

Wise Practices for First Nations Apprenticeships in Skilled Trades in Southwestern Ontario

by

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Abstract

This Major Research Project explores the key role of relationality in creating successful outcomes for First Nations apprentices in the skilled trades. First Nations perspectives and practices on knowledge sharing through a one-to-one relationship mirror the 80% on-the-job training structure of provincial apprenticeship models. By focusing on community 'wise practices' rather than universal "best practices," the project uses a co-design methodology to design with the lived experiences of First Nations tradespeople.

The research highlights an original relational design framework as a starting point for culturally safe co-design, ensuring that First Nations apprentices feel their lived experiences and cultural identities are valued. Designing with community members, including tradespeople and apprentices, is a tangible way that shifts power back to the community. The goal is to create a self-reinforcing cycle in which First Nations journeypersons become visible mentors, inspiring the next generation of 10-year-olds to pursue and succeed in the trades.

Acknowledgments

I want to frame the local context from where I live, work, play, learn, and dream when developing this research project. My local area is the traditional territories of the Haudenosaunee, Anishinaabe and Lenape people, which include the Oneida of the Thames First Nation (Haudenosaunee), the Chippewa of the Thames (Anishinaabe) and the Munsee-Delaware Nation (Lenape). Focusing my research on these three communities is a way of acknowledging my responsibility to design collaboratively with them in a good way.

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Finally, a heartfelt thank you to my family and Jaimie Malott. Thank you for supporting me in chasing my dreams and for encouraging me to balance exploring real challenges with having fun doing the impossible.

Author's Declaration

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Introduction

This study is set in a First Nations community in Canada. The study uses co-design methods to address wise practices for First Nations Apprenticeships in Skilled Trades in Southwestern Ontario. There are numerous opportunities to embark on a journey into the skilled trades through training and apprenticeship programs. The issue of sharing knowledge in a meaningful, engaging, and culturally relevant manner during an apprenticeship impedes the completion of training for First Nations people. In this work, the authors seek to explore wise practices for apprenticeships through a First Nations worldview on knowledge sharing. The project also incorporates co-design with First Nations to create a guide that enriches the relationship between apprentices and journey people. In this paper, we present the study's guiding framework and the philosophies that inform it.

First Nations communities have a key need for infrastructure and housing development, which requires skilled tradespeople to complete the projects. Supporting First Nation's people to complete apprenticeships opens opportunities for employment in high-paying, in-demand jobs that also could benefit the community Projects. This work evolved from a strategic foresight and innovation (SFI) program, in which tools and methods are applied to real-world problems.

There will be \$10 million throughout 2029 targeted for rapid skilled trades training within First Nations, in addition to other initiatives. With this in mind, the researchers sought to understand the context and explore several questions using both design methodologies and an indigenous worldview, such as what skilled trades funding programs are available and what would position First Nations Communities to access them. To support the development of future apprenticeships, this study aims to identify what is working in training and amplify its effectiveness. It also seeks to examine opportunities to explore and the trends that will shape the future of skilled trades. The study will include a deep exploration of the systems affecting the Skilled Trades in Ontario, and the labour-market impacts of hands-on work and designing WITH First Nations as a practical action of reconciliation.

Ontario Skilled Trades Context

The Ontario Government plans to build a more competitive, resilient and self-reliant economy through a critical mineral supply chain that includes new resources and opportunities for Indigenous equity partnerships. These measures include nearly \$3.1 billion in loans, grants and scholarships that would support Indigenous participation, partnership and ownership in Ontario's critical mineral supply chain. (Ontario 2025)

There is a growing opportunity for First Nations to develop tradespeople within their communities to support Ontario's workforce needs in the Skilled Trades sector. The heart of the Skilled Trades in Ontario

is hands-on skills learning through apprenticeship, supplemented by theory from training providers. An example of a Truck & Coach Mechanic training path would be 6000 hours of on-the-job training through an apprenticeship, 720 hours of in-school training, and an Ontario Secondary School Diploma/grade 12. A majority of the resources to support apprentices target the level 1 training (roughly $\frac{1}{3}$) of the 720 hours as an entry point into apprenticeship. All 144 designated skilled trades in Ontario have a detailed competence list of skills to be demonstrated and mastered through the on-the-job apprenticeship.

Exploring First Nations' perspectives on knowledge sharing, which historically has not been adopted within a colonial education framework, could create a welcoming environment for exploring career opportunities in the Skilled Trades. Few First Nations have the authorization or facilities to train local community members with the skills needed to thrive in the Skilled Trades. While funding/partnership opportunities exist, access to local First Nations skilled trade data to inform decision-making and proposals is not readily available. Neither is a documented approach to relational knowledge sharing from a First Nations perspective that would support culturally supportive work environments in the Skilled Trades.

Other factors that impact the completion rate of Skilled Trades training within First Nations could be:

- Low journey person to apprentice ratios on reserve means fewer opportunities to create more apprenticeship opportunities
- Trades are not the first choice for a career for young people
- Truth and Reconciliation Calls to Action to move towards reconciliation
- Barriers and sexism for women in trades environments
- Completing the final Certification of Qualification exam
- Restrictions from the Indian Act for training and education, impacting the money allocations for training supports
- Does the First Nations' completion of high school rate affect apprenticeship rates
- The practice of setting aside Indigenous seats in government-funded programs is sufficient to rapidly upskill the shifting workforce.

The issue of apprenticeship success has many layers, including stakeholders and interconnectedness.

Research Questions

Primary Research Question

How might we co-create culturally grounded apprenticeship models and mentorship tools that strengthen the relationship between apprentices and journey people within First Nations communities, such as the Chippewas of the Thames First Nation in Southwestern Ontario?

Secondary Questions

- What resources are available to support the apprenticeship's relationship, mentoring, and knowledge-sharing process?

- How might the Haudenasaunee (Oneida of the Thames First Nations), Anishinaabe (the Chippewas of the Thames First Nations), and Lenape (Munsee-Delawar First Nation) approaches to relationality correlate with the apprentice-journey person relationship within First Nations communities?
- Which trades are the focus of the Ontario government's funding model targeting a critical mineral supply chain, and are there opportunities locally for those training programs?

Context

Positionality

I am Brian J. Malott, and I am a believer in chasing dreams. I am the son of Robin and Jim Malott. My mom was a pharmacy assistant, and my dad is a truck mechanic. I grew up in a small town; we had a yellow light and a red light. About three hundred people were living in town, and a tire shop was our only business. As we have grown up, I have always been the big brother to my sister, Ashley, and my twin brothers, Steve and Brad. I have been married to my wife, Jaimie, since 2021, and I am a dad to our golden retriever, Eden.

As part of my self-learning journey, I have connected to my background as being Oneida of the Thames. My journey to OCAD brought me to a place I was not sure I would get to, reaching out and connecting with my birth father, Jeffrey. I met him for the first time in October 2024 over reading week for my Master's.

It has been a fascinating journey of balancing learning in the Master's program, full-time work, and living through various relationship stages. I say this to frame my story and center who I am as a designer.

I know it is rare, but I have been able to work in all four of my learning fields throughout my career: Human Resources, Career Development, College Teaching, and Design Thinking. With the rapid changes happening in the Ontario College and University environment, I am aware that my 13 years in Career Development at Fanshawe College will soon transition to a new professional role as a Pathways and Engagement Adviser. It has been a privilege to support people in their life and career journeys, taking new knowledge, skills, and abilities into a changing workforce.

Bringing who I am into the project is key. My family has been involved in the Skilled Trades as truck mechanics, long-haul truck drivers, welders, and train maintenance for several generations. I have been on a personal journey of learning my Oneida heritage for the last decade. I have been in Career Development for over twenty years, empowering people to choose meaningful work. Over the previous five years, I have been learning about Human Centred Design. Who I am and where I come from will guide and influence me as I try to facilitate co-designing wise practices for success in the skilled trades by First Nations People.

Local First Nations Context

I want to frame the local context from where I live, work, play, and dream when developing this research project. My local area is the traditional territories of the Haudenosaunee, Anishinaabe and Lenape people, which include the Oneida of the Thames First Nation (Haudenosaunee), the Chippewa of the Thames (Anishinaabe) and the Munsee-Delaware Nation (Lenape). Focusing my research on these three communities is a way of acknowledging my responsibility to design collaboratively with them in a good way.

Creating meaningful career opportunities within the Skilled Trades is a passion of mine, and I am excited to apply the methods and practices that have been caringly shared with me as part of the Strategic Foresight and Innovation program at OCAD University. I am privileged to codesign with the local communities. Practically, scoping the project to focus on the local allows me to learn from the national but frame it for the local. While I endeavour to design for all three, the timeframe may dictate starting with the Chippewas of the Thames /Anishinaabe, then building from there.

Ontario Apprenticeship Steps

Skilled Trades Ontario is the governing body of the Apprenticeship process in Ontario. Setting the standard for training requirements, certification exams and the required hours to complete an apprenticeship. The primary delivery of skilled trades training comes through a Training Agreement between a Sponsor and an Apprentice that fulfills the Apprenticeship program. There are 144 Skilled Trades in Ontario, 23 of which are Compulsory (requiring certification to work in that field; some expectations during training), and various Trades that require a certification exam and a Red Seal Endorsement. (Skilled Trades Ontario, 2026) Each Trade has specific requirements for hours, Apprenticeship Training Standard, Curriculum Training levels, and Certification Exam. For this research, the focus is generally on the Construction and Transportation sectors of Trades, while the Manufacturing and Service Trades sectors are not.

Process of the Apprenticeship for Skilled Trades in Ontario

<p>Sponsor an Apprentice The steps for a Sponsor to take to apprentice as described on the Skills Trades Ontario Website are (Skilled Trades Ontario, 2026) :</p>	<ul style="list-style-type: none"> ● Sign a Sponsor Agreement ● Find an apprentice ● Apply for an apprenticeship ● Sign a Training Agreement ● Ensure the apprentice receives training ● Confirm apprenticeship program completion
<p>Start an Apprenticeship</p>	<ul style="list-style-type: none"> ● Find out if you qualify

	<ul style="list-style-type: none"> ● Find a sponsor ● Apply for an apprenticeship ● Sign a Training Agreement ● Register your Training Agreement ● Download your Apprenticeship Training Standard Logbook
Current Apprentices	<ul style="list-style-type: none"> ● Maintain your Apprenticeship Training Standard Logbook ● Maintain a record of completed hours ● Register for in-school training ● Apply for Employment Insurance (EI) for your in-school training
Finish an Apprenticeship	<ul style="list-style-type: none"> ● Ensure your records are complete ● Fill out and sign the Apprenticeship Completion Form ● Submit your completed form ● Skilled Trades Ontario reviews your form ● Receive your Certificate of Apprenticeship in the mail ● Trade certifying exam (Y/N) ● Confirm apprenticeship program completion

Table 1: Process of the Apprenticeship in Ontario. Source: Skilled Trades Ontario.

