgments- speaking land acknowledgments, we're actually acknowledging the importance of the land, and making sure that Indigenous people have access to that.”

Participants who were not UW students or staff did not have strong impressions or were not aware of UW's commitments to the Indigenous community and wanted more from the institution. When asked about the possible actions UW can take towards this, Krystal (community member) said, *“I'd love to see them start amplifying like meaningful conversations around decolonization and how they're undertaking that work.”* To ensure that the commitments were sustained and last beyond the current leadership, Myeengun (project collaborator, Knowledge Holder) said, *“let's put reconciliation into the charter of what operates the school. That way, whoever comes in leadership roles later will have to follow, you know, the charter that they fall under.”*

Several participants spoke about the decentralization of the university as a challenge to navigate and work across faculties. Savannah said that the project helped build

connections “*because Waterloo feels a bit siloed it was great for me to engage with folks in the Faculty of Health. Because a lot of our work is interdisciplinary. But it's hard to remember that when we're all in kind of our little pockets of the institution.*” Participants suggested that the Land-based learning, research, and teaching done at the North Campus Community Garden could be housed under the Office of Indigenous Relations, and not under a specific faculty or department. Melissa (UW staff, OIR) warned:

“And I would also say a caution that that it needs to be an interdisciplinary collaborative space, not just one faculty having like, ownership or domination of what could go on. So, again, I would say that that's one of the reasons why our office exists... I would hate things go too far along the track without including all the stakeholders in there.”

The considerations expressed by participants highlight the need for UW to not only prioritize the integration of Land-based education, but to also consider the needs of members of the UW and local communities when supporting these Land-based efforts and future plans.

Institutional support is important for the project to continue, but another factor affecting the project's sustainability is funding. To continue with the Land-based learning events, funding will be needed. This project found success and generated positive outcomes with the one-year PEG grant, but ideally, longer-term funding and more sustainable university funding needs to be secured. Beth (community member) emphasized the role of UW and said that “*there are some things that need to be flushed out that universities only have the money for, like there aren't communities who can do that on their own.*” Other participants also recognized that funding is the key element that is needed to sustain these

initiatives. Not only is the funding needed to continue with the events and integrate Land-based pedagogy within the institution, but it is also needed for the day-to-day activities within the space. Bangishimo, (community member) said “*funding is needed to hire people to maintain the garden, bring knowledge to share, and even support programming.*” Funding can also support the infrastructural additions to the garden space to allow people to gather for longer periods of time and to ensure their safety and cultural needs are met.

3.3.3.3 Indigenous Oversight

Several participants spoke about the importance of infrastructure, partnerships, and Indigenous oversight to make decisions regarding the North Campus Garden. These aspects highlight the importance of social infrastructures to ensure ongoing sustainability and plans to operationalize activities and collaborations. Several participants discussed themes around responsibility, management and governance of the Land, to first clarify existing users of the space and create processes as further partnership opportunities develop. Savannah (UW staff, Faculty of Science) stated, “*It would be awesome if the university would let that be a little bit more self-managed by Indigenous staff, faculty and students, as well as you know, researchers who are doing Indigenous research there.*” Other participants shared this sentiment, and they supported the increase of Indigenous agency in the space. A few participants wondered how partnerships might also be approached from a university-wide project.

According to Sara (UW staff) and Susan (UW staff, OIR), the next step to continue the engagement from project partners and collaborators would be the consultation and formalization of a committee or council. When speaking about social infrastructure needs, a

few common ideas were discussed around creating a governing body to make decisions around the north campus site, manage communications surrounding the site, and recognize the diversity and needs of Indigenous community groups. The council or governing body would be responsible for developing protocols of care for the Land including protocols and principles. Regarding the governance of the space, Susan (UW staff, WISC) said:

"I would hope that it's led by the community for the community. What's really lacking here is some form of governance in a way that isn't colonial. So whether it's an Elders council or a Land-based council, it's representative of the different facets of identities that could be here, whether they're students, staff or faculty, you know, some kind of thought process around that would be my, my greatest hope. "

Others have also said that the governance structure should blend the university with community members that are involved in Land-based practices or with the North Campus Garden. Susan (UW staff, WISC) suggested governance be *“led by Indigenous, staff, faculty, students in friendship with, with non-Indigenous staff, students and faculty to learn with and alongside as opposed to learning from or extracting something.”* Susan (UW staff, WISC) added her opinion and *“hope is that it's not performative, and that it's not tokenistic. And that there is an Indigenous led, Indigenous governed process to the whole thing.”*

3.4 Discussion

In summary, the Land-based events grew support for Land-based learning and instilled the importance of learning on the Land for event participants and project collaborators. The learning takeaways from the events led to more Land-based initiatives in the community.

Participants highlighted that the focus on food was significant because it taught hands-on skills and facilitated gatherings and cultural exchange. Through this relationship building, diverse members of the community and university identified opportunities to contribute to research, teaching, and learning opportunities and highlighted a need for institutional support, funding, and infrastructure to support future Land-based activities in the garden space. The need for this Land-based resource to have greater Indigenous autonomy and to have Indigenous decision makers was an important factor that was identified. There is great potential of this space to become a place of gathering, ceremony, and healing for local and campus community members.

Overall, the perspectives of the Land-based learning events and the support for establishing a Land-based learning space at the North Campus Garden were positive. Similar to other Land-based programming in the Waterloo-Kitchener-Cambridge area, Land was a central theme across participant interviews and was discussed as both a space for growing food and a place to build relationships with (Miltenburg et al., 2023). Land-based practices, especially around food, involve cultural traditions and are therefore a means of reconnecting and revitalizing Indigenous knowledges (Bowra et al., 2021). Students and community members who participated in Land-based programs from Canadian universities such as the University of Winnipeg found their experiences to be empowering and educational (Arellano et al., 2019; Zurba et al., 2022). These responses were similar to the thoughts shared by the participants of the North Campus Garden events, who found the Land-based events to have positive effects on wellbeing and increased their support for Land-based learning in the community. The sentiments shared by participants about learning on the Land also build on

findings from another study that took place in Winnipeg and Brandon, Manitoba that community gardens contribute to health by identifying indicators of holistic health benefits derived from community gardening, (Moscou, 2022). The Indigenous youth participants described urban community gardening as a transformative, community-integrative practice that supported community health by enhancing food sovereignty as well as community connections (Moscou, 2022).

The importance of having intergenerational participants and facilitators was important to the participants of the study at the North Campus Garden. Community members from Kitchener-Waterloo such as Alicia and Alissa, along with Karol (UW staff, OIR) spoke about the importance of including children, youth, and students in Land-based learning. Several participants mentioned their enjoyment of seeing children and students learning and engaging in the Land-based teachings and activities that were held at the North Campus site. Similar sentiments were shared in Cidro and Martens' study (2015) with their urban Indigenous participants in Winnipeg also stating their desire to develop more of an awareness of IFS with the younger generation to better connect them to Indigenous food systems in the city (Cidro & Martens, 2015). Elders in Anishinaabe communities within Ontario on reserve in Batchewana First Nation and Pic River First Nation have made efforts to involve youth in cultural activities on the land, and similarly expressed their joy at seeing events for youth to participate in cultural activities on the Land (Tobias & Richmond, 2014).

The findings from the project at the North Campus Garden, such as building connections and gaining food skills, were similar to those of *Healthy Roots* and *Our Sustenance*- community-based initiatives in the community of Six Nations that aimed to

promote Haudenosaunee foodways, build community capacity, improve health indicators, and increase food knowledge (Gordon et al., 2018). Participants were able to foster connections between their food and community through engaging in workshops and events (Gordon et al., 2018). Similarly, at the Urban Aboriginal Garden Project in British Columbia, Mundel and Chapman (2010) determined that participants viewed gaining food skills to be empowering and decolonizing. When connecting with ancestral food practices, Indigenous Peoples can not only support the continued learning of cultural practices, but also help create a greater sense of food security within their communities by living off the land, growing and harvesting food, and food sharing, which can offset the financial strain of purchasing food (Bowra et al., 2021; Burnette et al., 2018). Event participants at the North Campus Garden site who learned from the hands-on activities, expressed that they felt empowered to expand IFS efforts and pursue their own initiatives by creating Land-based programming and hosting their own jam-making workshop. These impacts align with previous research on indicating that invested event participants are key players in addressing food sovereignty and, simultaneously, gain holistic health benefits such as pride in reclaiming cultural practices (Moscou, 2022).

Another outcome of the events held at the North Campus Garden was the connections made and strengthened among attendees (participants) along with facilitators (collaborators and community partners). Indigenous learning is a social and spiritual process that relies greatly on nurturing intergenerational relationships in order to transfer ancestral knowledge, and strengthening relationships and building community capacity (Bowra et al., 2021). Phillipps' study on how urban Indigenous Peoples in Sioux Lookout and Thunder Bay access

Indigenous foods and the relationship of Indigenous food to their food security and Indigenous food sovereignty found that it was more complicated to build networks in urban areas than in home communities, where sharing Indigenous foods was practiced less frequently across family and community connections (2021). Indigenous students at the University of Guelph shared were not connected to the local urban Indigenous community or did not access wider community-based food programming (Wilson et al., 2021). These sentiments were shared by the event participants, particularly those who were new to the community and described their feelings of disconnection and difficulties with finding programs or facilities to meet their cultural needs. Lieth's (Indigenous student) statement about being in community and feeling a sense of belonging was significant to UW's Indigenous Strategic Plan as Indigenous students need spaces of belonging once they arrive in a new campus environment (*Goals*, n.d.). Cidro & Martens and Moscou also found that their participants valued having a space for people to gather and connect (2015; 2022). These findings were also similar to those from the Garden Project at the University of British Columbia, with their Land-based learning events created a welcoming space for people to talk and get support (Mundel & Chapman, 2010). The UBC Garden Project also demonstrated that Land-based initiatives can facilitate healing and build health-supporting relationships by providing an urban place and space for Indigenous people to discuss and educate others about shared life experiences while celebrating and engaging in cultural teachings and practices (Mundel & Chapman, 2010).

The importance of maintaining a balanced relationship with the Land is vital for the entire community (Tobias & Richmond, 2014). Like Senese & Wilson's (2013) findings that highlighted the importance of Indigenous service organizations in facilitating connections in

urban settings, the participants at the North Campus Garden site sought out opportunities to connect with others in the community and to engage in cultural practices. Participants of the North Campus Garden events wanted the workshop events to continue and expand to integrate Indigenous Land-based learning into existing and new curricula. The integration of Land-based learning into UW's pedagogy and curricula comes from participants' of the North Campus Garden events recognition of the importance of Land and their sense of responsibility around transmitting culture. Similarly, Friedel's study (2011) with urban Indigenous youth that participated in a place-based learning summer program in the North Saskatchewan watershed situated within Edmonton, Alberta, found that the youth had desires to continue with Land-based learning, and was committed to fostering relationships to Land and culture. Establishing a Land-based learning space will therefore require feedback from different community and university voices to see what needs can be met, which can allow for the development of culturally responsible and relevant teachings. By integrating community-identified needs and considering existing Land-based models, Indigenous pedagogy can be built to accommodate the unique mix of Indigenous identities (Friedel, 2011; Peach et al., 2020).

It has been previously suggested in the literature that the distinct health needs of urban Indigenous Peoples must be better understood to be addressed (Moscou, 2022). In other Land-based projects such as UBC's Garden Project, participants were most interested in projects designed specifically by and for Indigenous people based on cultural teachings and functioning in awareness of colonization (Mundel & Chapman, 2010). Indigenous-led and culturally safe collaborations between the Indigenous community and other organizations

are critical to improving IFS and engaging Indigenous people in urban settings (Phillipps, 2021). Research and programming for urban Indigenous people therefore must reflect their unique and diverse experiences.

3.5 Strengths and Limitations

There are several strengths associated with this study. Purposeful sampling was used to gather a range of perspectives from different members of the local urban Indigenous and UW communities. Participants were of various ages, backgrounds, and experience with Land-based work and IFS. The community-based approach and the partnerships with WONAA and WC, and the support and participation of UW project collaborators allowed the research to be guided by community-identified needs and priorities. The semi-structured interviews allowed the researchers to collect rich and in-depth data. Participants not only gave their feedback and perspectives about the events, but they also identified new opportunities for learning, research, and teaching as well as strengthened community connections. The findings that work towards the establishment of a Land-based learning space on campus will benefit the local urban Indigenous and UW communities. This allows the reciprocation of the contributions of community members to this project and ideally paves the way for on-going and future collaborations.

Due to the community and location-specific nature of the project, the results are not generalizable across different communities or post-secondary institutions. Communities have unique needs, barriers, and Indigenous foods and practices that this research may not apply to. Additionally, the research team included Indigenous and non-Indigenous members. The research approach was collaborative, but ultimately led by individuals who were not

members of the campus or local Indigenous communities. Although this may be viewed as a limitation, in an effort to establish the inclusion of important cultural contexts, diverse community members and collaborators were included in every step of the research process and member checking was done throughout. The CBPR approach had WONAA and WC look over the interview and focus group questions and participant list for workshops and included voluntary participation in the data analysis process and to ensure that the process had the input of Indigenous community members. Other strategies to enhance trustworthiness included investigator triangulation (Shrivastava et al., 2020). Members of the research team met after coding to discuss the codes and themes to reach a consensus about the preliminary results. Preliminary results were then provided to project collaborators, and they were asked to suggest any change or additional information (Shrivastava et al., 2020).

3.6 Conclusions and Recommendations

All participants and facilitators were interested in continuing their engagement with the project and shared many ideas for future workshops. Participants also suggested using the space for counselling, outdoor team meetings, and ceremonies for Indigenous staff and students. Some offered more active involvement like being on a council, helping in the garden, and promoting the project or curriculum building, while others asked to be informed through a mailing list or through social media. These partnerships will help engage diverse intergenerational and interdisciplinary audiences of Indigenous community members, Indigenous youth, UW students, and academic leadership within the Faculty of Health and through the OIR to develop pathways of partnership between the UW and the local Indigenous community. By providing evidence to support more Land-based learning spaces

on campus, longer-term partnerships with urban Indigenous communities and UW can be established. The research outputs can be used to inform stakeholders, funders, UW decision-makers, other post-secondary institutions pursuing Land-based education, and other Urban Indigenous communities that are interested in IFS. The establishment of a permanent Land-based learning space on campus will provide access to Land-based learning spaces on campus, provide Land for growing food for community members, and could potentially encourage Indigenous students to pursue post-secondary education.

Further research is recommended to identify the specific needs of the unique Indigenous identities within the local and university communities and their needs in terms of Land-based learning and healing. This can be done by continuing to hold Land-based learning events, creating Land-based courses, and integrating Land-based curriculum in existing courses and recruiting students and attendees to participate in interviews, surveys, or focus groups to pinpoint community-identified needs. The effects of Land-based learning in the forms of seasonal workshops, courses, and field courses on Indigenous students, staff, faculty, and community members should also be researched. Evaluations could be conducted to examine if the events or curriculum fit the needs of the community.

The research can benefit the scientific community by sharing relationship-building processes with diverse campus and community partners towards Land-based learning uniquely within a post-secondary setting. These results may inform other post-secondary institutions and urban Indigenous organizations interested in exploring similar objectives within their own community settings. The Land-based activities could also be applied by other communities and institutions within their own unique Indigenous food systems and

communities. The results may also identify policy recommendations within institutional settings and local governments to advocate for Land-based learning spaces.

Chapter 4: Outcome Evaluation of the Cultivating Space and Place for Land-based Learning Project²

4.1 Project Context

The “Cultivating Place and Space for Land-Based Learning” project was initiated based on the interest of project partners, White Owl Native Ancestry Association (WONAA), and the Wisahkotewinowak Collective (WC). The one-year project was funded by a Social Sciences and Humanities Research Council (SSHRC) Partnership Engage Grant (PEG) in 2023. The overarching goal of this project was to bring together diverse campus and community members to strengthen and support the work that had been taking place at the University of Waterloo (UW) North Campus Environmental Reserve that included land-based learning, Indigenous Food Sovereignty (IFS), and urban Indigenous governance practices by exploring collaborative opportunities at UW. The timeline and project activities to be described in the sections to follow, acted as a starting point for project partners and campus-based collaborators to explore land-based learning possibilities and solidify connections between campus and community partners.