Skilled Trades Ontario outlines the straightforward process of the Apprenticeship for Skilled Trades process in Ontario as well as additional processes for changing sponsors and in-school training locations while working to complete a started apprenticeship. This research will explore the various system impacts on First Nations people going through the apprenticeship process, explore additional supports available to First Nations in the apprenticeship process, highlight opportunities for social change to increase retention, supporting First Nations participants to feel seen, heard, and understood in the work place, and recommended Wise Practices for First Nations Apprentices and Sponsors to co-design collaborative working relationships.

Literature Review

Why focus on Indigenous Trades People

The Canadian Apprenticeship Forum and the Southern First Nations Secretariat completed a report with 50 Indigenous tradespeople in the fall of 2025. (Southern First Nations Secretariat (SFNS), 2025) Since the focus of the Major Research Project was on the Southwestern Ontario First Nations trades experience, and both the SFNS and the Chippewa of the Thames are located in Southwestern Ontario, the report presents a current snapshot of the lived experiences of Indigenous tradespeople. The report highlights that the findings do represent a national perspective, with an emphasis on participants from the East Coast; the overall recommendations provide a solid foundation for framing the current situation in the skill trades for First Nations people.

Building on the OCAP training as part of the research foundational knowledge process for the MRP, the decision was made to build on these findings through the planned co-design activities to support knowledge development for local communities. With community members recently sharing their experiences in skilled trades for a similar study, the adjusted plan was to focus the co-design workshop on building on the recommendations presented in the CAF report. In this way, building on the shared stories and insights by honouring truths already shared with researchers, this research will explore using design thinking processes to generate ideas and strategies to move forward on the recommendations from the CAF report.

Recommendations from CAF-FCA Report 2025 (SFNS, 2025)

- Provide more opportunities for career exploration
- Encourage employers to hire apprentices
- Offer mentorship training for the journey persons who work with apprentices.
- Provide learning supports and alternate assessments that enable practical demonstration of learning.
- Give appropriate financial support to apprentices.
- Develop meaningful relationships with Indigenous communities and offer cultural supports during apprenticeship training.
- Provide practical supports, such as courses in life skills
- Encourage youth to get a driver's license
- Listen to Indigenous apprentices and integrate their feedback into apprenticeship programs.
- Ensure apprentices get their Employment Insurance(EI) as soon as they start their technical training.
- Promote greater awareness of the range of exciting financial and other supports.
- Share the stories of successful Indigenous role models with young people

These recommendations were adapted into a system map to highlight the interconnected impacts and influence of the barriers and opportunities within the Skilled Trades apprenticeship process.

Audiobooks and Text-to-Voice

Balancing life between learning/working / and family required a creative approach to quickly learning from various sources of information, which focused on using audiobooks and Text-to-Voice software. Digging deeper into various topics related to the research project involved reading books and sourcing reports on skilled trades, design and co-design, First Nations worldviews, and systems thinking. During the initial research phase, two software programs were primarily used: Google Books for audiobooks and ebooks, using the “Read for Me” accessibility function, and Speechify, a text-to-AI natural voice PDF reading tool. During the foundational research phase, as we explored what was already written on the topics, we studied and learned from a range of resources. By listening to sources while doing other tasks like driving, working, and walking, I learned on the job and may not be able to cite exactly which source I got the idea from. The sources are documented in the Bibliography. The concepts that influenced the research were covered in the following materials:

Books Read:

Design Social Change

Ideaflow

Assembling Tomorrow

Education for Critical Consciousness

Revenge of Tipping Point

Tipping Point

Navigating Ambiguity

Who We Are

Systems Thinking for Social Change

Design for Belonging

Pedagogy of the Oppressed

Thinking in Systems

HBR 10 Must Reads on Strategy

Black Experience in Design

True Reconciliation

Research is Ceremony

PDF Read:

Envisioning a Pluriversal Design Education

ONCAT Indigenous Prior Learning Assessment and Recognition

JAsc-v2ii Goodchild

2024 CAF FCA Report

Promoting - Careers in the Skilled Trades to

Indigenous Youth in Canada

Indigenous Systems Thinking Vol 1

Models of Care & Expansion Pack

Mindsets for co-design

Phenomenology

Exploring Relationality as a Knowledge Source

At the beginning of my studies for the SFI Master's, I read Research is Ceremony: Indigenous Research Methods by Shawn Wilson for the Innovative Research Methods class. I wrote 4 Post-it Notes that provided a framework for reflection throughout my studies and the MRP.

Knowledge as a Relational Process

Ontology - What is real?

Epistemology - How do I know What Is Real? How to acquire and validate knowledge?

Methodology - How do I find out more about reality?

Axiology - What is ethical to do in order to gain knowledge?

These questions, written from Wilson's Definition of Terms, have sat next to my computer monitor during every paper, reflection and Zoom call during the Master's. Asking what is REAL and how do you know guides what the research is looking for; how do I find out more, and what is ethical to gain knowledge, guides the method for gaining more understanding. Wilson framed those questions in the relationship between the knowledge holder and the knowledge seeker, and explored how they share and build on that knowledge.

Methodology

First Nations - Relationality

There is a growing opportunity for First Nations to participate in the development of tradespeople from within their communities to support the workforce needs of Ontario when it comes to the Skilled Trades sector. The heart of the Skilled Trades in Ontario is based on hands-on skills learning through apprenticeship and supplemented by theory from training providers. An example of a Truck & Coach Mechanic training path would be 6000 hours on-the-job training through apprenticeship and 720 hours in school, and an Ontario Secondary School Diploma/grade 12. (Skilled Trades Ontario 2026) Most of the resources to support apprentices target the level 1 training (roughly $\frac{1}{3}$ of the 720 hours) as an entry point into the apprenticeship.

The relational aspect of the apprenticeship process should be the focus of skilled trades training, as one-to-one training accounts for approximately 80% of the time spent learning. Relationality is recognizing cross-cultural dialogue as a doorway to healing, transformation, and spiritual understanding. (Goodchild, 2021) The First Nations' approach to sharing knowledge through a relational framework has many similarities to the learning process of apprentices on their journey to becoming tradespeople.

Exploring First Nations' perspectives on knowledge sharing, which has historically been overlooked due to a colonial education perspective, could create a welcoming environment for exploring career opportunities in the Skilled Trades. Few First Nations have the authorization or facilities to train local community members with the skills needed to thrive in the Skilled Trades. While funding/partnership opportunities exist, access to local First Nations skilled trade data to inform decision-making and proposals is not readily available. Neither is a documented approach to relational knowledge sharing

from a First Nations perspective that would support culturally supportive work environments in the Skilled Trades.

The key question, “What does skilled trades training support need to look like?”, reinforces the research question of this study. There is interest in supporting First Nations people on their apprenticeship training journey, and an awareness that the process needs to be updated to support their success.

The real problem I am addressing is how to support First Nations apprentices with completing training and securing employment in the Skilled Trades. This research proposes that co-creating strategies that focus on the relationality between apprentices and tradespeople, using a First Nations approach, would lead to more successful skilled trades training journeys.

Co-design as a methodology

I was introduced to co-design through in-class references. Later on, I gained a more profound knowledge of co-design from *Beyond The Sticky Notes* (McKercher, 2021), and finally, *Design for Social Change* (Noel, 2023) also allowed me to expand my thinking on co-design.

I saw many natural similarities between how I built relationships and how I delivered career development programming. For me, co-design was a similar process of being relational and developing solutions to complex problems.

In *Beyond Sticky Notes*, McKercher presents the mindsets and methods of co-design in bite-sized micro-concepts and simple visuals, facilitating quick adaptation to a design process. Drawing on experiences across Australia and New Zealand in health and social care, with a focus on Aboriginal people as collaborators in these spaces, I identified many touchpoints I could relate to in the work I observe. It was a different perspective on design, not typically shared from a business view. McKercher’s work includes printable cards, and I could ponder on what mindsets and methods to consider for my research design, which was helpful. While I admire McKercher’s work, and the context had similarities to my local context, it didn't feel like it spoke to my worldview and experiences.

I appreciated the conversational nature of Noel’s *Design For Social Change*. It felt like I was having a coffee with a friend who was sharing tools and provocations to support change. The invitations to action from the “Your Turn” sections provided straightforward design activities to explore the social changes needed. The tools of Emancipation, Liberation, and Abolition encouraged exploring massive, impactful changes rather than small tweaks, opening the door to bold design. While I enjoyed the work, a drawback was that it required some adaptation to apply the concepts in a different context.

Design thinking offers a linear approach to problem-solving, assuming that once the problem is clearly defined, exciting rounds of iteration, prototyping & refining, along with rapid failure, will ultimately yield the best product, solution, system, etc. In the design thinking process, we rush to the fun stuff of solving

the problem. Generating over two thousand ideas and prototypes through sprints, activities, reframing, rapid, inexpensive prototyping, and creativity and innovation enables designers and experts to excel in their field. The empathize and define phases are rarely given the space or fanfare they need. Seldom is it pointed out how the insight leads to understanding the issue at hand. Taking the time to understand who you are in the process—the background, experiences, feelings, and biases you bring to it—requires a lot of effort.

Wise Practice Over Best Practices

The emphasis on “wise” over “best” practices comes from a local knowledge keeper. If something is deemed a “best practice,” it leaves little room for future development, whereas a “wise practice” can be well-informed in the moment and offers opportunities for future growth. The research will feature skilled trades data related to First Nations Apprenticeship, First Nations worldviews on knowledge-sharing, and collaboration with First Nations tradespeople on wise practices.

Currently, there are opportunities to develop trades training initiatives to meet the growing demand for infrastructure and home construction, resource development, and a shifting labour market for skilled trades work. Identifying the current situation for First Nations apprenticeship and highlighting opportunities to strengthen the apprenticeship process in culturally relevant ways will support First Nations trades training by enabling timely funding applications through access to focused data and by delivering training using a First Nations approach to relationships and knowledge sharing in skilled trades.

The significance of this will support skill development in the trades, opening up economic opportunities for individual members and the nation through access to a growing construction and development economy. First Nations are in the process of developing and upgrading infrastructure to meet the increasing needs of their populations and building new homes to enable members to remain within the community.

Proposed Framework

In working to bring an Indigenous-focused approach of relationality to a co-design research method, a framework was designed to focus on teaching by a knowledge keeper that people want to be Seen, Heard and Understood. This framework aims to intentionally slow down the empathy phase of design thinking and create space to be present in the co-design process. Empathy is taking the time to understand the emotions, mindsets, and environments that are making the need for a design solution. Using reflection as an early tool to determine what you need to be fully engaged and present with the design opportunity. Taking a breath and checking in with yourself helps you be present for the required empathy work. Using a holistic approach to check in with co-designers invites them to feel seen and heard within the process. The proposed framework adapts Haudenosaunee teachings on the medicine wheel to understand the interconnectedness of the heart, mind, body, and spirit. Typical teachings on the medicine

wheel encompass many layers, including directions, seasons, traditional medicines, community roles, and additional teachings. For the proposed framework, a simplified medicine wheel is presented.