4.1.1 Project Partnerships and Timeline

WC works closely with WONAA, a local Indigenous community agency, to produce food and medicines for the WONAA Food Share. Together, they strive to strengthen Indigenous food sovereignty locally (Wisahkotewinowak, n.d.). WC first gained access to the North Campus garden site in the spring of 2018. This site became one of four of WC’s gardens and

² Prepared for White Owl Native Ancestry Association and The Wisahkotewinowak Collective

became known as their produce garden as it is primarily used to grow fresh fruits, vegetables and medicines for WONAA's Food Share program. The harvested items are also used for cooking and preserving workshops and have contributed to the Waterloo Indigenous Student Centre's (WISC) weekly soup and bannock lunches. A timeline of WC's involvement at the North Campus Community gardens can be found in Figure 1.

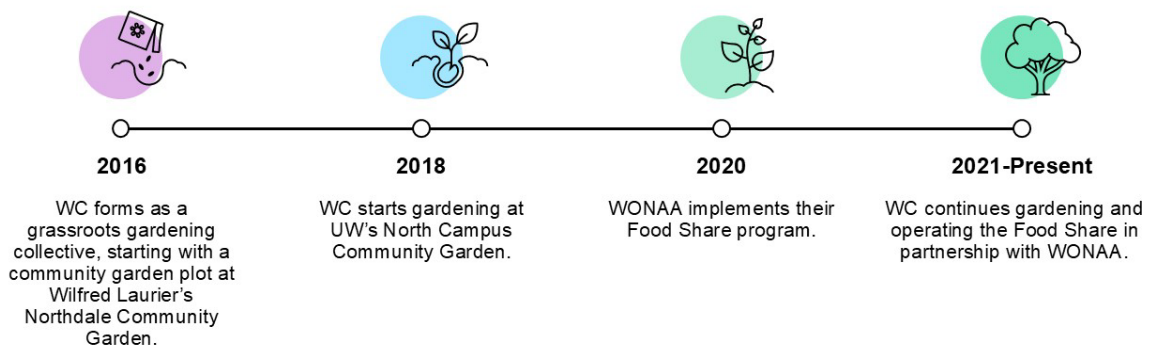


Figure 1: A Timeline of the Wisahkotewinowak Collective's Involvement at the North Campus Community Gardens

In April 2022, an initial meeting and walk around the Wisahkotewinowak (WC) gardens located at the North Campus site first brought together campus collaborators and members of WONAA and WC to begin conversations around infrastructure needs to better utilize the space. Myeengun, who officially joined the Faculty of Health as an Indigenous Knowledge Keeper in February 2022, opened the circle. Those attending UW included staff from the Faculty of Health, the Office of Research, and faculty members, Bryan Grimwood and Rhona Hanning. The gathering facilitated conversations around infrastructure needs to better utilize the space. In summer 2022, Myeengun held two pipe ceremonies out on the Land. He received a positive response, indicating that the plans could proceed. WC and

WONAA's objectives at the time were to explore opportunities to formalize to work towards the establishment of a more permanent Land-based learning space to strengthen land-based learning, Indigenous food sovereignty (IFS), and urban Indigenous governance processes with UW. The team explored funding pathways for infrastructure and research, and a Social Sciences and Humanities Research Council (SSHRC) Partnership Development Grant (PDG) was identified as a possible first step to aim towards exploring the partnership between WC and UW. A Planning and Gathering Session was held at the North Campus Garden in the fall with members of WC and UW representatives to identify potential objectives for a SSHRC PDG. Those in attendance provided ideas and feedback around how a SSHRC PDG could build campus and community partnerships along with what research questions could be explored. The decision to apply to a SSHRC Partnership Engagement Grant (PEG) was initiated as an agreed upon first step.

In the fall of 2022, a project meeting was held with project collaborators to gather further ideas around the Partnership Engage Grant and confirm collaborator involvement. Invitations were extended to interested representatives from the Faculty of Health, Office of Research, Office of Indigenous Relations, the Waterloo Indigenous Student Centre (WISC) and the Centre for Teaching Excellence (CTE) such as Jean Becker, Emma Smith, Savannah Seaton, and Savannah Sloat. The PEG was submitted by faculty and member of the WC, Hannah Neufeld, as Principal Investigator in December 2022 and the award was received in February 2023. Once funds were received, all PEG collaborators were invited to a lunch planning meeting held on May 1st, to determine priorities and goals for the overall project and gather feedback on the planned Land-based activities, data collection, and knowledge

dissemination strategies. The session had 23 attendees and included the research team, project partners, project collaborators from CTE, Waterloo Indigenous Student Centre (WISC), Indigenous Science Initiatives, Office of Research, the Dean's Office, and community members to collect feedback on the proposed timeline, participant groups, event activities, data collection methods, and plans for knowledge dissemination.

I was invited to attend the partner lunch and planning session held on May 1st, 2023. After several consultative meetings with project partners and collaborators, the idea to conduct an evaluation to gather evidence to support WONAA and WC's goals of continuing to enhance their capacities to continue their Land-based programming to work towards the establishment of a more permanent Land-based learning site. The evaluation planning began after the meeting, and a logic model (found in Appendix J) and an evaluation matrix (found in Appendix G) were prepared by me to compile the information of the project's activities and intended outcomes.

WONAA and WC provided in-kind support by contributing workshop supplies, ceremonial items and staff time. WONAA and WC staff assisted with leading workshop activities such as planting, harvesting, and food preparation demonstrations at four seasonal events. Ultimately, this project will support the creation of an urban Indigenous space and place that will strengthen land-based learning, Indigenous food sovereignty, and urban Indigenous governance processes within UW.

4.2 Project Evaluation

It was decided that the overall intent of the evaluation was to assess the activities of the larger SSHRC-funded project's ability to facilitate ongoing research and learning networks, continue facilitating Land-based learning activities, and cultivate further community engagement to gather evidence to contribute to the project partners' goals. Guided by the interests of the project partners, WONAA and WC, this evaluation utilized Appreciative inquiry (AI) and Community-Based Participatory Research (CBPR) approaches to guide the process of collecting evidence to support the establishment of long-term partnerships and collaborations between the project partners, the local Indigenous communities, and UW. By monitoring the Land-based programming activities that were part of the larger project and documenting and summarizing inputs, activities, and outputs, this evaluation aimed to answer the following questions:

- 1) What are workshop participants' and facilitators' perceptions of the Land-based engagement process?
- 2) What is the effectiveness of Land-based gatherings and workshops in identifying and prioritizing collaborative Land-based opportunities for learning and research?
- 3) To what extent can the Land-based learning workshops help to establish a local network to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space on the UW campus?

4.3 Evaluation Approaches and Methods

4.3.1 Outcome Evaluation

An outcome evaluation was chosen to provide evidence of the project's overall effectiveness in cultivating community engagement along with facilitating ongoing research and learning

networks through the Land-based and knowledge sharing activities that took place at the north campus site. Outcomes are defined as changes in development conditions that interventions are seeking to support and can be used to identify obstacles to achievement of outcomes and highlight achievements (*UNDP Evaluation Guidelines*, 2021). This outcome evaluation set out to examine the project's contribution towards the community-identified outcomes. This type of evaluation is compatible with AI and CBPR approaches in order to ensure that the findings of the evaluation will support the project partner's priorities of attaining funding and gather evidence to support the establishment of a permanent Land-based learning space at the North Campus Community Garden by adopting a strengths-based approach (Babcock & Budowle, 2022; Murphy et al., 2004; Shrivastava et al., 2020). AI and CBPR approaches are complementary as they focus on inclusive, empowering processes that build hope, trust and respect in the community and generate actions based on community strengths and achievements (Murphy et al., 2004). These approaches were combined to gather supporting evidence to address community and project partner- identified goals.

4.3.2 Appreciative Inquiry

This outcome evaluation utilized an AI approach as outlined by Shrivastava et al. (2020). This approach recognizes the strengths and focuses on the successes of organizations or programs to support future organizational development (Babcock & Budowle, 2022; Murphy et al., 2004; Shrivastava et al., 2020) and supports this evaluation because it is a culturally responsive framework that encompasses the diverse perspectives and experiences (Shrivastava et al., 2020). Other evaluation techniques can be deficit-based, which can reduce the motivation and confidence of those involved to initiate or take part in programs and

initiatives (Murphy et al., 2004). According to Babcock & Budowle (2022), applying AI within the context of Indigenous Food Sovereignty (IFS) supports exploring, transforming, and rebuilding industrial food systems towards a more just and ecological model for all. Utilizing AI to support the evaluation thereby highlights the strengths of Land-based learning and research activities to collect evidence that can be utilized by project partners to attain more funding, inform decision-makers, and support establishing a permanent Land-based learning site on campus.

AI is cyclical process which is important for developing and strengthening partnerships and opportunities for Indigenous Land-based learning within this project context (Shrivastava et al., 2020). The stages included: discovery, which comprised of the planning stage with project partners, collaborators and community members; dream, which consists of workshops and interviews, focus groups, and document review; design, the data analysis stage; and destiny, which consists of knowledge dissemination activities, recommendations, next steps, reports, and information for future use. The process will continue with the results of this evaluation ideally being used to attain more support and necessary funding to create further opportunities for Land-based learning at the north campus site.

4.3.3 Community-Based Participatory Research

CBPR was also used as a guiding methodology to create and collect dialogue on community-identified issues and needs (Crier et al., 2021; de Leeuw et al., 2017; Tobias et al., 2013).

Using a community-engaged process is essential to explore complex issues, promote critical reflection, and establish successful long-term research partnerships (Castleden et al., 2012; LaVeaux & Christopher, 2009; Saxinger & Dun, 2018). Diverse partners, WONAA and WC,

and collaborators such as members of the urban Indigenous community, Elders and knowledge Keepers, Indigenous youth and students, and UW staff, specifically WISC staff, Office of Indigenous Relations (OIR), the Centre for Teaching Excellence (CTE), the Faculty of Science and administrators, also participated in the process of developing the project, and engaging in land-based activities along with various collaborative dissemination processes and events. CBPR provides evidence that is tailored to the community-identified needs of diverse urban Indigenous communities (Herforth & Ahmed, 2015) and respects the goals and aspirations of the partners involved in the project (Koster et al., 2012). This approach gives ownership of the information to those most involved in carrying out and most affected by the establishment of a Land-based learning site by collecting and sharing data from the project's partners, participants, and collaborators. The community-based approach will also give rise to knowledge that will be generated into actions to create tangible changes within the local urban Indigenous and campus community.

4.4 Evaluation Process and Event Details

As project partners, WONAA and WC staff participated in all planning meetings, were consulted on the interview and focus group guides, event participant lists, and contributed to the knowledge sharing meetings and the final dissemination sharing feast. To best identify the perspectives of the community and the priorities of project partners and to gather rich data to answer the research and evaluation questions, qualitative methods including semi- structured interviews, focus groups, and a document review were employed to encompass the diverse views of the participants, including project partners and collaborators. Interview participants included event participants and collaborators that

attended the meetings or were involved with the project. Focus group participants included WONAA and WC staff that were involved in or attended the events. Timeline, funding, budget, meeting minutes, and attendance tracking documents were reviewed. The data was used to work towards an understanding of the ability of the project's activities in meeting to community identified goals and to understand priorities and perspectives to progress toward design and infrastructure needs that can be shared with research partners and university administrators. The data collection was ongoing from July 2023 until April 2024. A timeline of the PEG project and data collection process can be found in Figure 2.

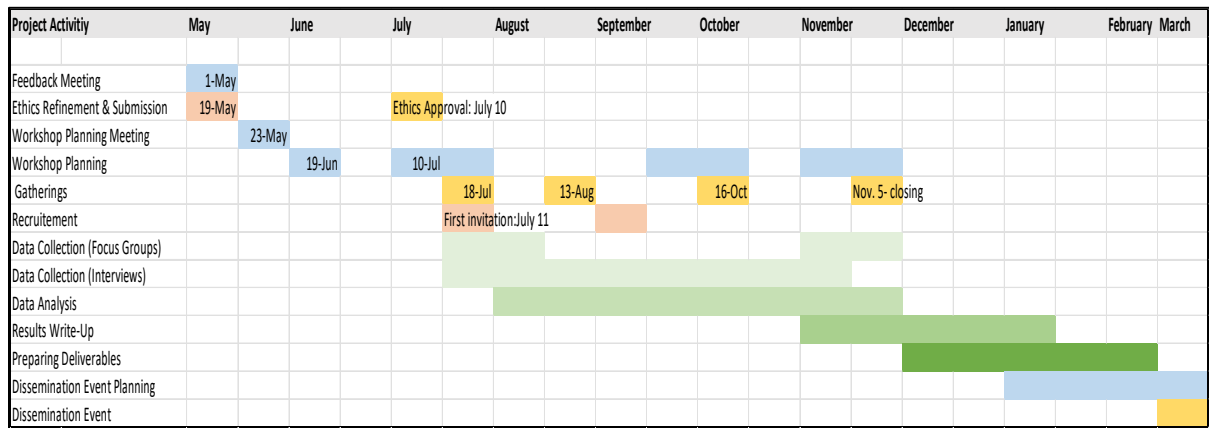


Figure 2. Project and Data Collection Timeline

In preparation for the planned seasonal workshops to take place at the north campus site, a workshop planning meeting was held on July 10 with the wider project team. Following ethics approval from the University of Waterloo Research Ethics Board (REB), invitations were sent to prospective participants for the spring, summer, fall and winter events. Project partners were consulted on the interview and focus group guides and the list of event participants. The list included members of the local urban Indigenous community, such as representatives from other local Indigenous organizations such as Land Back Camp,

members of the research team, Dr. Neufeld, Elisabeth, Bryan Grimwood, Rhona Hanning, and I, Indigenous youth connected to WC and WONAA as summer students, Indigenous students from WISC, UW staff representing teaching, research and curriculum development specialists from the Center of Teaching Excellence, the Office of Research, the Faculty of Science, the Faculty of Health, and UW staff representing the Office of Indigenous Relations. The inclusion criteria was: participants 16 years of age or older, living and/or working in Waterloo Region, are connected to one of the project partners, WONAA or WC, or research team members, interested in Land-based learning, teaching, or research at UW, and have either attended at least one of the seasonal Land-based events or have been involved in the project.

Invitations were sent out to the list of participants to attend the Spring Land-based learning event on June 23, 2023. Beginning in the spring, Elder Banakonda Kennedy-Kish Bell was identified to lead strawberry teachings for the spring workshop, and WONAA and WC staff would lead the workshop component and a tour of the WC garden. Project Manager, Elisabeth Miltenburg, prepared photo consent forms, and I was responsible for taking photos during the events, along with getting signatures for the consent forms

4.4.1 Spring 2023

The first gathering was held on July 18, 2023, and focused on strawberry teachings. Elder Banakonda opened the circle and shared the strawberry teachings. The workshop activities included a garden tour and making strawberry freezer jam (see Figure 3), which was shared and served with strawberry juice and bannock, which was prepared by WONAA

Food and Nutrition Coordinator and Chef, Sydney Keedwell. There were 36 participants in attendance including WONAA staff, WC staff, Indigenous youth, project team members, project collaborators, members of the UW Community, UW students, and community partners.



Figure 3: Strawberry Jam-making Workshop

After the event, follow-up emails were sent to all participants to thank them for attending and to ask participants to reach out if they were interested in participating in interviews. Data collection for the one-on-one semi-structured interviews began in July 2023. As part of their interviews, event participants were asked to share their reflections on the event(s) that they attended and their perspectives on establishing a permanent Land-based

learning space at the North Campus Community Garden site located at the University of Waterloo Environmental Reserve. The interviews were audio-recorded with permission. Field notes were taken during the interviews and afterwards to record the location, setting, and initial takeaways of each interview.

In addition to the semi-structured interviews that took place with event attendees and project collaborators, five WONAA and WC staff were recruited following the first event to participate in focus groups that were held after the second event on October 11, 2023, and final Knowledge Sharing Feast March 28, 2024. The focus groups were held in conjunction with the interviews to gather the goals and perspectives of the project partners around the project's outcomes. The first focus group focused on identifying participants' goals for the events and the potential of this project. The final focus group included perspectives on the events and input on the knowledge dissemination event's effectiveness in meeting those goals.

4.4.2 Summer 2023

On August 3, 2023, invitations were sent out to the participant list of 53 people to attend the Summer Land-based learning event that was scheduled for August 13, 2023. WONAA Executive Director, Dave Skene, shared WC's history with the site along with a teaching experienced at the garden site to open the circle and start the gathering. Participants prepared and canned cooked and fresh salsa (see Figure 4) using the tomatoes, peppers and onions from the garden. The salsas were enjoyed after the demonstration with a number of other taco filings prepared by Chef Sydney Keedwell. Attendees were also able to harvest and bring home produce from the garden including carrots, turnips, tomatoes, and chard. In total there

were 20 participants were in attendance, including WONAA staff, WC staff, Indigenous youth, project team members, members of the UW Community, and members of the wider urban Indigenous community. Another follow-up email was sent to all participants to thank them for participating and request a follow-up interview. Project collaborators that were unable to attend the events were also invited to participate in an interview.



Figure 4: Jarred Salsa

4.4.3 Fall 2023

Invitations were sent out on September 14, 2023, to participants to attend the Fall Land-based learning event that took place at the garden on October 16, 2023. Knowledge Holder Myeengun Henry from the Faculty of Health at UW opened the circle and shared a song with the group. A corn nixtamalization workshop was led by WC staff, where hardwood ash was boiled with dried Haudenosaunee white corn to make the kernels more digestible and release additional nutrients. All the participants assisted by sorting white corn kernels and

sunflower seeds all grown at WC's Steckle garden site (see figure 5). Participants also harvested and brought home produce including peppers, beets and turnips. Three sisters soup was prepared by Chef Sydney using the nixtamalized corn, beans and squash grown at WC's Steckle garden, along with fresh bannock. The soup and bannock were welcomed by those in attendance on such a cold and windy fall day. In total, 20 participants were in attendance, including WONAA staff, WC staff, Indigenous youth, project team members, members of the UW Community, and Indigenous community members from the local region. A follow-up email was sent to event participants to thank them for participating and to ask participants to reach out if they were interested in participating in a follow up interview. Interviews with event participants and project collaborators continued between the scheduled events.



Figure 5: Haudenosaunee Corn Sorting

4.4.4 Winter 2023

Before the start of winter weather, invitations were sent out to participants on November 2, 2023, to attend the Winter Garden Closing Ceremony. The ceremony was held at the north campus space on November 5, 2023. The circle was opened, and the ceremony was led by Elder Banakonda. The event included a sharing circle and a ribbon ceremony (Figure 6) to give thanks and reflect on our responsibilities to the garden and Land for the growing season past and to come the following year. Attendees all brought food to share. The Closing Ceremony was attended by 17 people, including WONAA staff, WC staff, project team members, collaborators, members of the UW Community, and wider Indigenous community.

Participants and project collaborators were contacted again individually by email for those who had yet to participate in a one-on-one interview. Interviews with event participants and project collaborators continued until the end of December 2023.



Figure 6: Ribbon on Oak Tree

4.4.5 Spring 2024

The Knowledge Sharing Feast was held on March 1, 2024, at United College and brought together project partners, project collaborators, research participants, UW faculty, staff, students, and wider members of the local Indigenous community. Overall, 36 people attended the event. Research team members shared the presentation of findings. Following the presentation of the interview results, all attendees moved into one of five breakout tables to

reflect on what was shared and discuss the themes of event feedback, infrastructure, building and maintaining relationships, meaningful action, and general feedback.

4.5 Data Collection and Analysis

In all, the overall sample size for the entire project included a total of 22 participants (see table 1). Seventeen took part in one-on-one semi-structured interviews and five in two focus groups to collect feedback from project partners during and after the seasonal events. One participant, however, withdrew from the study and their data was not included in the final analysis.

Table 1

Participant Details

Participant Name or Pseudonym	Participant Category	Data Collection Method	Total Number
Dave	Project Partner	Focus Group	4
Nancy	Project Partner	Focus Group	
Sarina	Project Partner	Focus Group	
Sydney	Project Partner	Focus Group	
Alicia	Community Member	Interview- Event Attendee	5
Alissa	Community Member	Interview- Event Attendee	
Beth	Community Member	Interview- Event Attendee	
Krystal	Community Member	Interview- Event Attendee	
Sven	Community Member	Interview- Event Attendee	
Bangishimo	Community Member	Interview- Community Member	1
Lieth	Indigenous Youth and Students	Interview- Event Attendee	2
Payton	Indigenous Youth and Students	Interview- Event Attendee	
Emma	UW Staff	Interview- Event Attendee	5
Kevin	UW Staff	Interview- Event Attendee	

Melissa	UW Staff	Interview- Event Attendee	
Susan	UW Staff	Interview- Event Attendee	
Thomas	UW Staff	Interview- Event Attendee	
Karol	UW Staff	Interview- Project Collaborator	4
Myeengun	UW Staff	Interview- Project Collaborator	
Sara	UW Staff	Interview- Project Collaborator	
Savannah	UW Staff	Interview- Project Collaborator	
Total Participants			21

The first focus group was held in October just prior to the Fall event with a total of five focus group participants. The first focus group was conducted in person at the WONAA office with four WONAA and WC staff in attendance and lasted approximately one hour on October 11, 2023. One focus group was conducted with one WONAA staff member over Zoom on October 26, 2023, due to scheduling, and lasted around 20 minutes. The first focus group focused on identifying participants' goals for the events and the potential of this project. The focus groups were audio-recorded with permission, and field notes were taken after each focus group to record the location, atmosphere, and takeaways of each interview.

The final focus group was held on March 28, 2024, after the knowledge dissemination feast. Due to the various availability of the participants, the second focus group was conducted with three WONAA and WC staff members over Zoom, with one separate interview taking place on Zoom afterwards with one participant on April 5, 2024, and one in-person interview took place with a participant at WONAA offices on April 2, 2024. The final focus group included perspectives on the events and input on the knowledge dissemination event's effectiveness in meeting the goals outlined in the first focus group and during the planning meetings and ideas to work towards the continuation of the project.

In addition to the interviews and focus groups, a document review was conducted to evaluate the ability of the project to complete its planned activities and reach its goals as planned within the specified timeframe and budget provided by the PEG. Additional data sources for the evaluation were documents such as meeting notes, planning documents, the SSHRC funding application, budget documents and timelines. These documents were compiled following the final focus group.

Starting in the summer of 2023, the audio recordings from the interviews and focus groups were transcribed verbatim using Otter.ai and manually reviewed and edited by me (Otter.Ai, n.d.). Data from the field notes and transcriptions were coded and analyzed both within and across cases using NVivo, a qualitative analysis software. Data analysis was conducted using Braun and Clarke's Six Steps of Reflexive Thematic Analysis (Braun et al., 2018). An experiential orientation was also adopted to consider the thoughts, feelings and experiences of participants, which was appropriate for the evaluation, as the aim was to prioritize participants' own accounts of their experiences of Land-based learning (Byrne, 2022). To ensure the consistency of the data interpretation and validity, research team members, Dr. Neufeld, Elisabeth Miltenburg, and I, reviewed the codes and discussed preliminary themes for the interview results.

The research team also held knowledge sharing meetings where those in attendance weighed in on the priorities and relevance of the various themes that emerged from the interview data and highlighted certain aspects to be emphasized for knowledge dissemination. On December 7, 2023, a Collaborators Lunch Meeting was held at WISC to share project updates and plan the Knowledge Sharing Feast with 14 in attendance. Again, on

February 7, 2024, the research team held a more formal results feedback presentation of the initial interview results with 14 project collaborators, partners, and members of the research team present. Initial findings and emerging themes were presented, followed by a group discussion. Those in attendance weighed in on the priorities and relevance of the various themes and highlighted certain aspects to be emphasized for knowledge dissemination. The collaborators agreed that focusing on the impact of the events and highlighting the partnership for the presentation at the Knowledge Sharing Feast was most important.

Data analysis continued for the evaluation component of the study starting in the spring of 2024. Like the interviews, the focus group data was analyzed using Braun and Clarke's Six Steps of Reflexive Thematic Analysis with the addition of the Evaluation Matrix (Braun et al., 2018). The collected funding, budget, and planning documents were reviewed following the final focus group. The goals that were outlined in the spring 2023 planning session and the first focus group were compared to the responses from the final focus group and referenced with the evaluation matrix (see Appendix G) that was prepared during the evaluation planning process. The budget was evaluated referencing the original grant application and the project budget document that was maintained by the Principal Investigator, Dr. Neufeld, and the Project Manager, Elisabeth. The timeline outlined in the PEG planning meetings was compared with the dates of the project's activities. The findings from the document review and analysis of the focus groups were then written up and will be presented in the sections to follow.

4.6 Findings

Drawing from the focus groups with WONAA and WC staff, interviews with event participants and project collaborators, and document reviews, the following categories (1) event attendance and workshop feedback, (2) project partner-identified goals, and (3) moving forward, are framed to respond to the questions posed for the evaluation.

4.6.1 Event Attendance and Workshop Feedback

The Land-based events drew diverse and intergenerational audiences from the university and the community, including children, youth, Elders, members of the urban Indigenous community, and UW staff and students. A breakdown of the event participants can be found in Table 2. Attendees included project team members, including students and staff of Dr. Neufeld and SSHRC co-applications, project collaborators that were involved in the project, UW staff, UW students and WONAA and WC's summer students, and community members include urban Indigenous community and those involved in Land-based, or IFS work locally. The attendees were tracked through email RSVPs and in-person observation.

Table 2

Event Participant Tracking Table

Land-based Learning Event Attendees						
Spring Gathering Attendees						
	Project Team	Collaborators	UW Community	Students & Youth	Community Members	Total
Totals	9	2	5	7	13	36
Summer Gathering Attendees						
	Project Team	Collaborators	UW Community	Students & Youth	Community Members	Total
Totals	8	0	1	5	6	20
Fall Gathering Attendees						
	Project Team	Collaborators	UW Community	Students & Youth	Community Members	Total
Totals	9	1	2	3	5	20

	Winter Closing Ceremony Attendees					
	Project Team	Collaborators	UW Community	Students & Youth	Community Members	Total
Totals	9	1	0	0	2	12
						Total: 88

The spring event had the highest number of participants in attendance, with a gradual decline through the summer and into the fall and winter. Participant attrition for youth was partially due to the end of the work term for summer students from WONNA, WC, and WISC after the spring and summer gatherings. Regarding their awareness of the events after the end of their term, Leith (UW student) commented during their interview:

“Because my position I was, because only for the summer, when I got out of that it was like, oh, suddenly all these connections that I had, and all these opportunities I had now I don't really have them as much anymore. Because I'm not there and being given these opportunities.”

This statement illustrated that even though Lieth was unable to attend the later events, the desire to maintain their connections to on-going events was still present. Attending the events and the knowledge-sharing feast introduced many to the garden site for the first time and showed participants the vision for a Land-based learning space. Melissa's (UW staff, OIR) support of the space only grew after attending the gatherings. During her interview she noted, *“I think that like, it's one thing to see a professor and a community partnership on paper, and it's another to like, actually visit and go and create connections and see impact.”* Through this project, Melissa learned about the partnership with WONAA and WC and saw firsthand the scope and potential of the garden space. The Land-based learning events and gatherings

garnered positive perspectives, grew support for establishing a Land-based learning site on campus and highlighted the importance for UW to make the establishment of the space a priority.

When asked about their experiences and takeaways from the Land-based events, the event attendees shared unanimously positive feedback. Several participants spoke about how they enjoyed and appreciated the inclusion of local and university community members and the wide range of ages of the attendees. During her interview Alissa (community member) spoke about the significance of the events bringing together intergenerational audiences and fostering a connection with the Land stating:

"I guess that's how you get to know your community a little bit more too, having that connection to the Land, and to Mother Earth and carrying that forward for the youth and having the Elders too, it was just really nice"

Both interview and focus group participants mentioned that there was a welcoming atmosphere that allowed them to feel comfortable. When asked about their favourite aspect of the events, Sydney (focus group 2) said that she *"liked that it was really, like flexible and friendly. It wasn't just like another, like large meeting you're going to. I think it always had like, a welcoming tone."* The welcoming atmosphere contributed to focus group and interview participants' positive perspectives of the events. Sydney added that she felt safe building connections while facilitating the workshops during the events. Sydney (focus group 1) expressed their excitement for the events, stating:

"I feel like as these like events go by, slowly, I just feel more connected and more like confident and kind of claiming some space in you know, in the

sense of just like, I'm Indigenous and I don't need to be like afraid, you know. But, you know, I'm like not Indigenous enough or whatever but it's a really common feeling for urban Indigenous people. So like kind of like you said, it's, it's something that we're all going to have to kind of learn to kind of evolve with and it's nice to meet people who also are on that same path that feel like a little bit insecure and are a little unsure sometimes.”

Sydney was able to meet other members of the urban Indigenous community who were also seeking connections, which helped her feel more of a sense of belonging. During her interview, Melissa (UW staff, OIR), said, *“it was a nice open, gathering space from a physical standpoint, but it was also like very warm and inclusive from a relational and community standpoint.”* As Sydney and Melissa described, the events felt inclusive and safe. The diversity of attendees and the presence of both university and community members allowed participants to make new connections and strengthened existing community relationships, which created a sense of belonging and community.

4.6.2 Project Partner- Identified Goals

The project partners, WONAA and WC, were directly involved throughout the entire project. It was important to determine what they wanted to accomplish with this project and with the North Campus Garden Space, and this was done through focus groups. These goals were established by WONAA and WC staff during the planning meeting held in April 2023 and later revised during the first focus group that was held in October 2023.

4.6.2.1 Growing Connections to the North Campus Garden Site

WC in partnership with WONAA have been gardening at the North Campus Environmental Reserve since the spring 2018. Many of the staff members feel a close connection with the space, but some have vocalized a desire to grow even closer to it. Sydney (focus group 1) had not spent a lot of time on the Land at the site and said she “*really wanted to feel as passionate about the Land as everyone else did.*” By attending the events, cooking around the community, and helping to educate attendees about food preparation methods, Sydney not only grew her connection to the space but also identified possible additions to the space for more food preparation activities on the Land. Other WONAA and WC staff stated that their connections to this space already ran deep, but enjoyed seeing participants begin to foster their own connections to the space. Dave (focus group 2) stated:

“Because when people get other ideas about other workshops and other educational programs on that space, then I feel like people caught the idea of a Land-based practical expression of education and sharing and stuff like that. So I think yeah it did exactly, maybe even more than we expected, in the sense of other people having other ideas.”

Similarly, Sarina (focus group 1) said,

“Yeah, I think it's always been a place like a special place for us. But I also think that it's now like, opening up opportunities for like, further connection and a place for other people to feel like they belong in that space too.”

These shared sentiments show that the events were successful in meeting and even exceeding the goals of the project partners to deepen connections with the garden space.

4.6.2.2 Growing Relationships with Community

The project partners had various degrees of familiarity with the attendees, with some knowing most of them, and some knowing few. Meeting and connecting with people were some of the goals that were identified. When asked about whether or not the events helped meet those goals, Nancy (focus group 2) said, “*Yeah, definitely. It definitely- I think that we were able to do that in a greater way than we’ve ever done, quite honestly.*” Event participants were not the only ones that were about to make and grow connections. WONAA and WC were able to do so when they facilitated the events. Facilitating the workshops and teaching participants how to harvest produce from the garden allowed facilitators to spend time with community members and have them share their interests. Sarina (focus group 1) also spoke about sharing the vision of a Land-based learning space with the community and said:

“There was that education piece too. I feel like that was a part of that. Like teaching people who we are, what we do. And like what they can do with the foods that grow around them. Yeah. Because that is a big part of what we do as an organization, right? And as a collective. So I felt like it was like, a good way to convey and to show just what we do in the community.”

Sarina (focus group 1) also added: “*I think something that we’re doing well is placing that that groundwork in order to, like, show people the kind of work that we do and be like this could be a way that we could like, collaborate with you.*” This showed that WONAA and WC were able to convey their message through the events and knowledge sharing activities.

4.6.2.2.1 Growing Support for Land-Based Learning

The growth in relationships resulted in the growing support for the establishment of a permanent Land-based learning site on campus. The importance of learning on the Land was highlighted by Sarina (focus group 1), who said, *“I think being on the land is important. And was something that was like really inviting. And just a really integral part, I think of I’m doing like food sovereignty and community work.”* Having the events on the Land was an essential part of the learning and community for event participants. The importance of having access to Land-based activities and a space to gather, learn, and spend time on the Land materialized through the events. During the interviews, Payton (Indigenous youth) stated their initial uncertainty of the potential of the space to be a community space. When asked about whether participating in the events give inspired ideas about how that space could be used, Payton said:

“I remember people mentioning before, like, oh, yeah, this would make a good community space and, like, I agreed but I didn’t really see the vision, I guess. Whereas it was a little bit more clear when we were having those events and sort of seeing it in action.”