The Seen, Heard, and Understood design framework was used to guide co-design activities that collected primary research from a co-design workshop. The participants were made up of people with experience working in the skilled trades as apprentices and journey people, and educators who support skilled trades workers.

Seen, Heard, Understood Design Framework

A framework based on relationality

I have spent several years learning from Liz Akiwenzie, a highly respected Ojibway and Oneida cultural knowledge keeper, educator, and ceremonial grandmother. We have had many enriching conversations and thought collaborations. As I was early in my journey of learning about Design Thinking and Indigenous perspectives and ways of being, my curiosity and exploration came together and bounced off each other. During my research into gaps in an Indigenous framework for the apprenticeship relationship process, I needed a framework to guide the intervention.

Narrative

I drew inspiration from Akiwenzie's teachings (2022). Some of the highlights of her teachings are centred on Seeing, Hearing, and Understanding, and how these concepts connect with being present for others. She does a good job of sharing a lesson from a knowledge keeper's perspective. I believe that in relationality, it's essential to learn from the original people who shared a lesson with us. It's similar to me sending you a social media clip and saying, 'Would you want to grab a coffee and chat about this idea?'

Here are some notable ideas from Akiwenzie's teachings:

- Being able to see and to hear, and to understand another person is the greatest gift you can give to anybody, as it builds trust, builds understanding, and creates healthy relationships through healthy communication
- When you feel your mind wandering, you know you're not being present, you're really not seeing, you're really not hearing, you're really not understanding, because we're not present
- we need to be able to communicate: to be able to see with our heart, our mind our body and our spirit, to be able to hear with our heart our mind our body and our spirit, and to be able to understand from our heart what is that feeling, from our mind what are those ideas, from our body what is that feeling
- be present no matter who you're communicating with

Relationality Framework

Reconciliation is a step in developing healthy relationships. The nature of reconciliation is to restore a relationship. Relationality starts with being present. Being present is a core foundation for building a healthy relationship. When exploring design as a tool for reconciliation, curiosity about how relationality shapes healthy relationships leads to a different approach to design methods.

Relationality through being present.

I have incorporated Akiwenzie’s relational principles into the framework.

First Nations Framework for Relational Co-Design

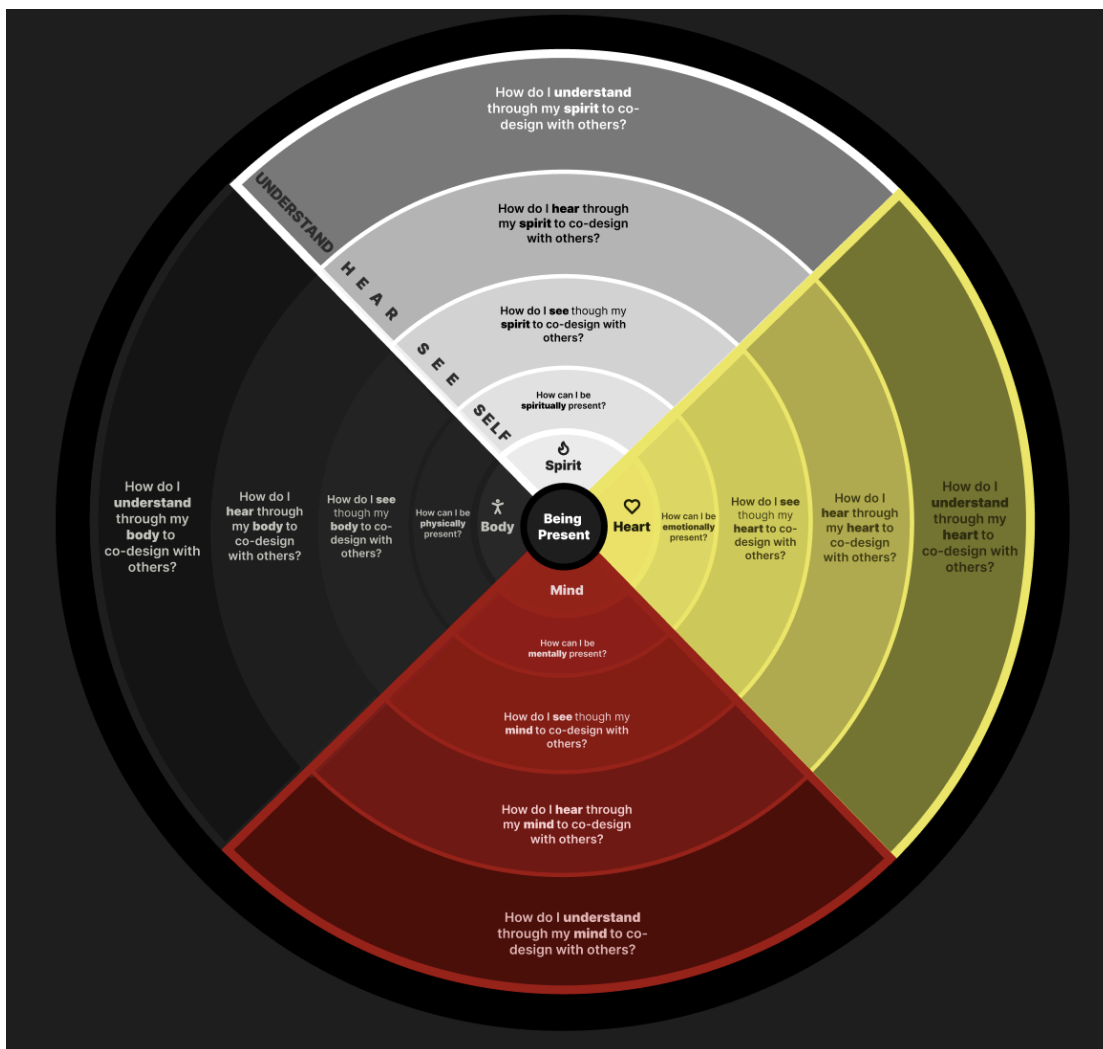


Figure 1: Depiction of the ‘Relationally Present’ Co-design framework. Source: Author.

The Relationally Present framework is situated in a medicine wheel based on Indigenous teachings from Turtle Island. Centring being “Present” in the middle of the wheel and working out through the components of the medicine wheel of: Heart/Emotions, Mind/Thinking, Body/Physical, and Spiritual/Interconnectedness. Each layer adds an element to consider in building a healthy relationship, starting with self and exploring how others want to be seen, heard, and understood. By considering a holistic view from your heart, mind, body, and spirit, understanding others becomes a more whole endeavour.

The framework uses prompt questions to encourage the participants to reflect, such as:

- What do I need to be “Present” in this design challenge? Consider what you need to be PRESENT and not BUSY for this design challenge with your heart/emotions, mind/thoughts, body/physically, spirit/interconnectedness, and looks.
- What does seeing look like? Consider what “Seeing” someone with your heart/emotions, mind/thoughts, body/physically, spirit/interconnectedness looks like.
- What does hearing sound like? Consider what “Hearing” someone with your heart/emotions, mind/thoughts, body/physically, spirit/interconnectedness looks like.
- What does understanding mean? Consider what “Understanding” someone with your heart/emotions, mind/thoughts, body/physically, spirit/interconnectedness looks like.

Why is this framework needed?

“How Might We Use Design to Support Reconciliation” is a thought-provoking idea.

Reconciliation at its heart is repairing a broken relationship that may have been formed through a misunderstanding, different perspectives, colonization, power imbalance, and oppression.

Relationality can be a step in the journey towards reconciliation. An Indigenous framework that builds from the balance of the teachings of the Medicine Wheel with the goal of building strong relationships through seeing, hearing and understanding by being present. Holding the space needed for relationality, through reflection by asking what I need to be present in this work and how I might see, hear, and understand those whom I am designing for through healthy communication. The sometimes-perceived fun and exciting elements of design, involving brainstorming, rapid prototyping, and finding a solution that will resonate with funders, often overlook the journey of understanding the relationships that have been broken. Seeing, hearing, and understanding people’s experiences and perspectives with power imbalances or systems of oppression is a key step towards design that supports reconciliation.

Reflection of Framework

Using this framework of incorporating an indigenous worldview into popular co-design and design-thinking frameworks has great value. By sharing this framework, I hope others will be inspired to bring their own worldviews and experiences into their design practices. This framework explores First Nations methodologies for sharing knowledge alongside design strategies and pedagogies.

Results of Co-Design Workshop

Approach

In exploring how knowledge is shared between people, there was a purposeful design choice to focus on research methods and approaches that emphasize a reciprocal approach to information sharing, thus choosing a co-design methodology to share knowledge. Skilled Trades is all about the relationship and the sharing of knowledge between a Sponsor and an Apprentice. While many initiatives to promote the skilled trades focus on in-school learning, Level 1 theory, or introductory skills learning, this research project chose to focus on the elements that account for the majority of time spent in an Apprenticeship: 1-to-1 work-hour learning from an experienced journey person. Exploring how First Nations people experience being an apprentice or a sponsor felt timely given the number of government-announced opportunities in the Skilled Trades, especially with a focus on mineral resource extraction and infrastructure in Ontario and Canada in the coming years.

Exploring how to build on existing research on Indigenous/First Nations participation in the Skilled Trades to further the conversation was important. The path to reconciliation is to build on known truths through movements toward action. Starting from recommendations and insights in reports was a way to build on lived experiences already shared. Framing the information through a design and systems-thinking lens allowed us to gather multiple sources and lived experience in a way that respects the fact that Skilled Trades is a complex issue with many interconnected facets, and the approach explored has the power to drive Social Change.

In approaching this research, a framework for relationality was developed from Liz Akiwenzie's teachings. The framework explores how to design with empathy through reflecting on and asking how the person you are designing for feels Seen, Heard and Understood through the program or process. The framework also asks the designer or policy creator what they require to feel Seen, Heard, and Understood in the work they are creating.

Co-Design

Co-design is an approach to designing *with* people rather than designing *for* people. It is about elevating the voices and knowledge of people with *lived* experience and combining that group with *learned* experience. (Noel, 2023)

By adopting a co-design methodology and engaging in structured conversation and dialogue during a one-day co-design workshop with people with lived experience in the skilled trades and those who support them, insights can be shared and collected to highlight the impact of the apprenticeship system on participants. Creating an environment where participants could feel safe sharing their experiences through conversation and capturing elements/ideas through anonymous post-it notes created a place to share their stories about the apprenticeships and workplace environments. The System Map and

Reinforcing and Balancing Causal loops provided a framework to guide conversations on certain aspects of Skilled Trades, as highlighted by research across various reports.

This co-design workshop was hosted at the Chippewa of the Thames Employment and Training office in the community. The participants were 4 First Nations and 1 Metis participant, with 4 working / previously working in the Skilled Trades and 1 working in Education/Housing. An honorarium of a gift card and lunch was provided for participation in the co-design workshop.