This shows that Payton’s support of the vision grew after attending the events. Payton then shared a statement about the need for these activities to be based on the Land. When asked about how attending the events changed their perspective about the establishment of a permanent Land-based learning space, Payton said, *“like now after, like, I see it as like, essential. Like, if I was to move anywhere, I’d need to have that connection with the land.”* Payton highlighted the importance of having access to Land, and how attending these events led to these feelings.

Participants supported the continuation of the events and the development of the garden site. Dave (Focus group 2) recognized the enthusiasm for the continuation and growth of the Land-based activities and said, *“I think the other thing is that there's just so many advocates now, for that space.”* Dave (Focus group 2) also shared, *“I think like, it's like, whether it's meeting a need, or, or people really just have a vision for a space like that, I think. Yeah. Like, I think there was genuine excitement and vision for that space.”* The potential for the site to become a Land-based learning space was made clear to the participants when they attended the events and made connections with each other and the project partners. Dave (focus group 2) recognized the support and said:

“I feel like the feedback and then conversation was like to continue the workshop activities that we started in some way or form. That was really, really important. And so and I feel like that was met in the workshops that we did. And I imagine, just from that, like, only a few people that I heard kind of talked about the workshops, and then kind of had some vision for future workshops or that kind of thing.”

The relationships that were formed could potentially support the garden space in the future, especially for future partnerships between UW and the local Indigenous community.

4.6.2.3 Increased Agency within the North Campus Site

WONAA and WC staff wanted to maintain their presence, have more agency with the site, and have a sense of security with the North Campus Community Garden. This goal was identified in the planning meetings and the focus groups. The garden site is on university Land and is not owned by WONAA or WC. This lack of permanence has somewhat

prevented WONAA and WC from pursuing long-term investments in the space such as planting perennials such as berry bushes or fully optimizing the soil. After the events, WONAA and WC staff had ambivalent feelings about their agency moving forward. Sarina (focus group 2) said that the events allowed them to build relationships with those “*advocating for us within the university system,*” while Dave (focus group 2) felt more insecure about the site because:

“I don't know, if I didn't hear that, that vision was, had grown with other people. Like vision for workshops, and, you know, for, you know, sweat lodges, or, like, the, the Indigenous vision kind of grew. But I don't think like the food sovereignty aspect, like, I didn't hear so much about that, but if it didn't come from, from us. So that was one thing I didn't like, I felt like a little around the thing about more security. I did feel a little more insecure.”

However, because of the increase of interest in the site from these events, the facilitators were hopeful about the possibility of more security, with Dave (focus group 2) stating, “*I think there is possibility of having a voice and a greater voice in that in there.*”

4.6.3 Moving Forward

When asked whether the goals of WONAA and WC partners were met through this project, focus group participants agreed that the activities did achieve what they set out to do, and even exceeded expectations in areas such as gathering support for the Land-based learning space. However, as Sarina (focus group 2) highlighted, “*a lot of those goals are ongoing. So they won't be like finite in terms of like, continued community building.*” According to focus group and interview participants, all were interested in continuing their engagement with the

project and shared many ideas for supporting the continuation of the land-based learning events beyond the duration of the project funding. Some offered more active involvement like being on a governing council, helping in the garden, and promoting the project or curriculum building, while others asked to be informed through a mailing list or through social media.

Interview and focus group participants were eager to see the Land-based events continue and shared ideas on how to support the establishment of a Land-based learning space and its future activities. The project was that it not only garnered support and shared the vision for the space, but an additional outcome of the activities also inspired those that participated in the activities and were involved in the project to work towards long term and sustainable action. Based on these overall findings, potential pathways to move forward to continue meeting the goals are as follows:

4.6.3.1 Continuing with Land-Based Learning Events

The project activities, including six planning meetings, four Land-based events, 17 interviews, one knowledge sharing meeting, and one knowledge sharing feast, and two focus groups were conducted within the one-year timeline of the SSHRC grant, from February 2023 to March 1st, 2024. The proposed timeline of the evaluation was to have the four seasonal events in June, August, October, and November, and the final dissemination event in February. However, the larger project's ethics application for the data collection portion of the project did not get final approval until July 10, delaying the first event. The first event was moved to July 18, 2023, while the subsequent events remained as scheduled. WONAA and WC staff were understanding of the time it took to get ethics approval but wished that

the strawberries could have been harvested and processed on site for the Spring event.

Regarding the timeline of the events, Sarina (focus group 2) said:

“I know the plan was to do that earlier because it was strawberries and strawberry season is more June so, but other than that I think I think it went pretty well in terms of like spacing things out and doing things seasonally.”

Despite the adjustment for the Spring event, it was well attended and was enjoyable for the participants. Sydney suggested considering different times for future events, to accommodate those who could not attend due to work or personal conflicts.

The project’s events and activities outcomes were successful and had a big impact on the community during the one-year timeline of the grant. The community building and takeaways from the events went beyond the project, and participants went on to facilitate Land-based events and initiatives of their own- causing a ripple effect of Land-based teaching and learning. Interview and focus group participants both agreed that the Land-based learning events should continue. WONAA and WC wanted to retain a similar format and to continue with the seasonal aspect, with a greater emphasis on Land-based learning and IFS, as opposed to focusing on introducing attendees to the garden site- which was done successfully by the project according to Dave. The events created a space for the growing Indigenous campus community to feel welcome including staff and students as Leith (UW student) noted, *"there's a valuable, more intangible social lesson that you learn when you're with community like that. It kind of helped me feel like, oh I belong here. People were accepting."* This quote significantly aligns with the University of Waterloo Indigenous Strategic Plan’s goal 5.1, that aims to, *“connect students to Indigenous communities, cultures*

and to each other, as well as advocating for their success” along with 5.3 to “support the Indigenous campus community by creating robust and sustainable networks,” as Indigenous students need spaces of belonging once they arrive in a new campus environment (Goals, n.d.) A complete list of goals may be found in Appendix H.

The events were also a catalyst for many participants who identified opportunities for future events. Alicia (community member), Alissa (community member), Karol (UW staff, OIR), and Kevin (UW staff, OIR) shared Land-based learning ideas such as composting, tea-making, foraging, and following the entire growing cycle accompanied by storytelling related to the plants, the season, or the Land. Participants also emphasized that it was important to continue with the focus on food and there was a need for culturally relevant education around growing and preparing the food, especially for community members and students receiving the food grown in the garden and shared with them through the WONAA Food Share to know where their food comes from and how to prepare or preserve the produce. Karol (UW staff, OIR) noted:

“One of the things we were told when the garden got up and running, and there was food being given to students, you know, food baskets, but then they didn't know what to do with the stuff. They get these raw carrots and turnips and whatever. And then they'd be like, "well what am I supposed to do with that?" [laughs] Yeah, they're used to popping open a box and tossing something in the microwave...”

The need to pursue food literacy and learning opportunities to meet those needs that were identified by Karol grew from their engagement of the project and could be done with the establishment of a permanent Land-based learning space.

4.6.3.2 Infrastructure

When each of the participants were asked about what infrastructure or resources would help support a Land-based learning space, there were many physical infrastructure ideas, along with considerations given related to social infrastructure related to the networks and governance processes supporting how people come together at the north campus site. Focus group and interview participants agreed that the space can be enhanced to support further Land-based learning opportunities and to engage users to cultivate a sense of belonging in the space. A full list of infrastructure ideas suggested by interview and focus group participants is presented in Table 3.

Table 3

A Full List of Physical Infrastructure Ideas

Ceremony	Food Sovereignty	Land-Based Education	Accessibility and Safety
Sacred fire	Storage shed	Outdoor classroom	Washroom
Sweat lodge	Greenhouse	Heated classroom space	Potable water
Teaching lodge	Garden expansion, Food forest		Seating areas with shelter from elements
	Food storage space		Paved pathways
	Outdoor and indoor kitchens		Hydro/internet

In terms of physical infrastructure, participants identified clear needs to enhance food sovereignty activities, workshops and events already occurring on the Land, as well as

structures which could create new opportunities for future Land-based programming, teaching and research. Participants also described ideas which could enhance food sovereignty efforts being led by the WONAA and WC. Expanding the garden spaces and the diversity of plants and medicines could provide further opportunities for Land-based education to support UW staff and students in addition to opening the space to other urban Indigenous organizations that exist within the broader community. An outdoor classroom space and/or a heated classroom space were specifically identified as needs to allow Land-based education initiatives to take place year-round.

Across all participants including project partners and collaborators, there was a consistently expressed need for ceremonial space. The most frequently mentioned aspect of this space was a sacred fire, recognizing the centrality of this symbol for gatherings and the functionality of a fire for warmth as well as outdoor cooking. Participants also identified the possibility of building a teaching lodge or sweat lodge on the Land, to address the need for more ceremonial spaces in the city for the urban Indigenous community. If located on campus, the space could directly support Indigenous students and staff, as well as the off-campus Indigenous community.

Another type of physical infrastructure needs participants described pertained to accessibility and safety. Potable water, bathrooms, and protection from the elements were identified as high-priority infrastructures that were critical to making the most of the space by participants and facilitators by community partners such as Alicia, Alissa, and Sven, UW staff like Emma, Kevin, Myeengun, Sara, Susan, Thomas, and Payton (Indigenous youth). Melissa (UW staff, OIR) recognized the importance of how the space is designed and

managed, stating, *“it’s spirit and heart work on the Land. How do we make it so that it is secure and it’s you know, not in view, but also at the same time safety needs are met?”* These are important points that must be considered during the design of any infrastructure and in the continual operation and management of the space.

4.6.3.2.1 Social Infrastructure

The importance of coordinating and managing plans to make decisions regarding the Land was highlighted in several interviews and both focus groups. These aspects describe the importance of social infrastructures to ensure ongoing sustainability and plans to operationalize activities and collaborations. Several participants discussed themes around responsibility, management and governance of the Land, to first clarify existing users of the space and create processes as further partnership opportunities develop. Savannah (UW staff, Faculty of Science) stated, *“It would be awesome if the university would let that be a little bit more self-managed by Indigenous staff, faculty and students, as well as you know, researchers who are doing Indigenous research there.”* WONAA and WC shared this sentiment, as they also wanted to increase their agency and remain stewards of the Land. WONAA and WC staff also highlighted the need to consider how the university would consult and engage with other groups that share the community garden, with Dave (focus group 1) saying, *“we’re all approaching the land from different perspectives, but none of us are really communicating, I think, effectively. And if you don’t do that soon, then you’ll end up with a teaching lodge right on our tomatoes.”*

Many of the project collaborators and partners agreed that the next step to continue their engagement is the formalization of a committee or council. Regarding social

infrastructure needs, Participants were all in agreement regarding social infrastructure needs and the necessity of creating a governing body and protocols to support collective decision making around the north campus site, along with managing communications, and recognizing the diversity of Indigenous community groups both on and off-campus. The council or governing body will be responsible for developing protocols of care for the Land. As Dave (focus group 2) suggested, drawing from his past experiences on the council there for Indigenizing the University of Guelph:

“... it's possible to have community members kind of come in. And then so I think community members, faculty, and admin is a good a good system, because you need the admin to kind of work through the system, you need the faculty for like, what are we designing what education- what education is happening? Possible education, like things, all that kind of stuff. So I think all of that, all of that would be good. And students. Because I think students need to be a part of everything, or youth. Students slash /community youth.”

During the second focus group, Nancy, Sarina, and Sydney also suggested that a governance structure should blend university with community members who are either involved in Land-based practices locally or have had experience working at the North Campus site. There was a consensus among the project partners around Sarina's (focus group 2) point of, “*having community liaisons to kind of be advocates within, like, what happens there [on the Land].*” WONAA and WC staff all emphasized that the voices of those directly involved at the North Campus site should be included, as they are the ones that will be most

affected by the decisions about the space moving forward. Susan (UW staff, WISC) shared similar thoughts regarding the governance of the space and said:

"I would hope that it's led by the community for the community. What's really lacking here is some form of governance in a way that isn't colonial. So whether it's an Elders council or a Land-based council, it's representative of the different facets of identities that could be here, whether they're students, staff or faculty, you know, some kind of thought process around that would be my greatest hope."

All of these sentiments shared by project partners and collaborators emphasize that including a variety of voices, especially from those who are most involved in and affected by the space and retaining an Indigenous-led approach are essential in the development of a governance structure for the site in the future.

4.6.3.3 Knowledge Dissemination

The Knowledge Sharing Feast was held on March 1, 2024, at United College and brought together project partners, project collaborators, research participants, UW faculty, staff, students, and wider members of the Indigenous community. Overall, 36 people attended the event. Melissa Ireland gave an opening greeting on behalf of OIR. Attendees then enjoyed a lunch prepared by Chef Sydney from WONAA. Afterwards, Dave Skene, WC's co-founder and WONAA Executive Director spoke about the Collective's history at the North Campus site. Then, members of the research team shared the presentation of findings. Maya Ninomiya, a graphic illustrator was present to record and summarize the findings and

discussions with attendees that followed. An illustration of the research findings can be found in Figure 7.

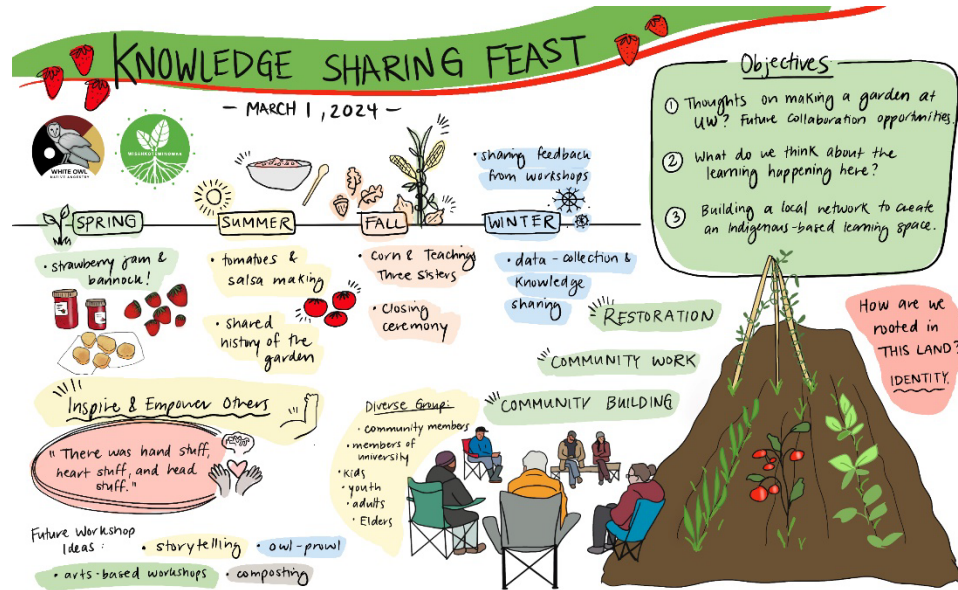


Figure 7: Graphic illustration summarizing PEG project and research findings

Following the presentation, all attendees were invited to move into one of five breakout tables to reflect on what was shared and discuss ideas. An illustration summarizing these discussions can be found in Figure 8. Afterwards the research team and finally Dave shared some closing thoughts, reflecting on the importance of Land for identity and belonging for Indigenous Peoples, and thanked the Land for her continual gifts. With that, the event concluded as gifts of corn and sunflower seeds from Wisahkotewinowak gardens were shared with all the attendees.

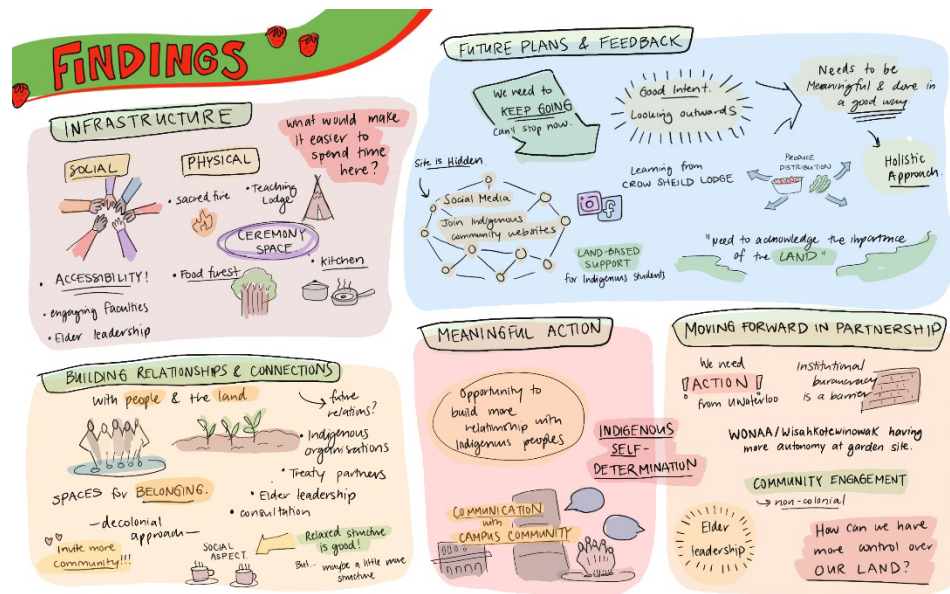


Figure 8: Graphic illustration summarizing breakout discussions

4.7 Recommendations and Implications

Following the final Knowledge Sharing Feast, the breakout table discussion notes were collected. Using the findings of the interviews and focus groups and the discussions from the breakout tables, continuing with Land-based events and exploring funding opportunities were suggested to contribute to the forward momentum of the partnership opportunities.

4.7.1 Future Events

The events had positive feedback overall and throughout the project, participants along with those who attended the seasonal and final knowledge sharing events wanted the Land-based events to continue in order to maintain and strengthen these relationships and continue to keep UW aware of the work taking place on the site. Some identified the need for connecting promotional platforms such as social media accounts and websites for WC, WONAA, Indigenous pages of the Region of Waterloo, and UW OIR newsletters, to extend

communications around upcoming events. Some of the participants also recommended creating greater awareness and additions to the events including sending out an agenda beforehand, more structure during the workshop or learning component, and consistently having a formal closing or reflection aspect at the end of the events to reflect and to have another chance to connect with community members. It was thought that an agenda may attract attendees who are interested in the event topic and will allow those who may not be able to attend the whole event to attend a portion of it. Having designated spaces for learning, assigning roles to attendees, and providing more teachings about the seasonal foods were recommended for more structure to the workshop components. The addition of these components to the events, could improve attendance, increase learning, and strengthen connections between participants and wider networks.

Continuing the events will require strong partnerships. Housing the coordination of a Land-based learning space under the OIR at UW could potentially contribute to these needs. This partnership could assist in liaisons between community partners and institutional governing bodies to uphold university policies and community-developed ‘stewardship’ principles and inform community partners and the governing body of the site of the other projects and developments at the North Campus Community Garden site.

4.7.2 Continued Funding

To continue with the Land-based learning events and pursue infrastructure needs, funding will be needed. A list of funding opportunities can be found in Appendix O. The initial budget of the project was \$25,000 awarded to Dr. Neufeld from the SSHRC Partnership Engage Grant and an additional \$4750.00 of in-kind support by WONAA and WC through

contributing workshop supplies, food, medicines, and staff time. WONAA and WC staff assisted with leading workshop activities such as planting, harvesting and food preparation demonstrations at each of the four seasonal gatherings. A breakdown of the budgeted and actual expenses can be found in Table 5. The project was able to successfully complete all activities under the allocated budget. The project activities expenses totaled \$10,899.50 leaving a remainder of \$14,100.50.

Table 5.

Budgeted and actual expenses of project

Project Expenses			
	Budgeted	Actual	Remaining
Personnel Costs	0	0	0
Student salaries and benefits	0	0	0
Undergraduate	0	0	0
Masters	0	0	0
Doctorate	8,400	0	\$8400
Non-student salaries and benefits/stipends	0	0	0
Postdoctoral	0	0	0
Other Non-Student	3,600	\$565.42	\$3,034.58
Other expenses	13,000	\$9,331.77	\$3,668.23
Professional/Technical Services	2,400	\$1,600.00	\$800.00
Supplies	3,600	\$4,631.77	\$-1,031.77
Elder Honoraria	2,000	\$1,000.00	\$1,000.00
Participant Renumeration	4,000	\$2,100.00	\$1,900.00
Elder Transportation	1,000	\$1,002.31	\$-2.31
Total Expenses	\$25,000.00	\$10,899.50	\$14,100.50

Short term external and internal can both be used to continue the seasonal Land-based learning activities. Longer term grants and targeted funding can be used to develop infrastructure and contribute to the integration of Land-based pedagogy into UW. The

existing data from the evaluation and project findings and the list of expenses showed that the project was able to complete the activities, successfully meet the goals of the project partners, and meet the objectives of the project with a small grant below the budget of \$25,000. With the continued support of project partners and collaborators, particularly those within the Office of Indigenous Relations at UW, it is anticipated that their continued interests and aims will be achieved in the coming years.

4.7.3 Evaluation Implications

Through the interviews, focus groups, documents reviews, and graphic illustrations, the evaluation questions were answered by the project partners (WC and WONAA) and collaborators (UW staff and students) along with interested individuals and families from the urban Indigenous community within Waterloo Region. The evaluation collected the focus group and interview participants' and perceptions of the Land-based engagement process and found that the Land-based events were able to initiate the process of identifying and prioritizing collaborative Land-based opportunities for learning and research at the north campus site. The project's activities, including the planning meetings, Land-based events, knowledge sharing meetings, and the final Knowledge Sharing Feast, helped to establish and strengthen local networks to drive community-led support of the development of a Land-based learning space on campus within the one-year timeframe of the grant and within budget. The focus groups and document reviews were conducted as a part of the evaluation. The interviews were completed as a part of the larger project, with the data being used for the evaluation along with a manuscript that will be published and report for the funding agency and project collaborators. This evaluation report was prepared for WONAA and WC for their

usage, which is detailed in section 4.7.2 above. As the project partners of the SSHRC PEG project and following the shared research agreement that is in place, WONAA and WC own the findings of this evaluation and are therefore the decision makers moving forward.

Possible usages for the findings are funding applications, advocacy for the establishment of the North Campus location as a permanent Land-based learning site. The future funding in the form of grants and institutional support can be used for programming and staffing support for the organizations to continue to facilitate Land-based learning and to build upon the partnerships formed during this project. This can also affect the project participants and collaborators by creating more Land-based learning and community building activities.

The project's alignment with the Indigenous Strategic Plans was clear through the interviews and focus groups. Notably, by sharing relationship-building processes with diverse campus and community partners, supporting the establishment of a Land-based learning space at the north campus garden, including Indigenous students in Land-based learning activities on campus, and fostering relationships between on and off campus communities to integrate Indigenous knowledge systems and pedagogies, Goals 3.1, 3.2, 5.1, and 5.2, respectively, are addressed. A detailed list of how the project meets the strategic plan's goals can be found in Appendix H.

Further engagement and the establishment of expanded partnerships and funding needs to be followed up on in the immediate future to capitalize on the growing interest that has been achieved through this work. Future funding perhaps in the form of a SSHRC Partnership Development Grant could be designed in partnership to continue to bridge connections and collect additional supportive data on the impacts of Land-based learning on

Indigenous students, youth, and the wider urban Indigenous community. Additionally, Indigenizing strategies on campuses and responses to the Truth and Reconciliation Commission's Calls to Action should be continually evaluated to ensure that the efforts are purposeful and not tokenistic (Peach et al., 2020). The evaluation outputs can provide supporting evidence that can contribute to projects that respond to the following TRC calls:

- *14iii: We call upon the federal government to enact an Aboriginal Languages Act that incorporates the following principles: The preservation, revitalization, and strengthening of Aboriginal languages and cultures are best managed by Aboriginal people and communities (Government of British Columbia, 2015, p. 2).*
- *53. We call upon the Parliament of Canada, in consultation and collaboration with Aboriginal Peoples, to enact legislation to establish a National Council for Reconciliation. The legislation would establish the council as an independent, national, oversight body with membership jointly appointed by the Government of Canada and national Aboriginal organizations, and consisting of Aboriginal and non-Aboriginal members. Its mandate would include, but not be limited to, the following:*
 - *iii. Develop and implement a multi-year National Action Plan for Reconciliation, which includes research and policy development, public education programs, and resources.*
 - *iv. Promote public dialogue, public/private partnerships, and public initiatives for reconciliation (Government of British Columbia, 2015, p. 6).*
- *62ii: We call upon the federal, provincial, and territorial governments, in consultation and collaboration with Survivors, Aboriginal Peoples, and educators, to: Provide the necessary funding to post-secondary institutions to educate teachers on how to integrate Indigenous knowledge and teaching methods into classrooms (Government of British Columbia, 2015, p. 7).*

- 63iii. *We call upon the Council of Ministers of Education, Canada to maintain an annual commitment to Aboriginal education issues, including: Building student capacity for intercultural understanding, empathy, and mutual respect* (Government of British Columbia, 2015, p. 7).
- 65. *We call upon the federal government, through the Social Sciences and Humanities Research Council, and in collaboration with Aboriginal Peoples, post-secondary institutions and educators, and the National Centre for Truth and Reconciliation and its partner institutions, to establish a national research program with multi-year funding to advance understanding of reconciliation* (Government of British Columbia, 2015, p. 8).

Chapter 5: Conclusion

Through CBPR, project partners WONAA and WC, and project collaborators including UW staff, community members, and students, were involved throughout the project, from project planning, event facilitation, and research feedback. By using AI, a strengths-based approach was applied to community-identified goals and perspectives collected through interviews with event participants and project collaborators, focus groups with WONAA and WC staff, and document reviews.

5.1 Summary of Main findings

The findings from this research project were presented within the thesis as a manuscript in chapter 3. The manuscript describes the three key categories that have emerged from the participants' interviews about the Land-based learning events and their potential for building connections to establish a permanent Land-based garden space include: (1) growing support for land-based learning (2) building relationships and bridging communities, and (3) institutional support and sustainability. This manuscript drew from semi-structured interviews that took place during the seasonal Land-based learning events with event participants and project collaborators that have been involved with the project. The participant interviews highlighted the importance of Land-based learning activities to persist, grow, and integrate into UW. The establishment of a permanent Land-based learning space and the continuation of the Land-based learning events was supported by participants. It was important to the participants that intergenerational and interdisciplinary audiences continue to be included, as they emphasized that it was important for younger generations to learn skills and knowledge from Elders and Knowledge Keepers. The events brought together

community members and facilitated connections and reconnections between the local urban-Indigenous and UW community members, something that some stated was difficult to do in urban areas (Phillipps, 2021). Participants were keen on attending future events and suggested events that followed the growing cycle, foraging, tea making, arts-based activities, and events in the forest by the gardens. Participants also suggested using the space for counselling, outdoor team meetings, and ceremonies for Indigenous staff and students. Some offered more active involvement like being on a council, helping in the garden, and promoting the project or curriculum building, while others asked to be informed through a mailing list or through social media. To sustainably meet community needs, participants emphasized that the events must continue to be Indigenous-specific and involve Indigenous input or partnerships. These partnerships will help engage diverse intergenerational and interdisciplinary audiences of Indigenous community members, Indigenous youth, UW students, and academic leadership within the Faculty of Health and through the OIR to develop pathways of partnership between the UW and the local Indigenous community.

Chapter 4 subsequently presents the findings from the outcome evaluation and incorporated results from the semi-structured interviews with event participants and project collaborators, in addition to two focus groups conducted with project partners WONAA and WC, and documents such as meeting notes, participant tracking, budget, and timelines documents. interviews and document reviews, Chapter 4 follows the format of a research report prepared for project partners, Wisahkotewinowak and White Owl Native Ancestry Association. The report presents the following categories (1) event attendance and workshop feedback, (2) project partner-identified goals, and (3) moving forward, are framed to respond

to the questions posed for the evaluation. An outcome evaluation was conducted to provide evidence of the project's overall effectiveness in cultivating community engagement along with facilitating ongoing research and learning networks through the Land-based and knowledge sharing activities that took place at the North Campus site. The overall intent of the evaluation was to assess the activities of the larger SSHRC-funded project's ability to facilitate ongoing research and learning networks, continue facilitate Land-based learning activities, and cultivate further community engagement and to examine the project's contribution towards the community-identified outcomes. The outcome evaluation combined complimentary AI and CBPR approaches to gather supporting evidence to address community and project partner-identified goals. The report also contains details from the four seasonal events and knowledge sharing activities that took place. According to event attendees and project partners, all enjoyed the welcoming atmosphere that allowed them to learn on the Land and gather amongst community. All interview and focus group participants were interested in continuing their engagement with the project and shared many ideas for future events. The events created valuable and necessary opportunities for the community partners and other local urban Indigenous community members to build relationships with other campus and community partners. Project partners shared that through this project their goals such as building connections with the Land and growing relationships with community were met. The goals of growing connections to the North Campus site and the community and increasing WONAA and WC's agency within the space were met. Project partners stated that building a governance structure would be the next step to establishing greater agency, managing the space, and developing decision-making protocols. WONAA and WC staff

stressed the importance of Indigenous oversight and the inclusion of those directly involved at the North Campus site, as they are the ones who will be most affected by the decisions about the space.

5.2 Strengths and Limitations

The community-based approach and the partnership with WONAA and WC allowed the research to be guided by community-identified needs and priorities. The semi-structured interviews allowed the researchers to collect rich and in-depth data from a range of perspectives from different members of the local urban Indigenous and UW communities. Participants not only gave their feedback and perspectives about the events, they also identified new opportunities for learning, research, and teaching as well as strengthened community connections. Project partners also participated in two focus groups, which also contributed perspectives of the partnership, and helped further identify the needs of the urban Indigenous community. The findings that work towards the establishment of a Land-based learning space on campus will benefit the local urban Indigenous and UW communities and will allow the reciprocation of the contributions of community members to this project.

Due to the community and location-specific nature of the project, the results may not be generalizable across different communities or post-secondary institutions. Different communities have different needs, barriers, and traditional foods and practices that this research may not apply to. Additionally, the research team was composed of non-Indigenous members. Therefore, the data collection and analysis were primarily completed by non-Indigenous people. This may result in a lack of understanding of the cultural context with the Indigenous participants' perspectives. To establish the inclusion of important cultural

contexts, diverse community members and collaborators were included in every step of the evaluation process. Other strategies to enhance trustworthiness included the triangulation of multiple data collection methods and data sources, such as by including data from interviews from different demographics as well as investigator triangulation (Shrivastava et al., 2020).

5.3 Research Contributions

This research was conducted alongside the larger SSHRC-funded project to examine the Land-based learning activities' potential to facilitate ongoing research and learning networks. The written knowledge outputs in the form of an academic manuscript and more practical evaluation report are important in creating a greater diversity of literature and knowledge outputs. These outputs highlight the project's successes, which can be used to create and maintain partnerships and establish a more permanent Land-based learning space at UW, establish long-term partnerships that span past yearly grants, and inform other post-secondary institutions aiming to respond to the TRC calls to action.

The research responds to the TRC calls: 14 iii, 53ii, 53iii, 53iv, 62.ii, 63iii, and 65 (Government of British Columbia, 2015). The calls 14iii, 62.ii, 63iii, and 65 focus on Indigenous education and funding to support these efforts. Calls 53ii, 53iii, and 53iv include developing and implementing plans for reconciliation and evaluating and publicly reporting on these initiatives (Government of British Columbia, 2015).

This research also responds to and supports the UW Office of Indigenous Relations' 2023-2028 Strategic Plan and the Faculty of Health's Indigenous Advancement Strategy (Brant, 2023; *Goals*, n.d.) For example, Land-based programming, events, and gatherings at

the North Campus site will attract new students who live in the region, provide support to existing Indigenous students, staff, and faculty, and connect students to Indigenous communities, cultures and to each other. Continued research on the impacts Land-based education will continue which will support growth for Indigenous researchers and foster and continue building relationships with Indigenous community research partners. These education and research activities will give rise to opportunities to develop mutually beneficial and meaningful partnerships, strengthen University of Waterloo relationships with local Indigenous communities (*Goals*, n.d.). A detailed list of the goals that this project addresses is in Appendix H.