Skilled Trades Apprenticeship Program

The Skilled Trades Apprenticeship program in Ontario has a set process/system from Apprentices to Journey Persons. Below is an outline of the key steps in the process that can be found on the government website at www.skilledtradesontario.ca/apprenticeship

Apprentice	Sponsor	Framing for Research
Meet the qualifications for an apprenticeship <ul style="list-style-type: none"> • Be at least 16 years old • Have legal permission to work in Canada 	Assess training capacity	
Meet the education requirements for the chosen trade	Sign a Sponsor Agreement	
Find a sponsor	Find an apprentice	
Apply for an apprenticeship	Apply for an apprenticeship	
Signing a Training Agreement	Sign a Training Agreement	Start Apprenticeship Program (Sign a Training Agreement) (includes Apprentice and Sponsor tasks in this row & up)
Work through the Training Standards	Ensure the apprentice receives training	Work Through Training Standards (Hours) (includes Apprentice and Sponsor tasks in this row)
Attend in-school training	Ensure the apprentice receives training	Attend in-school training (School) (includes Apprentice and Sponsor tasks in this row)

Finish an Apprenticeship by submitting a completed Log Book and completing a CofQ exam, depending on the Skilled Trade	Confirm apprenticeship program completion	Complete Apprenticeship Program (includes Apprentice and Sponsor tasks in this row)
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Table 2: Skilled Trades Apprenticeship Program. Source: Skilled Trades Ontario.

Systems Thinking

Systems thinking has been described as a language for talking about the complex, interdependent issues within a system. (Lannon, 2018) In exploring how First Nations people's unique experiences within the Apprenticeship process in Ontario are structured between Apprentices and Sponsors. First Nations People bring a unique cultural, historical, and relational perspective to economic participation in work and life.

By identifying the variables within a process or structure and linking those that impact other variables, causal loops can be created to demonstrate the structural forces that produce various behaviours. There are two main loops that can exist in a system or process: Reinforcing Loops and Balancing Loops.

Reinforcing Loops

Definition: A process where a change in a variable compounds more of the same, causing accelerating growth or decline. (Lannon, 2018)

Behaviour: Known for exponential change, amplifying, and "snowballing".(Lannon, 2018)

Balancing Loops

Definition: A process that resists change, adjusting the system to keep it near a target state or equilibrium. (Lannon, 2018)

Behaviour: Goal-seeking, stabilizing, and counteracting. (Lannon, 2018)

By linking together several loops, you can create a concise story about a particular problem or issue. (Lannon, 2018) The particular interconnected issues identified along the steps from apprentice to Skilled Trades Journey Person affecting Indigenous people were sorted into six Reinforcing Loops and nine Balancing Loops. These loops were shared with participants during the co-design workshop to provide a framework for mapping their individual experiences in the Skilled Trades collectively, identifying shared and differing experiences.

By exploring insights and recommendations from various reports on Indigenous People in skilled trades, an overall map of the Apprenticeship process was developed, highlighting strengths and weaknesses.

Co-Design Results

Throughout the co-design workshop, participants shared stories and insights from their lived experiences in the Skilled Trades. Using the overall apprenticeship process from Finding, Working, Attending, and Completing as a frame for the stories and insights gathered in the workshop, the results of the co-design workshop will be presented.

Start Apprenticeship Program

Choosing the Skilled Trades

The participants indicated different pathways into selecting a career in the skilled trades. The pathways shared were:

- Tried university wasn't a great fit
- I was lost and didn't know what to do
- My generation needed more guidance focused on the trades
- Was offered a millwright program through Six Nations
- Joined the military for 12 years, then started a trade after the military
- Encouraged to take high school courses leading to skilled trades and encouraged to join the armed forces as a diesel mechanic

Participants typically decided to pursue a career in the skilled trades after high school, according to their feedback.

Finding a Sponsor

Attendees wished that finding the initial sponsor was easier. Generally, finding a sponsor involves more than simply applying with a resume.

- Impossible to find a sponsor at the time (COVID)
- Applied to Union, and it took 2 years to get an opportunity
- Prior Certifications (in basic skilled trades training) really opened the door for me
- Bought into the family business, signed a contract (Training Agreement for Apprenticeship)
- Lower % (of employers) to initiate hiring of apprentices
- Union provides a lot of support (for finding an employer /work)
- Finishing the first block of schooling, can't find a sponsor, have 3.5 years of work/hours
- Employers in most places don't let you sit down for an interview now
- Nepotism and other desirable traits (are you a hockey player)

Generally, a delay in finding a sponsor was reported, though once a sponsor was willing to hire/sign up, the Training Agreement registration process was straightforward once the requirements of a high school diploma, science & math, and good health were demonstrated.

Identifying the Loops - Find an Apprenticeship & Sign a Training Agreement

Reinforcing Loop 1 — Mentorship Flywheel

When First Nations tradespeople are visible as mentors, they strengthen belonging and aspiration, which increases enrollment and completions, creating a self-reinforcing cycle that grows the next generation of First Nations journeypersons.

Reinforcing Loop 2 — Employer Readiness Adoption

As employers adopt culturally safe practices and mentorship, retention improves, and a measurable business case emerges, driving wider employer uptake and more apprenticeship placements.

Exploring Apprenticeship Process - Systems Thinking Approach

In exploring the impacts of two reinforcing loops related to First Nations participation in the skilled trades: First Nations tradespeople being visible as mentors and employers' readiness to adopt culturally safe practices, and mentoring the participants, the participants discussed how both of these have improved over the last five years. There are “Very few First Nations journey persons/mentors/teachers” within the skilled trades overall. One participant indicated facilitating and leading an employee resource group for Indigenous employees across the company. Another participant stated that their employer was willing to sign the training agreement to support continuing night school courses towards completion of the apprenticeship, while indicating they would need to apply and be hired for the role full-time after the apprenticeship.

Work through Training Standards (Hours)

Starting Work

Starting work as an apprentice after securing a sponsor and registering was fast and engaging, according to the participants. Feedback from a participant was that you “Had to quickly get comfortable with not knowing” and “Everything was new, and many things still are”. Another shared that they “Immediately started working 50 hours a week, and that continued for almost 4 years”. A question posed by a participant was, “Are you prepared physically & mentally to do this job? Sacrifices will be made for work.

Additional Supports

Participants indicated the need for additional support throughout the apprenticeship journey. Some of the supports shared by the participants included “people in class every year and worked with/near most”, “Union provides extracurriculars to help meet more people in my trade (baseball, hockey, bowling)”, “Support through Veterans Affairs”, “Gov support lack of trades through targeted programs” and “Union supports you if injured”. A need for additional support was expressed as “different family constraints regarding availability” for work.

Identifying the Loops in Work through Training Standards

Reinforcing Loop 4 — Coach Quality → Learning Confidence

High-quality, attentive coaching accelerates learning and confidence, builds respect among crews, and increases retention, reinforcing the development of more capable mentors over time.

Balancing Loop 2 — Cultural Safety Attrition

Unwelcoming and unsafe workplace cultures (racism, sexism, ageism, harassment) drive attrition and erode trust, suppressing enrollment and retention until cultural safety conditions materially improve.

Balancing Loop 3 — Admin Friction

Administrative complex forms/logbooks/sign-offs and misaligned processes slow progress and trigger drop-off until navigation, simplification, or system redesign reduces the burden.

Balancing Loop 4 — Life/Logistics Drag

Everyday life pressures (Financial stress/transport/childcare issues) compound attendance and hours challenges, slowing progress and increasing attrition unless wrap-around supports reduce the load.

Balancing Loop 5 - License/ Transport Constraint

Limited access to licences and reliable transportation disrupts attendance and hour accumulation, delaying progression and increasing attrition.

Exploring Apprenticeship Process - Systems Thinking Approach

Coaching and Unwelcoming Workspace

Having a high-quality, attentive coach/mentor accelerates learning and confidence in the skills outlined in the Training Standards. Participants indicated that success or struggles in developing new skills were directly connected to the overall quality of the coaching they received in day-to-day interactions with their mentor on the job site. The ability for the apprentice and sponsor to connect and build a trusting relationship increases apprentice retention and completion. As more apprentices complete their development, more capable mentors are produced over time.

Unwelcoming and unsafe workplace cultures (racism, sexism, ageism, nepotism, harassment) drive attrition and erode trust. This cultural safety attrition loop feeds on itself, suppressing apprenticeship enrollment and retention. Several participants reported leaving jobs due to a lack of safety. A participant shared that “Indigenous knowledge needs to be seen as valid for us to progress & for these barriers to employment, health care & housing to be lifted”. Most participants indicated experiencing racism, sexism, ageism, nepotism and harassment on the job site at some point in their careers. This study acknowledges the need for further research and for actionable steps to create equitable and safe environments within the skilled trades field.

Participants discussed the Training Standards logbook as a friction point during the apprenticeship process. A participant experienced hours lost towards completion due to a lack of sign-offs. The registration fees for apprentices and journey people in the skilled trades were highlighted as a concern, but were generally considered acceptable.

Balancing Life, Logistics, and Transportation

Everyday life pressures (Financial stress/transport/health issues/childcare issues) affect the ability to complete the required hours towards the Training Standards and increase apprenticeship attrition. These life pressures can affect the relationship between apprentices and their sponsors, as the assumption is that apprentices don't care about the job because of missed time. A majority of the participants express experiencing balancing life pressures as an issue when working in the skilled trades. The experiences shared through the workshop include:

- Day care starts after the workday begins and ends before the workday is complete. Day care typically runs from 8 A.M. to 4 P.M., while jobs in the trades could run from 5 A.M. to 9 P.M.
- Long working hours to meet deadlines.
- Can't make some business/store/bank hours because working those hours too
- Night school and skill training to gain specialized tickets
- Create a realistic budget and make sacrifices where possible, be prepared for a lower income during in-school training, 2-3 months a year

Participants identified limited access to licences and reliable transportation as major sources of pressure, creating interconnected issues for apprentices. While public transportation, ride-sharing, and carpooling are options for getting to most workplaces, participants indicated that, based on location and timing, these may not be viable options for the job site. For participants living on reserves, transportation issues are amplified when getting to and from workspaces. The requirement to be a certain age and have a clean driving record to use company vehicles for jobs has limited participants in the past.

Attend in-school training (School)

The feedback from participants on attending in-school training highlighted that the “schooling part was relatively easy” compared to their field experience, and that the “financial situation was always the hardest part” during in-school training.

Identifying the Loops in Attend in-school training / Ensure the Apprentice Receives Training

Reinforcing Loop 5 - Navigation (First Nations Post Secondary Assistance /The Indigenous Skills and Employment Training -ISET)

Dedicated navigators reduce complexity and friction across trade pathways, increasing persistence and completions and strengthening the case for sustained investment in navigation roles.

Balancing Loop 1 — Capacity Bottleneck

As interest and enrollment grow, limited training seats, instructors, and employer sponsors create bottlenecks that slow progress and cap completions.