Research findings will be used to inform future workshops and Land-based activities and could potentially foster future Land-based learning projects at UW and beyond. The research can benefit the scientific community by sharing relationship-building processes with diverse campus and community partners towards Land-based learning uniquely within a post-secondary setting. The methodology for Indigenous research can be preserved and shared with the Office of Research Ethics and other faculties to encourage or improve current and future research partnerships with Indigenous communities. The research outputs can be used to inform partners, funders, UW decision-makers, other post-secondary institutions pursuing Land-based education, and other Urban Indigenous communities that are interested in IFS.

The research findings may also inform other post-secondary institutions and urban Indigenous organizations interested in exploring similar objectives within their own community settings. This research will contribute to the literature about what IFS movements

look like within southwestern Ontario and how their expression is largely shaped by the local environment and local and university community (Peach et al., 2020). The Land-based activities could also be applied by other communities and institutions within their own unique Indigenous food systems and communities (Miltenburg et al., 2022). The eventual publication of the manuscript and other forms of knowledge dissemination will allow knowledge sharing between communities, as many IFS initiatives are embedded in their local communities, and there has been little opportunity for communities to share and learn from each other (Robin, 2019). The research also addresses the role of the natural environment in health, which is underrepresented in health promotion literature (Mundel & Chapman, 2010). The results may also identify policy recommendations within institutional settings and local governments to advocate priorities supportive of Land-based learning spaces.

5.4 Relevance to Project Partners

The research and evaluation were designed primarily to support the on-going work that has been taking place at WC's garden at the North Campus site. The research findings are specific to the population and region of Kitchener-Waterloo and Cambridge, and the University of Waterloo community. The findings may be relevant for other post-secondary or educational institutions and other Land-based or IFS initiatives, but considerations will be needed to address the unique needs and cultural identities of different populations. The evaluation report was prepared for WONAA and WC for their usage for future funding applications, partnership building with on and off campus communities, and promotional activities for their events and programs. As the project partners of the SSHRC PEG project,

these organizations own the findings of the evaluation and are therefore the decision-makers. Possible usages for the findings are funding applications and advocacy for the establishment of the North Campus Community Garden site as a permanent Land-based learning site.

5.4.1 Establishment of a Project Manager Position

Participants highlighted the importance of day-to-day operations and decisions that would need to be managed, particularly as opportunities develop for broader programming engaging urban Indigenous organizations, Indigenous staff and students as well as teaching and research opportunities for faculty. A new project manager position, housed under the Office of Indigenous Relations at UW can fulfil these needs. This position will be responsible for the organizational and administrative aspects of coordinating Land-based learning workshops such as communications with attendees, marketing, managing requests to use the space, managing a calendar for the space and ensure accountability, safety, and privacy needs are met. This position will also act as the primary point person for inquiries and projects in the space from university staff that want to use the garden site or requests for WONAA to facilitate workshops. This position would be a critical liaison between community partners and institutional governing bodies to uphold university policies and community developed ‘stewardship’ principles and inform community partners and the governing body of the site of the other projects and developments at the North Campus Community Garden site.

The establishment of this position can improve the communications aspect of the events, something that was identified as needing improvement. The event attendees were notified of the events over email, and the invitation list was established by the project partners and research team members. Unfortunately, that limited some students and

community members, since they were not invited directly, but were invited by those that received the emails. Those attendees proclaimed their preference of updates, reminders, and summaries of the events through social media or mailing lists. Some participants have stated that the late notice of the events prevented them from attending, and that having the dates be sent out at least three weeks before the events, or having set dates, such as the first Monday of the month, would have allowed them to attend. Having a designated Project Manager position would allow for improved planning and communications for future events.

5.5 Future Research and Final Thoughts

Further research is recommended to identify the specific needs of the unique Indigenous identities within the local and university communities and their needs in terms of Land-based learning and healing. This can be done by continuing to hold Land-based learning events, creating Land-based courses and integrating Land-based curriculum in existing courses, and recruiting students and attendees to participate in interviews, surveys, or focus groups to pinpoint community-identified needs. The effects of Land-based learning in the forms of seasonal workshops, courses, and field courses on Indigenous students, staff, faculty, and community members should also be researched. Evaluations should be conducted to examine if the workshops or curriculum within-post secondary institutions fit the needs of the community.

The effects of Land-based learning in forms of seasonal workshops, courses, and field courses on Indigenous students, staff, faculty, and community members should also be evaluated. Formative, Summative, Process, and Outcome evaluations could be conducted to evaluate if the workshops or curriculum fit the needs of the community.

In conclusion, this thesis has contributed towards establishing a permanent Land-based learning space on campus that provides access to Land-based learning spaces on campus, provides Land for growing food for food boxes for community members, and could potentially encourage more Indigenous students to pursue post-secondary education. Participants' and partners' willingness to continue their engagement with the project shows that the impact of the Land-based learning activities grew beyond learning food processing skills. By providing an urban place for Indigenous people to discuss and educate others about shared experiences while celebrating and engaging in cultural teachings and practices, the Garden Project serves as one example of what decolonizing health promotion could look like and how such an approach might facilitate healing (Mundel & Chapman, 2010). These partnerships will help engage diverse intergenerational and interdisciplinary audiences to develop pathways of partnership between the UW and the local Indigenous community to work towards the establishment of a permanent Land-based learning site on campus at the North Campus Gardens that spans beyond yearly grants. The establishment of a permanent Land-based learning space on campus will provide access to Land-based learning spaces on campus, provide Land for growing food for community members, and could potentially encourage Indigenous students to pursue post-secondary education.

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Appendices

Appendix A: Workshop Participant Email Recruitment Script

Recruitment Email Script – Workshop Participants

Dear **[Participant's name]**,

My name is Hannah Neufeld and I am an Associate Professor in the School of Public Health Sciences at the University of Waterloo. My research program focuses on urban Indigenous food environments, along with practices towards developing spaces and places for Land-based learning. I have been building relationships with urban Indigenous organizations in the community, specifically, White Owl Native Ancestry Association, to bridge partnerships with the university of Waterloo community. To support this work I was recently awarded a SSHRC Partnership Engage Grant which aims to explore collaborative opportunities for Land-based learning, research, teaching, and community engagement at the University of Waterloo by bringing together diverse campus and community partners. This project entails a series of seasonal workshops to bring together diverse campus and community partners, with subsequent data collection activities. Workshop attendees who are interested in participating in the research study will be invited to participate in an interview held at a later point between July and November 2023.

I would like to invite you to participate in this engagement process by attending at least one, some or all of our Land-based gatherings being hosted between July and November. These gatherings will take place at the University of Waterloo's north campus community garden site within the Environmental Reserve, where current Indigenous food sovereignty activities are underway. Each event will be 2 hours in length and involve teachings, a workshop activity, preparing and sharing food together based on the season:

- The early summer (July) will focus on the strawberry harvest,
- the late summer (August) will focus on garden care and maintenance,
- the fall event (October) will focus on food processing, and
- the final event (November) will be a garden closing ceremony.

Following your participation in one or more of the Land-based gatherings, you will have the option to participate in a semi-structured interview if you are interested in sharing your perspectives around the Land-based workshops and gatherings, establishing a Land-based learning site, and partnerships to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space. If you choose to participate in this research study, a member from the research team will send you the consent letter and schedule a time to conduct the interview. In appreciation of your time, you will receive a \$100.00 gift card as remuneration for participating in the interview.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45280)

I hope that you are able to attend the Land-based workshops, and that you might be interested in participating in the research study. If you require additional information please contact me at hannah.neufeld@uwaterloo.ca.

Sincerely,

Hannah Tait Neufeld

Appendix B: Information and Consent Letter for Workshop Participants

Title of Study: Cultivating Place and Space for Land-Based Learning

Research Team Members:

Dr. Hannah Tait Neufeld (Principal Investigator)

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Bryan Grimwood (Co-applicant)

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Dear **Participant**:

This letter is an invitation to consider participating in a research study that aims to explore collaborative opportunities for Land-based learning, research, teaching and community engagement at the University of Waterloo by bringing together diverse campus and community partners. This project is being led by a team of researchers from the University of Waterloo in the School of Public Health Sciences with collaborators from the Office of Indigenous Relations, and the Centre for Teaching Excellence. The research is also being conducted in partnership with White Owl Native Ancestry Association (WONAA), an urban Indigenous community-based agency dedicated to culturally safe, wholistic practices and education. To help you make an informed decision regarding your participation, this letter will explain what the study is about, the possible risks and benefits, and your rights as a research participant. If you do not understand something in the letter, please ask one of the investigators before consenting to participate in the study. You will be provided with a copy of the information and consent form if you choose to participate in the study.

Information

This research project will gather perspectives from urban Indigenous community members along with staff, faculty, and students from the University of Waterloo (UW) campus community who have demonstrated interest in Land-based learning, teaching, research, or community engagement activities at the UW North Campus Environmental Reserve. You have further demonstrated interest in engaging in this process by attending one of the seasonal gatherings at the UW Environmental Reserve. Now, we hope to gather your perspectives about establishing a Land-based learning space at the UW, along with discuss opportunities for collaboration, and provide feedback around the Land-centred engagement process.

Participation in Interviews

If you are interested in being a study participant, you will participate in an interview which will last approximately one to two hours in length. The interview will be arranged at convenient and accessible location for you. It will be audio-recorded, with your consent. After the interview has been transcribed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of our conversation and to add or clarify any points.

Participation in this study is entirely voluntary. You may decline to answer any question(s) you prefer not to answer. Further, you may end the interview at any time by simply notifying the researchers of your decision.

Risks and Benefits

There are no known or anticipated risks to you as a participant in this study.

There are no direct benefits to participating in this study, but you may gain personal and professional benefits by connecting with diverse campus and community partners who share interest around Land-based learning within institutional settings, and bridging community-campus partnerships. Your involvement will help shape priorities and recommendations to be shared in a report to stakeholders to influence university policies, procedures, and help advocate for infrastructure and institutional support to advance priorities for a Land-based learning space at the University of Waterloo.

Remuneration

You will receive \$100 gift card for your participation in this study. The amount received is taxable. It is your responsibility to report this amount for income tax purposes.

Confidentiality

If you prefer not to be identified in study results, your participation will be kept confidential. Your name will not appear in any paper or publication resulting from this study, however, with your permission quotations may be used with a pseudonym in place of your real name. Identifying information will be removed from the data that is collected and stored separately for seven years and then it will be permanently erased. You may withdraw your consent and request for your data to be deleted by contacting us within this time frame. Afterwards, it will not be possible to remove your data because we will have no way of knowing which responses are yours. Alternatively, you may choose to be identified by name and have your quotations directly attributed to you. If you later change your mind, you may withdraw your consent and request for your data to be removed from any future publications, however it will not be possible to remove your data from findings that have been submitted for publication or otherwise shared publicly. Collected data will be securely stored for a minimum of 7 years on a password protected computer and in a locked office.

Feedback and Publication

The research collected from this study will result in a report to inform university administration, consultants and future stakeholders of priorities and perspectives of establishing a Land-based learning site at the University of Waterloo. Results will also be shared back to all participants to inform networks and partnership development to facilitate ongoing research and learning. Results will also form part of a MSc thesis. Thesis and potential journal publications to disseminate findings to broader academic audiences.

At the end of the study, a knowledge sharing feast and circle discussion will take place with relevant stakeholders from the university and any participants who choose to attend.

Ethics and Contact

This study is funded by a Social Sciences and Humanities Research Council (SSHRC) Partnership Engage Grant.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45280). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca

For all other questions or if you would like additional information to assist you in reaching a decision about participation, please contact the principal investigator of this study, Professor Hannah Tait Neufeld at 519-888-4567 ext. 42269 or email hannah.neufeld@uwaterloo.ca.

It is our hope that the results of this study will be of benefit to the Project Partner, White Owl Native Ancestry Association (WONAA), along with those organizations and individuals directly involved in the study, administrators at the University of Waterloo, as well as to the broader research community.

We very much look forward to speaking with you and thank you in advance for your assistance in this project.

Thank you for your participation,

Sincerely,

Dr. Hannah Tait Neufeld

CONSENT FORM

By agreeing to participate, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I have read the information presented in the information letter about a study being conducted by *Hannah Tait Neufeld* of the Department of *School of Public Health Sciences* at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interview to be recorded to ensure an accurate recording of my responses.

I am also aware that with my permission, excerpts from the interview may be included in any publications to come from this research.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

"This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45280). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca"

For all other questions contact Dr. Hannah Tait Neufeld at 519-888-4567 ext. 42269 or email hannah.neufeld@uwaterloo.ca .

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

☐ YES ☐ NO

I agree to have my interview audio recorded.

☐ YES ☐ NO

I agree to the use of my quotations in the report and any publications that come from this research.

☐ YES ☐ NO

In sharing results with my quotations, I would like to be identified by (please choose one option):

☐ Identified by name

☐ Pseudonym

Participant Name: _____ (Please print)

☐ Verbal consent was obtained.

Participant Signature: _____

Researcher's Name: _____ (Please print)

Researcher's Signature: _____

Date: _____

Appendix C: Verbal Script Focus Group Participants

Hello [Participant's name],

My name is Danica Bui, and I am a master's student working under the supervision of Dr. Hannah Neufeld in the School of Public Health Sciences at the University of Waterloo. As part of my master's degree, I am conducting a research study that aims to evaluate the effectiveness of Land-based workshops in identifying and prioritizing collaborative Land-based opportunities for learning and research. This evaluation is a part of the larger Partnership Engagement Grant project that aims to explore collaborative opportunities for Land-based learning, research, teaching, and community engagement at the University of Waterloo. As a collaborator of this project and role as workshops facilitator in this project, I would value your participation in this research evaluation.

After the first workshop and after the last workshop, a member of the research team will schedule a focus group that will take approximately 60 minutes of your time. During the focus group you will be asked questions about your perspectives on the Land-based workshops and gatherings, establishing a Land-based learning site, and partnerships to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space. With your permission, I would like to audio-record the focus group to ensure accurate transcription and analysis.

In appreciation of your time, you will receive a \$100.00 gift card for each focus group you are able to attend.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board.

Please read the attached Information Consent Letter for more details describing the study. If you would like to participate, or you require additional information to assist you in reaching a decision, please contact me at danica.bui@uwaterloo.ca. You may also contact my supervisor at hannah.neufeld@uwaterloo.ca.

Sincerely,

Danica Bui

Appendix D: Focus Group Information and Consent Letter

INFORMATION CONSENT LETTER - Focus Group Participants

Title of Study: Cultivating Place and Space for Land-Based Learning

Research Team Members:

Dr. Hannah Tait Neufeld (Principal Investigator)

Associate Professor, School of Public Health and Health Systems
University of Waterloo
519-888-4567 ext.32269
hannah.neufeld@uwaterloo.ca

Elisabeth Miltenburg (Study Coordinator)

Research Project Manager
School of Public Health and Health Systems
University of Waterloo
emiltenburg@uwaterloo.ca

Rhona Hanning (Co-applicant)

Professor, School of Public Health and Health Systems
University of Waterloo
519-888-4567 ext. 45685
rhanning@uwaterloo.ca

Danica Bui (Msc. Student)

School of Public Health and Health Systems
University of Waterloo
danica.bui@uwaterloo.ca

Bryan Grimwood (Co-applicant)

Associate Professor, Recreation and Leisure Studies
University of Waterloo
519-888-4567 ext. 42612
bgrimwood@uwaterloo.ca

Dear **Participant**:

This letter is an invitation to consider participating in a research study that aims to explore collaborative opportunities for Land-based learning, research, teaching and community engagement at the University of Waterloo by bringing together diverse campus and community partners. This project is being led by a team of researchers from the University of Waterloo in the School of Public Health Sciences at the University of Waterloo, and is being conducted in partnership with collaborators from campus (such as the Office of Indigenous Relations, Centre for Teaching Excellence) and collaborators from White Owl Native Ancestry Association. This research will also involve a process evaluation of the Land-based workshops. As a workshop facilitator and a collaborator on this project, we would value your participation in the evaluation component of this research, specifically in your role supporting and participating in the Land-based workshops.

To help you make an informed decision regarding your participation, this letter will explain what the study is about, the possible risks and benefits, and your rights as a research participant. If you do not understand something in the letter, please ask one of the investigators prior to consenting to the study. You will be provided with a copy of the information and consent form if you choose to participate in the study.

Information

This research project will gather perspectives from urban Indigenous community members and staff, faculty, and students from the University of Waterloo campus community who have demonstrated engagement or interest around Land-based learning, teaching, research, or community engagement activities at the Environmental Reserve. This research will use a Land-centered engagement approach by inviting diverse participant groups to participate in seasonal gatherings and Land-based workshops. Post-workshop interviews will be conducted to gather perspectives about establishing a Land-based learning space at the UW, discuss opportunities for collaboration, and provide feedback around the Land-based engagement process. A process evaluation will be conducted to evaluate if the Land-based learning workshops can establish networks to facilitate ongoing research and learning. WONAA program staff will participate in two focus groups, one during and one after the seasonal workshops, to better understand their role in supporting the development of an urban Indigenous Land-based learning space of UW campus, and to gather their perspectives around the ability of their workshops to meet their goals and expectations of the learning space. The information from the focus groups will be used to inform future workshops and Land-based activities.

Results will be developed into a report to share with participants and relevant stakeholders at a knowledge dissemination event and feast, planned to take place in February 2024. All participants will be invited to participate in a final sharing circle to discuss implications of the research findings.

Participation

If you are interested in being a study participant, you will attend and facilitate at least one of four Land-based workshops, which will take place between July-November 2023. Each event will be planned for 3-4 hours in length and involve a workshop component, meal, and gathering held at the University of Waterloo's North Campus Community Garden. Each event will offer different workshops and teachings based on the season. The spring event (July) will focus on the strawberry harvest, the summer event (August) will focus on garden care and maintenance, the fall event (October) will focus on food processing, and the final event (November) will be a garden closing ceremony.

After the first and the final workshop events, a member of the research team will reach out to you and schedule a focus group at a convenient location for you. During the focus group, you will be asked about your perspectives on establishing a Land-based learning space at UW, opportunities for ongoing collaboration, perspectives on the research partnership, and feedback on the workshops. The focus group will last one to two hours in length and will be audio-recorded, with informed consent. Data will be transcribed for later analysis in a software program. You will receive a copy of your responses of the focus group transcript to confirm accuracy of the conversation and to add or clarify any points.

Participation in this study is entirely voluntary. You may decline to answer any question(s) you prefer not to answer. Further, you may leave the focus group at any time.

Risks and Benefits

There are no known or anticipated risks to you as a participant in this study.

There are no direct benefits to participating in this study. Participation may provide personal and professional benefits to connecting with diverse campus and community partners who share interest around Land-based learning within institutional settings, and bridging community-campus

partnerships. Your involvement will help shape priorities and recommendations to be shared in a report to stakeholders to influence university policies, procedures, and help advocate for infrastructure and institutional support to advance priorities for a Land-based learning space at the University of Waterloo.

Remuneration

You will receive \$100 gift card for each focus group you attend. The amount received is taxable. It is your responsibility to report this amount for income tax purposes.

Confidentiality

For the focus groups, we ask that all participants respect each other's privacy by not discussing who was present or what was said, but please note that the research team cannot control this. Identifying information will be removed from the data that is collected and stored separately. Your participation will be kept confidential in study results by default. Identifying information will be removed from the data that is collected and stored separately for seven years and then it will be permanently erased. Your name will not appear in any paper or publication resulting from this study, however, with your permission quotations may be used with a pseudonym in place of your real name. Collected data will be securely stored for a minimum of 7 years on a password protected computer and in a locked office. Only researchers associated with this project will have access to the data. You may withdraw your consent and request for your data to be deleted by contacting the researchers within this time frame. Afterwards, it will not be possible to remove your data because we will have no way of knowing which responses are yours. Additionally, please be aware that it may not be possible to remove all data that is associated with you due to the group nature of the sessions. Alternatively, you may choose to be identified by name and have your quotations directly attributed to you. If you later change your mind, you may withdraw your consent and request for your data to be removed from any future publications, please note that it will not be possible to remove your data once the study results have been submitted for publication.

Feedback and Publication

The research collected from this study will result in a report to inform university administration, consultants and future stakeholders of priorities and perspectives of establishing a Land-based learning site at the University of Waterloo. Results will also be shared back to all participants to inform networks and partnership development to facilitate ongoing research and learning. Results will also be a part of a Msc. Thesis and potential journal publications to disseminate findings to broader academic audiences.

At the end of the study, a knowledge sharing feast and circle discussion will take place with relevant stakeholders from the university and any participants who choose to attend.

Ethics and Contact

This study is funded by a SSHRC Partnership Engage Grant.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45280). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca

For all other questions or if you would like additional information to assist you in reaching a decision about participation, please contact the principal investigator of this study, Professor Hannah Tait Neufeld at 519-888-4567 ext. 32269 or email hannah.neufeld@uwaterloo.ca

I hope that the results of this study will be of benefit to those directly involved in the study, administration at the University of Waterloo, as well as to the broader research community.

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Thank you for your participation,

Sincerely,

Dr. Hannah Tait Neufeld

CONSENT FORM

By agreeing to participate, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I have read the information presented in the information letter about a study being conducted by *Hannah Tait Neufeld* of the Department of *School of Public Health Sciences* at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my focus group to be recorded to ensure an accurate recording of my responses.

I am also aware that with my permission, excerpts from the focus group may be included in any publications to come from this research.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #**45280**) If you have questions for the Board contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or reb@uwaterloo.ca.

For all other questions contact Dr. Hannah Tait Neufeld at 519-888-4567 ext. 32269 or email hannah.neufeld@uwaterloo.ca.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

☐ YES ☐ NO

I give permission for the focus groups to be audio recorded.

☐ YES ☐ NO

I agree to the use of my quotations in the report and any publications that come from this research.

☐ YES ☐ NO

In sharing results with my quotations, I would like to be identified by (please choose one option):

☐ Identified by name

Pseudonym

Participant Name: _____ (Please print)

☐ Verbal consent was obtained.

Participant Signature: _____

Date: _____

Researcher's Name: _____ (Please print)

Researcher's Signature: _____

Date: _____

Appendix E: Interview Guide- Workshop Participants

Details about participant group belonging

1. Can you introduce yourself and your role in connection to this project? (Prompt: are you a student, UW employee, Indigenous community member)
2. How did you become connected to this project?
3. What workshops have you participated in?

Perspectives on Land-based workshops and gatherings

4. What did you like about these workshops?
5. What didn't you like, or what could be improved?
6. Would you continue to attend these workshops if there were available seasonally?
7. What did you learn from the workshops?

Perspectives on establishing a Land-based learning site

8. How do these teachings inform your perspectives about establishing a Land-based learning site at the UW Environmental reserve?
9. Do you think participating in these workshops on the Land strengthened your relationship to the site and the community?
10. Did participating in the workshops provide any ideas about how the space could be used? If so, could you provide us with some examples?
11. What sort of infrastructure or resources do you think are necessary to enhance future Land-based learning activities?
12. Do you have any expectations for the learning space? Do you have any expectations from the university?

Perspectives on partnership

13. Do you think being involved in the Land-based activities has increased your connection to diverse campus and community partners (why or why not?)
14. How could this process be improved to develop collaborative partnerships around Land-based learning and activities?
15. What opportunities can you identify to foster more Land-based learning, teaching, and research at the University of Waterloo?
16. How would you like to maintain engagement in this project moving forward? What next steps would you like to see happen?
17. Is there anything else you would like to share that you haven't had a chance to yet?

Appendix F: Focus Group Guide WONAA and WC Staff

1st Focus group: conducted after 1st workshop

Focus group questions

1. What is your perspective about establishing a Land-based learning site at the UW Environmental reserve?
2. What are your goals for the workshops?
3. What do you look forward to with these workshops?
4. What are your expectations for this project?
5. After the 2nd workshop, are there any improvements or changes you would like to make for the upcoming workshops?
6. Do you think that it is possible for the outcomes to be achieved based on the workshops, research, and knowledge dissemination activities?
7. How do you feel about the potential collaboration opportunities between White Owl and UW?

2nd focus group: conducted after completion of all workshops

Perspectives on Land-based workshops and gatherings

- What did you enjoy about facilitating these workshops?
- Were the workshops and activities delivered according to plan?
 - Were your goals met? If not, what hindered it?
 - Was there anything that you felt could be improved on?
- Were the workshops delivered within the allocated budget?
- Would you like to continue these workshops?
 - What are your future goals for continuing the workshops?
- Do you think that these workshops on the Land can strengthen participants' relationship to the site and the community?
 - Did the results of the workshops look promising?
 - Considering the input and activities, do you feel as if the expected outcomes will occur?

Perspectives on establishing a Land-based learning site

- Did facilitating the workshops change your perspective about establishing a Land-based learning site at the UW Environmental reserve?

Perspectives on partnership

- Do you think being involved in the Land-based activities has increased your connection to diverse campus and community partners?
 - Why or why not?
 - How would you establish a governance structure to maintain the sustainability and longevity of the Land?
- What opportunities can you identify to foster more Land-based learning, teaching, and research at the University of Waterloo?
- How would you like to maintain engagement in this project moving forward?
- In terms of partnerships, what next steps would you like to see happen?

Appendix G: Evaluation Matrix for Outcome Evaluation

	Measures/Indicators	Data Source	Collection Methods	Analysis Procedures
What are workshop participants' and facilitators' perceptions of the Land-based engagement process?				
Did participants have positive perspectives on the Land-based workshops and gatherings?	- Participant engagement (attendance, email responses, agreement to participate in interviews, attitude during the workshops) - Participants mentioning enjoyment - Positive workshop feedback - Benefits of workshops	Interview Participants: workshop participants	One on one interviews	Qualitative Analysis: NVivo
Did facilitators have positive perspectives on the Land-based workshops and gatherings?	- Facilitator engagement (attendance, attitude during the workshops and focus group) - Focus group responses to liking and enjoying workshops - Positive responses to project and workshops	WONAA and WC staff	2 Focus groups	Qualitative Analysis: NVivo
Did community partners, project collaborators, and UW partners have positive perspectives on the Land-based workshops and gatherings?	- Participant engagement (attendance of planning meeting, email responses, agreement to participate in interviews) - Participants mentioning enjoyment - Positive workshop feedback - Benefits of workshops	Planning and attendance documents Interview Participant: non-workshop participants	Document review One on one interviews	Qualitative Analysis: NVivo
What did facilitators and participants like about the workshops and gatherings?	Responses to interview/ focus groups about enjoyment, likes, and favorite aspects	Interview Participant: workshop participants WONAA and WC staff	Interviews 2 Focus groups	Qualitative Analysis: NVivo
How were the workshops and activities delivered according to the facilitators' plans?	- Positive responses about facilitation of workshops - Critical feedback of workshop structure or facilitation	WONAA and WC staff	2 Focus groups	Qualitative Analysis: NVivo
What did the facilitators and attendees suggest for the enhancements of the workshops and gatherings?	- Future recommendations for workshops - Constructive or critical feedback of past workshops	Interview Participants: workshop participants WONAA and WC staff	Interviews 2 Focus groups	Qualitative Analysis: NVivo
How did the teachings and workshops inform participants' perspectives about establishing a Land-based learning site at the UW Environmental reserve?	Interview responses around how workshops affected their perspectives of a Land-based learning site	Interview Participant: workshop participants	One on one interviews	Qualitative Analysis: NVivo
To what extent do participants, community members, project collaborators, and facilitators have interest in attending future workshops and other educational events in this setting?	- Participant engagement (attendance, email responses, attitude during the workshops) - Interest expressed through interview responses - Interest expressed through focus group responses - Knowledge Sharing Feast discussion notes	Interview Participants Workshop participants Knowledge Sharing Feast discussion participants WONAA and WC staff	Interviews 2 Focus Groups Knowledge sharing feast discussion	Qualitative Analysis: NVivo
What is the effectiveness of Land-based gatherings and workshops in identifying and prioritizing collaborative Land-based opportunities for learning and research?				
How did participating in these workshops strengthen community relationships?	- Participant engagement (attendance, email responses, agreement to participate in interviews, attitude during the workshops) - Responses about community, connections, and relationships	Interview Participant: workshop participants WONAA and WC staff Documents	Interviews 2 Focus Groups Document review	Qualitative Analysis: NVivo
Were facilitators' goals identified during the first focus group and the planning meetings met?	- Community identified goals from planning meeting and focus group - Focus group responses to individual goals during second focus group	White Owl staff Documents Knowledge Sharing Feast discussion participants	Document review Focus group Knowledge sharing feast discussion	Qualitative Analysis: NVivo
Did participating in the workshops provide any ideas about how the space could be used?	- Suggestions for future workshops - Future workshop opportunities in surrounding areas - Suggestions for research and learning opportunities at garden site	Interview Participant: workshop participants Project partners WONAA and WC staff	Interviews 2 Focus Groups	Qualitative Analysis: NVivo
What opportunities have been identified to foster more Land-based learning, teaching, and research at the University of Waterloo?	- Suggestions for research opportunities - Suggestions for curriculum building - Suggestions Land-based courses and courses focused on Land-based learning - Suggestions for future workshops for students and faculty	Interview Participants WONAA and WC staff	Document review Interviews 2 Focus groups	Qualitative Analysis: NVivo

		Knowledge Sharing Feast discussion participants Project partners Document review	Knowledge sharing feast discussion	
To what extent can the Land-based learning workshops help to establish a local network to facilitate ongoing research and learning in support of the development of an urban Indigenous Land-based learning space on the UW campus?				
How did attending the gatherings increase participants' and facilitators' connection to diverse campus and community partners?	Responses about community, connections, and relationships	Interview Participant: workshop participants WONAA and WC staff	Interviews 2 Focus groups	Qualitative Analysis: NVivo
How have the activities established a local network in support of the development of an urban Indigenous Land-based learning space?	- Participant Engagement (attendance, email responses, agreement to participate in interviews, attitude during the workshops) - Community engagement (attendance in planning meetings, agreement to participate in interviews, support of project) - Responses about community, connections, and relationships - Knowledge Sharing Feast discussion around building relationships and community engagement	Document Interview Participants WONAA and WC staff Knowledge Sharing Feast discussion participants	Document review Interviews 2 Focus groups Knowledge sharing feast discussion	Qualitative Analysis: NVivo
How would a governance structure, infrastructure, or resources be established to maintain the sustainability and longevity of the Land for future Land-based learning opportunities?	- Responses about infrastructure, governance, and decision making - Planning meetings - Knowledge Sharing Feast discussion around future plans	Interview Participants WONAA and WC staff Knowledge Sharing Feast discussion participants	Interviews 2 Focus groups Knowledge sharing feast discussion Document review	Qualitative Analysis: NVivo
How did the knowledge dissemination activities and outputs support of the development of an urban Indigenous Land-based learning space?	- Knowledge Sharing Feast discussion about moving forward - Engagement of sharing feast attendees - Focus group responses on dissemination activities' achievements	WONAA and WC staff Knowledge Sharing Feast discussion participants	2 Focus groups Knowledge sharing feast discussion	NVivo, graphic illustration
How does this project add to the current Indigenous Strategic Plan and Indigenizing Initiatives from the University of Waterloo?	- Project achievements outlined by interview and focus group participants that align with UW OIR strategic plans, Faculty of Health strategic plans - Knowledge Sharing Feast discussion notes	Interview Participants WONAA and WC staff Knowledge Sharing Feast discussion participants Articles from UWaterloo Articles about Uwaterloo from local news outlets Indigenous Strategic Plan Website	Interviews 2 Focus groups Environmental scan	Qualitative Analysis: NVivo

Appendix H: Links to the Indigenous Strategic Plan and Indigenous Advancement Strategies

Links to the Indigenous Strategic Plan

Goal	Details	Links to the Indigenous Strategic Plan
1.5: Student recruitment	Attract Indigenous students through a robust recruitment strategy.	The prospect of an interdisciplinary Indigenous Land-based learning lab that is connected to curriculum, campus programming (i.e., OIR, WISC), and community-driven research will attract new students and support the overall student experience for professional goals and personal growth opportunities. Providing Land-based programming, events, and gatherings at the north campus gardens geared to families will engage elementary and high-school-aged youth who live in the Waterloo region will support UW's positive reputation in the Indigenous community. This can lead to increased uptake by local students deciding to pursue their post-secondary education at UW.
1.6: Collaborative strategies	Support each faculty, department and unit to develop and implement collaborative indigenization strategies.	By establishing or supporting a position for a North Campus Garden Program Manager, this role can help play a crucial role in linking faculties and departments in indigenization strategies by bringing more students, faculties and researchers to onto the Land and participating in Land-based practices to observe Indigenous ways of knowing.
2.1: Mentoring	Support growth for Indigenous researchers, with an emphasis on Indigenous student researchers and Indigenous early career researchers.	Future Partnership Development Grant can have specific funding dedicated to early career researchers, and students who are connected to Hannah's lab, or other faculty that have Indigenous students who are interested in pursuing future research.
2.2: Guidance	Educate researchers about Indigenous research methodologies and practices, including Indigenous ethics, protocols of community engagement, Indigenous data sovereignty and other practices.	The permanent garden space and possibility of an outdoor classroom at the north campus garden can be used to educate researchers about Land-based learning and Indigenous practices. Education and knowledge transfer is best shared through circle, and on the Land.
2.4: Nurture	Foster and continue building relationships with Indigenous community research partners	Continued research (i.e., a PDG) will continue building relationships and engaging with Indigenous community research partners.