Balancing Loop 7 — Income/Timing Gap (In School)

Delays in EI and training allowances during in-school periods create acute financial stress, increasing withdrawal risk unless timing gaps are bridged.

Balancing Loop 8 — Intake Window Mismatch (Post Secondary deadlines)

Fixed application deadlines for funding, creates missed windows to apply, deferral/attrition until rolling micro-intakes or bridging supports reduce timing mismatches.

Balancing Loop 9 — Deposit/Timing Squeeze

When month-end allowances arrive after upfront costs are due, short-term cash squeezes disrupt attendance and progress until timing or payment mechanisms are adjusted.

Exploring Apprenticeship Process - Systems Thinking Approach

Three areas emerge in the system map during the in-school training: availability of seats for in-school training, Navigation of financial assistance available to First Nations apprentices, and disruption of income and the timing of deposits while in school training.

Availability of Seats for in-school Training

There is a balance that becomes strained as interest and enrollment in apprenticeships grow; limited training seats, qualified instructors, and employer sponsors create bottlenecks that slow progress and cap completions. This creates a Capacity Bottleneck loop for completing in-school training. A majority of participants identified this as a key struggle while on their apprenticeship journey. Participants indicated they waited for in-school training even though the required hours and tasks were for the Training Standards log. A participant indicated that 100+ people applied to the union for 12 spots, indicating that demand far exceeds availability. Another participant indicated that 100 First Nations students attend a program that hired 4 upon completion.

Navigation of Financial assistance available to First Nations apprentices

There are several programs available to assist First Nations apprentices with funding for tuition and training costs, and living-cost supports (living allowances). Participants indicated program supports were helpful when available. Participants expressed confusion about which First Nations supports were available from Post Secondary & Employment and Training for Apprenticeship. Social Agencies like Ontario Works and Employment Ontario assisted another participant. A participant shared that counselors were sometimes great supporters and at other times not. Family and friends provided support in navigating access to First Nations financial assistance, as a participant experienced. Skilled Trades require specialized training, apprenticeships, or education that command higher wages and provide expertise in fields like electrical work, welding, or plumbing, a participant shared. These specialized trainings can be obtained through night school, government-funded, or company-sponsored personally financed and through First Nations assistance programs.

Since in-school training is offered on a rolling rotation, it is hard to predict when a seat will become available. This unpredictability of seat availability affected a participant. Applying for support from Indigenous training programs and Government funding requires fixed application deadlines and is dependent on the availability in the fiscal year.

Disruption of income and timing of deposit while in school training.

The disruption to income and the timing of Employment Insurance (EI) deposits while attending in-school training was selected by all participants as the largest hindrance to completing the apprenticeship process. To attend in-school training, an apprentice needs to stop working for 2-3 months per year as part of a block release training model.

While apprentices are in school training, they are eligible to receive Employment Insurance benefits during the 8-week block release time. There is a one-week wait for the first time in school. The basic rate for calculating Employment Insurance (EI) benefits is 55% of their average insurable weekly earnings, up to a maximum amount of \$729 per week. - (Government of Canada, 2025) Balancing the reduced income by 45% over the time in school training with any additional training-related expenses can be a challenge. A participant shared they "Save while working, and it burns through it while at school every year, 2-3 months." While some employers offer assistance for tools and travel, the participant has to wait for compensation out of pocket. The experiences shared by the participants regarding EI were:

- EI was never enough during school.
- EI never pays fast enough during school.
- EI never pays fast enough, while I was temporarily laid off during slow times in the skilled trades.
- Explaining to the EI counsellor, I'm not looking for a job because my union representative is finding a job for me.
- Burn through savings while at school on EI.
- Funding only covered the bare essentials financial barriers often persisted.
- EI or a similar system at a faster pace or on demand
- Better EI System to support apprentices in school. Living on half pay for 2-3 months

While EI provides limited financial support during studies, the timing and amount of funding create additional strain on apprentices developing in-demand skills.

In-school training costs add to financial stress at a time when income is already reduced. While the tuition amount may be lower than that of other programs offered by the institution, the total cost of \$1,275 plus books and tools can be very expensive, according to a participant. These costs need to be paid upfront at the beginning of training, before support, grants, and the first EI cheque are available to cover them. The initial cost of "starting out with the union, was only for a handful of hand tools, coming to \$200," highlighted one participant. A suggestion by a participant for better "communication between employer and school on tools for tasks" completed on the job site to ensure the tool costs align with the workplace needs. Textbook or food this week was a choice participants had to make during in-school training. A participant asked, "When does the textbook actually get used in the class or updated with new content?" and could an older edition be sufficient? Participants expressed a need for "more funding for low-income students for supplies/clothes, even to start the job/school."

In exploring additional funding options, participants wonder about:

- Income threshold bursaries / under a certain amount qualify for funding
- money for tools & uniform from placement employer
- create sideline hustle to earn money
- Apply for any grants/bursaries
- Ask for retired tradespeople to donate their tools, and or equipment
- Can the 'in-class' (non-hands-on) portion be delivered online to allow for work
- Necessity upfront and advances for tools & books
- Travel barriers – formally organized carpooling, discounted via rail /flex bus tickets, as in-school training may not be offered close to home.

Complete Apprenticeship Program

The process of completing an apprenticeship is generally straightforward, including submitting completed logbooks, sending records of in-school training, and finalizing documents. Completing the Certification of Qualification exam for trades that require it can be very challenging because of its design and delivery. For First Nations communities, seeing authentic success of First Nations members in the skilled trades upon completion is important for community uptake and for owning and using the data to design future programs and initiatives.

Exploring Apprenticeship Process - Systems Thinking Approach

Completing Certification of Qualifications

Participants indicated that passing the Certification of Qualification (CofQ) exam was a hurdle to completing the apprenticeship and a barrier to advancing in the wage chart. Depending on the timing, the final in-school training and the completion of the required hours may create a gap between the last in-school session and the writing of the CofQ exam. Participants indicated that the lack of training support for the CofQ Exam, with examples, and the inconsistency between the written testing and the practical demonstration of skills caused stress and delayed progression on the wage scale. One participant indicated that their “lack of focus and short attention span was detrimental to me without continual support,” and that a high-stress exam was not in line with their success. The assessment mismatch loop undermines retention for skilled, hands-on learners in the skilled trades.

First Nations - Visibility and Community-Owned Data

The need for visible, authentic First Nations role models in the skilled trades and for First Nations to control and steward their own apprenticeship data were identified as keys to encouraging more participation in the skilled trades by First Nations youth. The participants discussed many key elements of these two reinforcing loops within the system, but did not fully document these ideas until a co-design solution was developed. Strong First Nations role models who become sponsors and mentors will normalize success and reinforce a cycle of enrollment and completion among First Nations apprentices, thereby creating further visibility. By having control and stewarding their own apprenticeship data, First Nations can improve programs and design stronger advocacy for future funding and delivery of skilled trades programming.

Identifying the Loops to Finish/ Complete an Apprenticeship Program

Reinforcing Loop 6 — Visibility & Role Models

Visible, authentic First Nations role models in the trades raise aspirations and normalize success, reinforcing a cycle of enrollment, completion, and further visibility.

Reinforcing Loop 3 — Community/Owned Data

When First Nations control and steward their own apprenticeship data, programs improve, advocacy strengthens, and funding decisions become more responsive, reinforcing investment in better data systems.

Balancing Loop 6 — Assessment Mismatch

Assessment formats that privilege written testing over practical demonstration delay Certification of Qualifications and undermine retention for skilled, hands-on learners.

Co-Design solution - Building interest in skill trades by 10-year-olds

Through the co-design workshop, a few opportunities were identified to increase interest/success among First Nations people in the skilled trades. Sharing participants' collaboration in creating a recommendation and early steps in designing a prototype is important in co-design, so participants can draw on their lived experiences to create a solution rather than handing over insights to a designer to go off and make a program or product. These ideas centred around: budgeting as an apprentice during a time when not being paid a full wage in school; a series of hands-on experiences to try skilled trades; and creating a program to get 10-year-olds interested in skilled trades.

Once a month, in a box workshop/activity for 10-year-olds in skilled trades, for companies to sponsor and deliver

Monthly Activity

The idea is to create a program that trains mentors to teach skilled trades activities on a small scale, such as a couple of hours of a workshop for 10-year-old First Nations kids. Home Depot's once-a-month building workshops for children and their parents, where a child takes home a craft they built, inspire the idea of earning a badge for learning a skill and for experiencing the joy of working with their hands. The goal is to get kids more hands-on and less screen time. During the workshop, participants shared a commonality: they tinkered and understood how things worked and were made. OYAP is a way for high school students to earn courses and hours toward an apprenticeship, starting at age 15. Public school cutbacks have limited shop exposure in younger kids, making skilled trades less visible.

Train the Trainer

Having strong skills in building rapport and sharing skills is fundamental to the apprentice-sponsor relationship. By developing a program that trains skilled tradespeople to build rapport and share their skills with the younger generation through short activities and workshops, the additional skills to be a quality coach as a sponsor can be developed.

Many companies have in-house programs that encourage volunteering and community giving. Exploring opportunities to provide companies with a skilled trades workshop in a box, with training on how to deliver it, could enable quick uptake. Companies already have in-house training that can be built upon.

Activities/Workshops to expose 10-year-olds to the skilled trades

- Cabinet Making trip
- Furniture repair
- Trades specific building site visits
- Subscription box activity
- Field trips
- How it's made
- Kit car
- Box of parts, build a robot
- Airbrush on car door/weld- cut car door and have to weld back clean
- Watch a tradesman work if it's exciting
- Simple electrical logic with a breadboard
- Making your own LED light with a switch
- Bike Fix workshop
- Company-based workshops for kids

- Make a meal
- Women in trades

- Robots creation
-

Partners to Offer the Workshops

Next steps would be to run a co-design workshop with First Nations program deliverers, skilled tradespeople, apprentices, companies that could offer interesting skilled trades field trips, and training providers like colleges and unions.

Post Co-Design Workshop Reflection

Facilitator: Brian Malott

Date of Workshop: March 3, 2026

Context: Research focused on the apprenticeship journey and skilled trades.

Flow and Inclusion

Successes: The session began with an informal "connect and collect" period over food (corn soup), which established a safe, energized atmosphere before the formal activities started. The opening circle, where participants shared their personal connections to the trades, was highly effective at building common ground across disciplines.

Challenges: One participant arrived 90 minutes late. While they eventually integrated well, it created a momentary risk of disconnection.

Power Dynamics: A significant experience gap existed between an apprentice (4 years) and a veteran (40 years). The "stronger voices" occasionally overshadowed the less experienced participants.

Refinement: A more structured question set or specific "equity pauses" could better amplify the voices of those with less seniority. Additionally, more detailed note-taking on individual contributors (beyond the most vocal talkers) is a priority for the next session.

Map Usability (Systems & Journey Mapping)

The Worksheet: The 11x17 personal workstations worked exceptionally well. Providing a "sticker legend" and a three-lane journey map (Apprenticeship Steps, Support Systems, and Financials) gave participants a clear structure for their individual reflections.

Cognitive Load: While the 12 core themes of the system map resonated with the group, the cognitive load could be further reduced. I initially focused on the "Apprenticeship" lane; in the future, I would explicitly guide participants through all three lanes simultaneously to capture deeper insights into financial and social support earlier in the process.

Insights: Participants quickly grasped that apprenticeship is not a "single-fix" issue but a complex system of reinforcing and balancing loops.

Emergent Insights & Systems Thinking

Loops in Action: The conversations naturally gravitated toward "Mentorship/Training" and "Financial Constraints." Interestingly, "Youth Engagement" emerged as a critical lever, validating my earlier desk research.

Pedagogy: I chose not to use the technical systems thinking handout to keep the conversation fluid. While this maintained momentum, a brief, simplified explanation of how loops work might have helped participants "see" the systemic leverage points even more clearly.

Leverage and Feasibility

Prototypes: The group naturally ideated around "Mentor Micro-training" and a "Navigator Checklist." We reached a consensus that a "Workshop-in-a-Can" (Train-the-Trainer model) would be a viable low-fidelity pilot.

Constraint Framing: To improve the "feasibility" section, I need to frame the "Minimum Viable Test" more strictly (e.g., "What can we do for \$100 in one week?") to move past paralysis caused by large-scale policy constraints.

Cultural Safety and Facilitation Learning

Environment: Hosting the workshop at Chippewa Employment and Training rather than a clinical university setting was vital for cultural safety. The inclusion of traditional food and the existing relationships within the space created a "warm" entry point.

Trauma-Informed Practice: While the facilitation felt safe, I recognized a need for clearer protocols for addressing harm or trauma disclosure, should it surface. Relying on 15 years of facilitation experience is a strength, but formalizing these safety nets is essential for co-design ethics.

The "Co-Designer" vs. "Facilitator" Tension: I observed that I still held the "Expert Facilitator" role. To move closer to true co-design, I want to explore ways to share power during the session—perhaps by having participants co-facilitate segments or lead the data-capture process.

Facilitation Tools & Logistics

Wins: Laminating the "Challenge Cards" made Post-it notes easy to move and pass around the table, democratizing the "expert at the board" dynamic.

Choosing to capture data via photos of the artifacts rather than audio recording allowed me to be fully present and maintain a more natural "sacred space" for sharing.

Logistics: The plastic folder system for REB forms and gift cards kept the administrative side seamless, allowing for a quick setup and even quicker cleanup.

Summary Post Co-Design Workshop Reflection

The workshop successfully bridged the gap between desk research and lived experience. The participants validated the core loops identified in my SFI research, particularly around the financial and social complexities of the trades. The next phase will focus on synthesizing these Post-it insights into the final MRP report and refining the "Workshop-in-a-Can" prototype.

Discussion

Key Findings

The guided discussion, informed by the system map, highlighted several shared experiences among the workshop participants, which were reinforced by the literature and reports reviewed. To map the Key Findings, a Value Proposition Canvas (VPC) will be used to highlight apprentices' experiences on their skilled trades journey. The four steps of the apprenticeship process enable the identification of joyful experiences, unmet needs, and opportunities for service design at spots along the journey. Designing to increase joy and lower pain while supporting the completion of tasks would be the recommendations to the various stakeholders looking to support First Nations apprentices throughout their journey. The hope is that stakeholders take these snapshots of Indigenous apprentices' experiences across the four steps and create wise practices to encourage, empower, and support Indigenous apprentices.

Customer Segment - Apprentice

	Start Apprenticeship Program
Gains / Joy	<ul style="list-style-type: none"> ● Encouraged to take high school courses in the skilled trades ● Discovered a trade through a micro training ● Decision to pursue a career in the skilled trades was made after high school ● Training Agreement registration process was straightforward ● Find an employer who is looking to sign up an apprentice
Tasks	<ul style="list-style-type: none"> ● Attain the required training/schooling level to start an apprenticeship ● Attend a pre- apprenticeship program to gain exposure and skills <p>Skilled Trades Steps</p> <ul style="list-style-type: none"> ● Find out if you qualify ● Find a sponsor ● Apply for an apprenticeship ● Sign a Training Agreement ● Register your Training Agreement ● Download your Apprenticeship Training Standard Logbook
Pains / Anger	<ul style="list-style-type: none"> ● Felt lost in what to do career-wise ● Delay in finding a sponsor ● Part of a generation that needed more guidance ● Fewer employers are hiring apprentices ● Not willing to sit down for an interview ● Competitive Job Market, more people than jobs

Table 3: Start Apprenticeship Program VPC. Source: Author

	Work Through Training Standards (Hours)
Gains / Joy	<ul style="list-style-type: none"> ● Training Standards outline progression in skills ● Fast-engaging work once started ● Supported by the Union, other Students, and Veterans Affairs ● Support from First Nation ● No real mention of support from First Nations or Indigenous supports ● A great coach relationship resulted in a better quality of training ● Wages from employment bring balance to life
Tasks	<ul style="list-style-type: none"> ● Track Hours and Training in a Logbook ● Quickly get comfortable with not knowing ● Prepared for the physical and Mental requirements for the job, sacrifices to be made <p>Skilled Trades Steps</p> <ul style="list-style-type: none"> ● Maintain your Apprenticeship Training Standard Logbook ● Maintain a record of completed hours ● Register for in-school training ● Apply for Employment Insurance (EI) for your in-school training
Pains / Anger	<ul style="list-style-type: none"> ● Unwelcoming and unsafe workplace cultures (racism, sexism, ageism, nepotism, harassment) ● Unlogged Hours and Training in the Logbook ● Poor Coach Relationship ● Everyday life pressures (Financial stress/transport/health issues/childcare issues) ● The mentor is not equipped with training skills ● Unable to complete banking/services/stores because of work hours ● Complicated/Lack of support from First Nation ● Public Transportation/ridesharing is not available based on location and timing ● Childcare is not available during work hours

Table 4: Work Through Training Standards (Hours) VPC. Source: Author

	Attend in-school training (School)
Gains / Joy	<ul style="list-style-type: none"> ● Relatively Easy ● First time in school felt like excelled ● Learning the theory of trade
Tasks	<ul style="list-style-type: none"> ● Attend classes ● Apply for EI

	<ul style="list-style-type: none"> ● Navigation of financial assistance from the school, government and First Nation
Pains / Anger	<ul style="list-style-type: none"> ● Financial situation is the hardest part ● Waiting on the availability of seats in the Apprenticeship program ● Disruption of Income ● Timing of EI Deposits ● Navigation of financial assistance was difficult ● Misalignment for funding windows and seat availability

Table 5: Attend in-school training (School) VPC. Source: Author

	Complete Apprenticeship Program
Gains / Joy	<ul style="list-style-type: none"> ● Seeing authentic success of First Nations members in the skilled trades upon completion is important for community uptake ● Levelling up to being a journey person
Tasks	<p>Skilled Trades Steps</p> <ul style="list-style-type: none"> ● Ensure your records are complete ● Fill out and sign the Apprenticeship Completion Form ● Submit your completed form ● Skilled Trades Ontario reviews your form ● Receive your Certificate of Apprenticeship in the mail ● Trade certifying exam (Y/N) - Certificate of Qualification ● Confirm apprenticeship program completion
Pains / Anger	<ul style="list-style-type: none"> ● Certification of Qualification exam is challenging because of its design and delivery ● Lack of training support for the CofQ Exam ● Inconsistency between the written testing and the practical demonstration of skills caused stress ● Delayed progression on the wage scale for failing the exam

Table 6: Complete Apprenticeship Program VPC. Source: Author

Complex Challenges

A few of the challenges identified are deeply ingrained system issues that appear immovable in their current layout, which can only be fixed by a key stakeholder or a reimagining of the situation. By defining issues that are complex and seemingly immovable, we create space to explore challenges. However, they may be equally complex, which presents an opportunity to increase First Nations participation and success within the Apprenticeship process. An acknowledgement of the scope and scale of this major research project, while identifying these challenges, the relational time required to co-design solutions to these challenges was not within the scope available. Highlighted are issues raised during the research,

along with a “What If” question to encourage exploration of wise practices to address them in the future.

Administrative Friction

Assessment Certificate of Qualifications - The assessment method for the final examinations relies heavily on a complex written evaluation to demonstrate the apprentices' level of proficiency. Throughout the apprenticeship stages, in-school theory training accounts for 20% of the training, while the Training Standards are demonstrated through hands-on training for 80%. Using a method of assessment that is different from the majority of the training does not evaluate the skills needed. During the research, the common solution presented is to create examination prep support options.

What if... The Certificate of Qualifications was rebuilt from the ground up, utilizing a more hands-on evaluation method. While support for writing tests can be developed and utilized, aligning the training and assessment methodologies would be more productive.

Log Books - Administrative Record Keeping - Tracking the completion of every Training Standard in a 180-page Logbook while working on construction job sites, shop floors, factory lines, and outdoors in all weather is a challenging task. Not misplacing any of the pages during a 3-5 year apprenticeship and losing the record of completed hours can pose a challenge. Each Standard requires the signatures and dates completed by both the apprentice and the sponsor.

What if... Explore digital ways to track and log the Training Standards. Other provinces have adopted a digital process to log books.

Employer Readiness

Cultural Safety - Creating a safe work environment is important for welcoming First Nations' apprentices. During the research, issues of both overt and subtle experiences of racism, sexism, nepotism, ageism, and harassment were shared. Larger organizations have human resources systems in place to support and address these issues, while smaller organizations may or may not have the capacity to do so.

What If... In developing coaching/mentor training programs, creating a culture of safety and support was part of the process. Many programs are created to increase the level 1 success of apprentices, but there is a lack of training programs to support coaches/mentors.

Employer Capacity - Budget restraints and training capacity hinder employers' ability to hire apprentices. The financial ability to bring on additional workers can be affected by global tariffs on materials and finished products, high fuel costs, low tender bid prices, rising employee wage costs, insurance, licensing fees, and workflow demands, among other financial pressures facing businesses. It's easy to say hire more apprentices. Apprenticeships are a great way to train a future workforce that will be fully trained in 3 to 5 years if there are no delays in training. Many businesses are struggling to stay financially viable in the next year or two, let alone plan for labour needs 5 years from now. The adjustment to the journeyman-to-apprentice ratio has made it easier to bring on more apprentices than before.

What if... Employers had additional tools and support to train and pay apprentices. Improving the training capacity through a modernized process for tracking training, train-the-trainer skill upgrades in methods of sharing knowledge, and abilities to connect to a social media-connected workforce could lower the burden of training. In the past, grant money and tax incentives reduced the financial cost of hiring and training an apprentice. Exploring different financial approaches to support hiring more apprentices is vital for ensuring the longevity of skilled trades workers.