3.1: Service	Develop mutually beneficial, meaningful partnerships in key service areas on our campuses that improve accessibility, usability and inclusion for Indigenous Peoples	This project will benefit the scientific community by sharing relationship-building processes with diverse campus and community partners towards Land-based learning uniquely within a post-secondary setting.
3.2 Place Making	Create and promote physical spaces and Indigenous identifiers throughout our campuses	Developing an advisory council, and staffing to support the coordination of events and programs that can take place at the north campus garden, it's in these Land-based spaces where reciprocal community relationships can be demonstrated. Place-making goes beyond the physical spaces and considers the social infrastructure that signals Indigenous ways of knowing, being and doing are present and centered on campus.
4.1 Urban	Strengthen University of Waterloo relationships with local Indigenous communities	This project is facilitated by and has participants from the local urban Indigenous community members. Establishing a permanent site will continue to maintain these relationships, so long as these processes center community partners in decision-making. Building meaningful partnerships with local Indigenous communities is also inclusive of the Land and waters, and therefore this project also supports relational processes and protocols that take care of and respect the Lands which the University of Waterloo resides. By supporting Indigenous community partners to be caretakers of the north campus Land (environmental reserve) supports the health of local communities – which includes humans and the wider web of ecosystems which sustain life.
5.1 Indigenous Students	Connect students to Indigenous communities, cultures and to each other, as well as advocating for their success	Indigenous students will be able to participate in Land-based learning activities on campus, something that is not yet available.
5.2 Education	Integrate Indigenous knowledge systems and pedagogies into the classroom, curriculum, and other teaching and learning	The existing relationships held by the research team and community partners will help engage diverse audiences of Indigenous students, university staff, and faculty.

	opportunities for the campus community.	
5.3 Campus Community	Support the Indigenous campus community by creating robust and sustainable networks.	This project will grow the existing relationships held by the research team and Indigenous community partners.

LINKS TO THE INDIGENOUS ADVANCEMENT STRATEGY

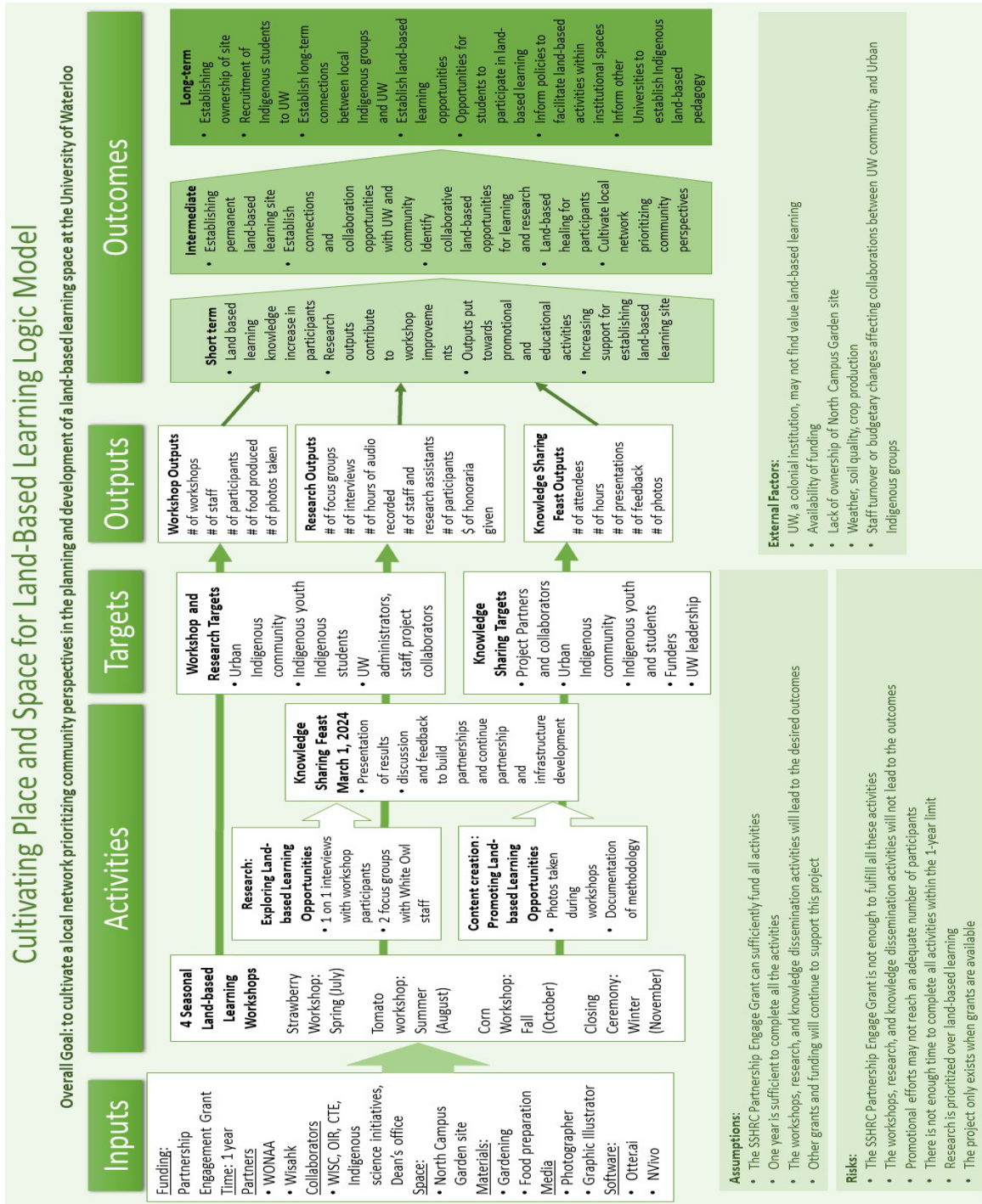
Goal	Details	Links to the Indigenous Advancement Strategy
Enhance Indigenous Engagement & Community Building	Sustain and expand the Indigenous Youth Career Initiative to include intermediate (Grades 6-8) elementary school students and their guardians.	Land-based learning workshops open to community members of all ages. Youth can volunteer as summer students in the gardens.
Mobilize Land-Based Learning	- Establish a Land-Based Learning Committee and online hub to encourage collaboration across UWaterloo (address siloes) and adherence to principles of Land-based learning. - Include local Elders and Knowledge Keepers who would receive honoraria for their engagement. Develop a guide with principles for Indigenous Land-based research and learning based on engagement with Land-based learning Knowledge Keepers from local communities and share guide through Land-Based Learning Committee.	Land-based learning involving community members will build relationships with local Elders and Knowledge Keepers that can contribute to the committee and hub Project has built principles for Indigenous Land-based research and learning by using a Community Based Participatory Research approach that had the involvement of local community members at every stage of the project.
	Develop a feasibility plan for infrastructure development to support Land-based learning space at UWaterloo, including community garden and greenhouse, place to learn	Project identified infrastructure priorities through interviews of those that are out on the gardens and attending the workshops.

	inside (ceremonial learning lodge), sweat lodge, arbor for fire, place to store food harvested from garden, restrooms, etc.,	
	Design and develop program for graduate students in collaboration with various campus community partners, including the Land-Based Learning Committee to ensure Land-based learning component is included.	Project included Land-based learning workshops and received feedback from attendees and facilitators through interviews and focus groups. Research results could be used to design and develop Land-based programs for graduate students.

Appendix I: A Full List of Physical Infrastructure Ideas

Ceremony	Food Sovereignty	Land-Based Education	Accessibility and Safety
Sacred fire	Storage shed	Outdoor classroom	Washroom
Sweat lodge	Greenhouse	Heated classroom space	Potable water
Teaching lodge	Garden expansion, Food forest		Seating areas with shelter from elements
	Food storage space		Paved pathways
	Outdoor and indoor kitchens		Hydro/internet

Appendix J: Cultivating Place and Space for Land-Based Learning Project logic model



Appendix L: Event Participant Tracking Table

Land-based Learning Event Attendees						
Spring Gathering Attendees						
	Project Team	Collaborators	UW Community	Youth	Community Partners	Total
Totals	9	2	5	7	13	36
Summer Gathering Attendees						
	Project Team	Collaborators	UW Community	Youth	Community Partners	Total
Totals	8	0	1	5	6	20
Fall Gathering Attendees						
	Project Team	Collaborators	UW Community	Youth	Community Partners	Total
Totals	9	1	2	3	5	20
Winter Closing Ceremony Attendees						
	Project Team	Collaborators	UW Community	Youth	Community Partners	Total
	9	1		0	2	12
						Total: 88

Appendix M: Budgeted and Actual Expenses of the PEG Project

Project Expenses			
Personnel Costs	Budgeted	Actual	Remaining
Student salaries and benefits		0	0
Undergraduate		0	0
Masters		0	0
Doctorate	8,400	0	8400
Non-student salaries and benefits/stipends		0	0
Postdoctoral		0	0
Other Non-Student	3,600	0	3600
Other expenses	13,000	\$9,331.77	\$3,668.23
Professional/Technical Services	2,400	\$1,600.00	\$800.00
Supplies	3,600	\$4,631.77	\$(1,031.77)
Elder Honoraria	2,000	\$1,000.00	\$1,000.00
Participant Renumeration	4,000	\$2,100.00	\$1,900.00
Elder Transportation	1,000	0	\$1,000.00
Total Expenses	\$25,000.00	\$9,331.77	\$15,668.23

Appendix N: Timeline of the PEG Project

Project Activity	May	June	July	August	September	October	November	December	January	February	March
Feedback Meeting	1-May										
Ethics Refinement & Submission	19-May		Ethics Approval: July 10								
Workshop Planning Meeting		23-May									
Workshop Planning		19-Jun	10-Jul								
Gatherings			18-Jul	13-Aug		16-Oct	Nov. 5-closing				
Recruitment			First invitation: July 11								
Data Collection (Focus Groups)											
Data Collection (Interviews)											
Data Analysis											
Results Write-Up											
Preparing Deliverables											
Dissemination Event Planning											
Dissemination Event											

Appendix O: LIST OF POTENTIAL FUNDING OPPORTUNITIES

Grant	Deadline	Amounts	Eligibility/Criteria
<i>Research Grants</i>			
SSHRC - Partnership Development Grants	Annual: November 15,	\$75,000 to \$200,000 1-3 years	Partnership Development Grants are expected to respond to the objectives of the Insight and/or the Connection programs Partnership funding is intended for formal partnerships between postsecondary institutions and/or organizations of various types.
SSHRC – Partnership Grants (Stage 1)	Stage 1: February 10 Stage 2: October	Stage 1: up to \$20,000 Stage 2 (by invitation only): up to \$2.5 million 4 to 7 years	Partnership Grants are intended for large teams of postsecondary institutions and/or organizations of various types that work in formal collaboration. They support new and existing formal partnerships over four to seven years to advance research, research training and/or knowledge mobilization in the social sciences and humanities
SSHRC – Insight Development Grants	Annual: February 2,	\$7,000 to \$75,000 1 to 2 years	Insight Development Grants support research in its initial stages. Funding is provided for short-term research development projects of up to two years that are proposed by individuals or teams. It can involve: Pilot initiatives, case studies
SSHC – Insight Grants	Annual: October 1,	Stream A for requests between \$7,000 and \$100,000; or Stream B for requests between \$100,001 and \$400,000. 2 to 5 years	Insight Grants support research excellence in the social sciences and humanities. And respond to the objectives of the Insight program.
SSHRC – Connection Grants	Quarterly: February 1, May 1, June 20, November 1	Events: \$7,000-25,000 Outreach activities: \$7,000-50,000	Proposed events and outreach activities must produce timely and concrete deliverables, such as conference proceedings or other knowledge products.

		1 year	Proposed events and outreach activities can be one-time encounters or catalysts designed to lead to longer-term partnerships and/or sustained programs of scholarly research.
CFI – Innovation Fund	Innovation Fund competitions at regular intervals of 24 to 30 months. 2025 Competition dates: Deadline to submit notice of intent: Oct 1, 2024 Deadline to submit proposals: Jan 21, 2025	Up to \$425 million in research infrastructure funding – CFI will fund up to 40% of eligible infrastructure costs. Total project costs must be greater than \$1 million to be eligible. up to \$127.5 million for associated operating and maintenance costs through the Infrastructure Operating Fund (IOF)	- Program goals: Enable internationally competitive research or technology development through the equitable participation of expert team members - Enhance the capacity of institutions to conduct the research or technology development program over the useful life of the infrastructure - Generate benefits to Canadians. An eligible infrastructure project involves acquiring or developing research infrastructure to increase research capacity and support world-class research. Note, there is an upcoming info session on June 18
CFI - John R. Evans Leadership Fund - Partnership Streams are submitted alongside SSHRC Insight and Partnership Grants	SSHRC Insight and Partnership Grant deadlines	Eligible institutions can submit proposals requesting up to \$800,000 from the CFI, with a maximum total eligible cost of \$2 million	Joint submission with SSHRC Partnership/Insight Grants to support Infrastructure An eligible project involves the acquisition or development of research infrastructure to increase research capacity and enable innovative research activities.
The Ontario Research Fund – Small Infrastructure	Past round deadlines were November & March.	The ORF will contribute up to a maximum of 40 per cent toward the total eligible costs. CFI also provides up to a maximum of 40%, with the remaining 20% coming from the institution or other	- helps cover the costs of acquiring/renewing research equipment (e.g., specimens, scientific collections, computer software, information databases) - co-funds with the John R. Evans Leaders Fund through

		eligible partners as match.	the Canada Foundation for Innovation
The Ontario Research Fund – Research Excellence	Last call was in 2023, website does not list new dates.	Stream 1 Basic and Applied Research Funds projects at technology readiness level (TRL) 1-2 from \$500,000 to \$2,000,000 (Ontario portion) up to 5 years	The Ontario Research Fund Research Excellence (ORF-RE) program promotes research excellence of strategic value to Ontario by supporting new leading-edge, transformative, and internationally significant research Link to internal UW page of the program.
UWaterloo Internal Grants			
UW – Sustainability - Sustainability Action Fund	Bi-annually: Winter (Feb) Spring (June)	Between \$2,000-\$30,000.	The Sustainability Action Fund (SAF) supports projects and initiatives that improve sustainability at the University of Waterloo. Project funds are distributed based on a call for applications, with successful applications determined by the President’s Advisory Committee on Environmental Sustainability (PACES)
UW – CTE - Learning Innovation and Teaching Enhancement (LITE) Seed Grant	3 annually: February 1 st , June 1 st and October 1 st	Up to \$7,500 Eligibility for faculty members,	LITE Seed Grants can help you investigate small-scale teaching and learning research projects and attend activities to develop your instructional skills.
UW / Lyle H. Hallman Higher Education Grants	Next accepting applications in 2025.	Past projects have ranged from \$200,00 to \$600,000.	This program is open to Conestoga College, Wilfrid Laurier University and the University of Waterloo. Preference is given to projects focused on child and youth development, increasing access to higher education for under-represented students, and strong community connections.
Grants Eligible for Community Partner			
Tri-Council - College and Community Social Innovation Fund grants	March 1	\$120,000 from 1 to 3 years	CCSIF grants are intended to foster community innovation by connecting the talent, facilities and capabilities of Canada’s colleges and polytechnics with the research needs of community organizations. CCSIF proposals should facilitate

			collaborative and innovative research that brings together researchers, students and partners to address challenges in community innovation in the social sciences, humanities, health sciences, natural sciences and engineering research fields.
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