In-School Training

Seat Capacity in-school Training - Apprentices report having to wait due to lower seat capacity than demand after completing the required Training Standards and hours, and being called to in-school training. Since the wage progression of apprentices who are paid at a % of a journeyperson's rate, in line with the level progression that comes from Hours + In-school training.

What if... Skilled Trades Ontario worked with colleges to increase in-school training capacity. Being fluid and focusing on registered apprentices in the training region each year to move them through to becoming a journeyperson promptly. More journeypersons means more opportunities to sponsor more apprentices. The provincial government and the colleges would need to build capacity to increase in-school seats. Labour unions can also offer in-school seats, as well, so they should be included in the overall strategy to increase capacity.

Income During Schooling - EI amount - Suggestions of helping apprentices save more during their working period, reduced tuition fees, or additional support through bursaries to offset the cost of school, books, parking and travel. The real problem is that 50% of wages are capped at \$500, while EI does not account for the fact that people's monthly expenses do not decrease during school, and there are additional costs associated with attending school. To address the challenge meaningfully, the EI Amount that causes the problem needs to be adjusted to meet the pressing need for more journeypersons in the Skilled Trades.

What if... instead of paying \$500/50% EI Limits during the 8-week school, pay the 32-week amount over 8 weeks so apprentices can focus on skill development and get \$2000 a week? If an apprentice worked 700 hours before school, they are entitled to 45 weeks of EI at that prescribed rate. 32 is 71% of the entitled amount of 45 weeks. The federal and provincial governments would need to develop a strategy to make this workable.

Implications for Future Work

The research highlighted three key areas to explore further: designing Wise Practices for First Nations Apprenticeships in Skilled Trades; First Nations-led apprenticeship ecosystems; the Apprenticeship In-School Money Crunch; and an Indigenous Relationality Systems Thinking Approach.

First Nations-led apprenticeship ecosystem

The overall First Nations apprenticeship ecosystem, from awareness of opportunities in the skill trades, starting an apprenticeship, to celebrating becoming a journey person, and finally giving back to the community, was a common theme. The group, during the co-design workshop, landed on developing a program to raise awareness among children about the skilled trades, driven by a desire to give back and by the trades' having provided a good life for the participants in the co-design workshop. By exploring how to build an apprenticeship ecosystem, the challenges of Celebrating Skill Trades in First Nations communities, creating Visibility & Role Models for First Nations journey people, and developing First Nations Community-Owned Data, these could serve as foundations for developing wise practices.

Opportunity Areas to Start From

Opportunity areas to start from would include:

- Nurturing curiosity in kids to create with their hands, explore math and technology, and try trades will increase interest in the skilled trades. Partner with employers to show trades in action and build employer buy-in for apprentices and community collaboration.
- OYAP provides high schoolers with the opportunity to complete hours and training for an apprenticeship while in high school and earn high school credits toward their diploma. This early work towards completing an apprenticeship could lead an individual to become a journey person by their early 20s. There could be an added bonus of increasing high school completion rates of First Nations participants.
- Encourage and support youth in obtaining a driver's license. Careers in the skilled trades are rarely located on public transportation/ridesharing routes or are available based on timing.
- Celebrating the success of apprentices through the steps of a journey person by sharing and highlighting their stories within the community. This enhances opportunities in skilled trades for youth.
- By having more First Nations journey people, the overall employer readiness and workplace environment will become more supportive over time.
- Track training agreements signed and completions to identify what initiatives are working and opportunities to try different approaches at the community level.
- Utilize the Apprentice VPC as an overview of joys, tasks, and pains.

How could this be achieved?

To design initiatives to increase Apprenticeship among First Nations, I suggest using a co-design methodology that has the resources, time and support to build towards the opportunity areas. Co-design will only work if the working group is built with First Nations apprentices & journey people, employers, community organizations, departments, and program designers. The success of the process would require champions to gather the required resources, secure buy-in, and hold the space to allow time to try stuff, fail, and learn from it. Wise practices take time and learning to be created. The research found that listening to Indigenous apprentices/journey people and integrating their feedback into apprenticeship programs were key.

Framing Question

How might we create a living, First Nations-led apprenticeship ecosystem, rooted in relationships among community, employers, mentors, and learners, so engagement continues long after short-term, funded programs end?

Why this frame? It states an end goal of a First Nation-led apprenticeship ecosystem, describes the key stakeholders, and has a measurable output of engagement that is not tied to short-term funded programs.

Apprenticeship In-School Money Crunch

The overall money crunch on apprentices during in-school training was the largest identified stress during the apprenticeship journey. The complex challenges arise from the Income During Schooling (EI) amount, which creates immense pressure on apprentices at a time when they are supposed to be focused on learning. Navigating the money coming in and going out is a challenge most people have to learn; the difficulty for skilled trades is compounded by the short length, multiple times over several years. By exploring how to support apprenticeship in-school money crunch, the challenges of managing the cost-out money-in timing balance, navigating the availability of First Nations support programs like post-secondary funding and employment & training (ISET), and understanding funding supports available from in-school providers, these could serve as foundations for developing wise practices.

Opportunity Areas to Start From

- Early application to EI before in-school starts will reduce the waiting gap between the last paycheck and the first EI payment.
- Map out what is covered by funding and the timelines for First Nations supports, such as Post-Secondary Funders, Employment & Training, and Indigenous-focused bursaries, to ensure funds are applied for as needed.
- Access to clear expenses related to in-school training, including incidental costs like parking, textbooks, and supplies, to budget appropriately
- Budgeting tools that set up the mindset for the need to save 5% of earnings + School costs to offset reduced income during two months on EI during school
- Develop a list of available bursaries, including the application process and availability timelines.
- Shift the timing of costs to align with the timing of incoming cash.

How could this be achieved?

To design and develop guides to navigate the cost-out, money-in timing requires collaboration with stakeholders to ensure the information is available in a timely, up-to-date manner. While the research highlighted overarching themes of how money impacts apprentices during in-school learning, a detailed survey or interview with apprentices would help define the pain points more clearly to inform

interventions. Having people with lived experience be a part of the design of the intervention would be key, as they could identify what would work in their situation, what would have been helpful, and what would look like it would help, but would actually hinder. Having in-school providers and First Nations community partners provide input and collaborate on ways to adjust systems, policies, and procedures would create a more holistic approach to addressing the opportunity areas.

Framing Question

How might we ensure First Nations apprentices experience seamless, coordinated, adequate, and culturally grounded financial support during in-school training, so economic insecurity never becomes a reason to pause, delay, or abandon their apprenticeship journey?

Why this frame? It states a goal of a seamless, coordinated, adequate, and culturally grounded financial support during in-school training for First Nations apprentices, describes the key stakeholders, and includes a measure to increase retention by reducing pauses, delays, or abandonment of the apprenticeship journey, and focuses on the economic insecurity apprentices feel during in-school training.

Indigenous Relational Systems Thinking Approach

By exploring how to utilize an Indigenous Relational Systems Thinking Approach, the challenges of Mentor Coach Quality and balancing Life Logistics shift from systemic issues to relationships. Exploring how a relational systems perspective could be applied to the apprenticeship process/system emerged near the end of the research process as a topic worth pursuing. By adapting Goodchild's relational systems research as a lens to explore the system loops that balance and reinforce the apprenticeship system, the issues are reframed as relationships in need of repair and maintenance. Throughout this research, a systems-thinking lens aligned with Meadows' perspective on balancing and reinforcing loops was used in collaboration with a co-design methodology. The truth is, I was so focused on using relational design for a co-design approach that I overlooked the concept of relational systems thinking to explore the challenges. For future research into how the relationship between the apprentice and sponsor could be developed through a relational systems perspective.

Opportunity Areas to Start From

- Mentorship functions not as an add-on support, but as an infrastructure of relationships that sustains learning, identity, and system continuity (Goodchild, 2021).
- Employer readiness functions as a structural condition that either sustains or fractures relationships within the apprenticeship system (Goodchild, 2021).
- Coaching is not merely the transmission of skills; it is a relationship of trust that shapes how learners perceive their place in the system (Goodchild, 2021). As apprentices progress and experience effective mentorship themselves, they are more likely to adopt similar coaching practices later, closing a reinforcing loop that improves overall system capacity.

- Cultural unsafety represents a fracture in the relationship between the apprentice, the workplace, and the system, causing the system to self-limit until relational conditions are repaired (Goodchild, 2021).
- Admin friction represents an information flow failure in which the system's rules override lived reality, eroding trust and momentum until mediated by navigation or system redesign (Goodchild, 2021).
- Visibility is not symbolic; it is relational signalling that affirms belonging and possibility within the system (Goodchild, 2021).
- Data is not neutral; it is a relationship between knowledge, power, and accountability. Community-owned data restores balance by ensuring that measurement serves community goals rather than external reporting requirements alone (Goodchild, 2021).
- The opportunities identified were developed in collaboration with Co-pilot 365

How could this be achieved?

The opportunity areas present a reframed relational perspective of the issues explored through the co-design workshop. Utilizing the Seen, Heard, Understood Design Framework, presented as a way to frame how people approach the research for themselves and for people with lived experiences in the skilled trades, would support a relational approach to the design. Completing a review of the concepts and research that is available on the Indigenous Systems Thinking. This review provides a basis for conversations as part of a co-design process to develop an approach to systems thinking that takes into account Indigenous knowledge and ways of sharing knowledge. Creating a shared knowledge base while protecting Indigenous ways of being would be a goal.

Framing Question

How might we explore Indigenous Systems Thinking in ways that center responsibility for relationships rather than treating systems as structures to be optimized or controlled, so future learners, employers, schools and communities learn to act with care, reciprocity, and responsibility within complex systems? etc Skilled Trades Apprentices programs

Why this frame? It states a goal of exploring ways that center on the relationships at the core of systems thinking, rather than the approach taken in this research to optimize or control the elements of the system. The key stakeholders identified who need to be part of the design to explore this are future learners, employers, schools, and communities. The measure would be an increase in acting with care, reciprocity, and responsibility within complex systems

Final Thoughts and Reflections

Reflection on the SFI and MRP Learning Journey

The value of a structured learning experience, like the Strategic Foresight and Innovation, Master of Design from OCAD, which I just completed, lies in the curated, guided learning path it provides. Selected quality content is provided to aid learning. Assignments are places to practice new skills and ideas. I am truly grateful for the space, time, and flexibility to have spent the last 2 years immersed in a learning journey. Throughout the last year of studying, I have had several major focuses that have been self-led, with advisors supporting. This year I have focused on exploring: co-design - how to focus the design process to do it **WITH** others and not just **FOR** others, working with a First Nation community in a respectful and reciprocal manner, being present in field research to notice the experiences of people, and a passion for researching a topic of interest to share that excitement.

The practice of curiosity, designing new ideas, and learning through research are what I am looking forward to from the SFI program. I have compiled a few reading lists, a collection of associations to learn from, and research opportunities through conferences, papers and conversations.

Why did I embrace co-design?

Selecting a particular methodology of research provided a focus for a skill to be grown and developed during the year-long research project. I hope for future work with communities and groups to come alongside and support the good work they are doing to create social change. By being purposeful in learning and reflecting on the questions of how to create design capacity, understand the power and systems that are present and the people impacted at the table, it became a complement to the tools of the Strategic Foresight and Innovation program. The mindsets, frameworks, methodologies, strategies, canvas, and maps of the program are very powerful tools to identify opportunities for change. For myself, exploring how to design **WITH** people to create the change in the system, service, business and learning was important to focus on developing.

While I spent a year focusing on Co-Design and learning about different approaches, a key takeaway from the research is the depth of Co-Design as an approach and methodology. I am more aware now about how much more curious I should be when it comes to designing with communities and groups. Every day, I see different conversations and ideas of how to co-design and not get trapped in the buzzwordiness of co-design. Taking the time to truly use empathy when defining the social change that is required to create an equitable world. In future research, I plan to build off the Seen, Heard, and Understood framework as a tool to start co-design from a place of truly seeing, hearing and understanding the people trying to design **WITH**.

Letter to the Future

Dear Nephew,

When you first went to school, you and I went back to school shopping together. We bought markers and notebooks, shoes, clothes, 5 ink pens, and stickers. While you were getting ready to start kindergarten, I was preparing for a Master's of Design in Strategic Foresight and Innovation.

Going into the Masters, I brought a new skill set of Design Thinking, which I had acquired during 2020-2022, the time period known as the COVID-19 pandemic. To choose to go fully in person for graduate studies would have been impossible two years before I started my journey. Being in person to collaborate with other students made the experience rewarding. Typically, I hand-wrote out my notes in the notebooks we bought for school, as it helped me to retain the learning better. Being able to turn off the laptop or screen forced me to not be distracted by the internet and games.

I chose to explore Skilled Trades with First Nations for my major research because I wanted to focus on a timely need and base it in a current reality. The world was just starting to shift to an AI focus with Chat GPT, Notebook LM, and Gemini becoming the first software that regular people could access. Focusing on sharing knowledge in hands-on Skilled Trades was a way of challenging myself. Also, with my family spending so much time in the trades as a mechanic, welder, and truck driver, it felt like a way to pay it forward.

The lesson of design “WITH People” and “FOR People” was a key takeaway from the MRP. During the first year of the SFI program, there were so many frameworks to explore problems and ways to create solutions. Spending the second year exploring how to design with those in mind who will use the product and service was important to me. After completing my Master's, I focused my career to shift from helping people design their life with people, learning and work in mind, to spending time working on big social issues that need to be addressed so things could be more fair and equitable.

In closing, I encourage you to be curious and try stuff. The joy I have found in being a designer and creating things WITH people has been truly rewarding. That curiosity has led me to be purposeful in learning new things and trying new methods.

Brian Malott, MDes, and PHD Candidate
Imagineer
April 9, 2039

Conclusion

This research underscores that the success of First Nations apprenticeships results from the relationship between the apprentice and the sponsor, and the community support available. This project has demonstrated that the one-to-one mentorship model utilized by the skilled trades mirrors the deep-rooted traditions of knowledge sharing found in First Nations communities.

The transition from "best" to "wise" practices ensures that the "Seen, Heard, and Understood" framework remains adaptable to the unique needs of Southwestern Ontario First Nations communities. As this research concludes, it is evident that when the apprentice-sponsor training process emphasizes a relational approach, it becomes a tool to empower community members to build success in skilled trades. 10-year-olds can be inspired to build, design, and create community in the skill trades.

Author Biography

Brian Malott is a designer and systems researcher interested in using design for social change. Currently working on completing his Master's in Design, focusing on Strategic Foresight and Innovation. Bringing 20 years of Career Development Consultant experience in journeying with people to career, education, and life balance planning. During that time, supported many people exploring skilled trades as a career path and developing the skills needed to succeed. Brian seeks to equip learners with the tools to identify social challenges and develop innovative solutions to them through curiosity and wondering "What if?" Learners are given the space to define and solve major challenges.

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Recommendations for Further Reading

The author also reviewed material in these publications during the Major Research Project. The ideas that were developed from the inspiration found in these.

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Appendices

Appendix A - Workshop Schedule

Co-Design Workshop – Run of Show

Date: March 3, 2026 | Start Time: 9:30 AM

Location: Employment & Training COTTFN — Portable #2, 328
Chippewa Road

RUN OF SHOW

8:00–8:45 AM — Setup & Coffee (Facilitators Only)

8:45–9:00 AM — Be Mentally Present (Facilitators Only)

9:00–9:30 AM — Greet & Connect (sign-in, consent, coffee)

9:30–10:00 AM — Start of Day (3 x 10 minutes)

- Welcome
- What are we hoping to design today?
- Guidelines (care, courage, lived experience, predictability) + Circle Introductions

10:00–11:30 AM — Co-Design Mapping Activity

- Map intro (10 min)
- Table mapping activities (30 min)
- Report-backs (30 min)
- Naming loops (20 min)

12:00–1:00 PM — Lunch (flexible)

1:00–1:30 PM — Working on a Solution (Design Round 1)

1:30–2:00 PM — Try (Design Round 2)

2:00–2:30 PM — Share (Gallery Walk)

2:30–3:00 PM — Reflective Circle (What did we do? Learn? What if?)

Appendix B - Workshop Safety & Comfort

- **Voluntary participation** — share only what feels right
- **Pass is always okay** — you can step out or skip any activity
- **Respect lived experience** — speak from “I”; avoid naming others
- **No judgment / no blame** — we map systems, not people
- **Confidentiality** — no identifying details in stories
- **Outputs only** — photos of boards/maps, not people
- **Care for self & others** — stretch, hydrate, take breaks
- **Ask for support** — facilitators can help at any time

Appendix C - Ontario Apprenticeship: Process (System Summary)

(Based on Skilled Trades Ontario — “Start an Apprenticeship” page)

Below is the **actual, formal process** as described by Skilled Trades Ontario, cleaned up for systems mapping (stocks, flows, decision points, actors, delays).

1. Understand What an Apprenticeship Is

An apprenticeship is a **structured training system**:

- ~80% **on-the-job training** with paid work.
 - ~20% **in-class learning** at colleges, union training centres, or other providers.
 - Takes **2–5 years**, depending on the trade. [\[skilledtra...ontario.ca\]](#)
-

2. Start Your Apprenticeship (Required Sequence)

Step 1 — Find out if you qualify

- Different trades have different entry qualifications.
 - *Pre-work: awareness, guidance, clarity of expectations.* [\[skilledtra...ontario.ca\]](#)
-

Step 2 — Find a Sponsor (Core requirement)

Your sponsor is the organization responsible for delivering your on-the-job training. Sponsors may be:

- **Individual employers** (contractors, companies), or
- **Group sponsors** (unions, consortia). [\[skilledtra...ontario.ca\]](#)

Ways Skilled Trades Ontario recommends finding a sponsor:

- Ask in **high school** — OYAP, SHSM, dual credit pathways.
- Ask **colleges** — career centres can help.
- Ask **family/friends/community** who know contractors.
- Trades job boards & local contractors. [\[skilledtra...ontario.ca\]](#)

System implication:

Sponsor availability is the gating factor to enrollment into an apprenticeship, a major leverage point.

Step 3 — Sign a Training Agreement

When a sponsor agrees to take you on, you and the sponsor sign a **Training Agreement**, which must be **registered with Skilled Trades Ontario**.

- This officially starts your apprenticeship.
- No special courses are required **before** this — the sponsor is the real entry requirement. [\[skilledtra...ontario.ca\]](#)

Step 4 — Begin On-the-Job + In-Class Training

Apprentices cycle through:

- **On-the-job training** (~80% time)
- **In-class training** (~20% time, 8–12 weeks at a time)
- Occurs in cycles until completion. [\[skilledtra...ontario.ca\]](#)

Step 5 — Earn Your Certificates

Depending on the trade:

- **Certificate of Apprenticeship** (completion of program).
- **Certificate of Qualification** (if the trade requires an exam).
- **Red Seal Endorsement** (if part of the Red Seal program).

Appendix D - System Map Inputs: Key Structural Components from This Process

Actors

- Apprentice (learner)
- Sponsor (employer or group sponsor)
- Skilled Trades Ontario
- Training Providers (colleges/unions)
- Secondary school pathways (OYAP, SHSM)
- Community network (family/friends)

Stocks

- Potential trades learners
- Apprentices with Training Agreements
- On-the-job trained apprentices
- Level-trained apprentices (in-class)
- Certified tradespeople (COA, CQ, Red Seal)

Flows

- Awareness → interest
- Interest → sponsor secured
- Sponsor secured → Training Agreement registered
- Agreement → on-the-job training hours
- Hours → eligibility for level training
- Completion of levels → certification
- Certification → employment mobility/retention

Delays

- Time to find a sponsor
- Registration processing
- Wait for in-class intakes
- Accumulating hours (seasonal work; layoff cycles)

Failure points in the formal system

- Lack of sponsor → cannot start apprenticeship
- Misalignment between work cycles & class scheduling
- No transportation → cannot maintain hours
- Poor employer readiness → limited training quality
- Long delays for in-class training seats

Appendix E - System Map for First Nations Apprentices in Skilled Trades Reference

Wise Practices for First Nations Apprenticeships in Skilled Trades

Reinforcing

R1 — Mentorship Flywheel

More First Nations journey persons/ mentors → stronger belonging & awareness → higher enrollment → more completions → more First Nations journey persons

R2 — Employer Readiness Adoption

Culturally safe employers & mentors → better retention/outcomes → clear business case → more employers adopt → more placements

R3 — Community/Owned Data

Better OCAP-aligned data → better program design & advocacy → stronger results & funding → improved data systems → better data.

R4 — Coach Quality → Learning Confidence

Higher coach/mentor quality → faster learning & confidence → better performance & feedback → team respect → retention & progress → more coaches developed.

R5 - Navigation (PSP/ISET/E&T)

Navigator support → faster sponsor matches & supports → persistence → completions → role models → stronger case to fund navigation

R6 — Visibility & Role Models

Celebrating First Nations trades successes → higher awareness/aspiration → enrollment → completions → more role models → more visibility.

Balancing

B1 — Capacity Bottleneck

Enrollment growth increases demand for seats/instructors → longer waits → slower progress → dampened completions.

B2 — Cultural Safety Attrition

Unwelcoming sites → incidents/attrition → trust erosion → lower enrollment/retention until safety improves.

B3 — Admin Friction

Complex forms/logbooks/sign-offs → delays → drop-off → lower throughput until admin supports simplify access.

B4 — Life/Logistics Drag

Financial stress/transport/childcare issues → attendance ↓ → hours logged ↓ → eligibility delayed → attrition ↑.

B5 - License/ Transport Constraint

Lack of license/vehicle/bus → lateness/absence → fewer hours → delayed eligibility → attrition ↑.

B6 — Assessment Mismatch

Text-heavy/multiple-choice assessments without accommodations → anxiety/failure → delayed CofQ → wage/retention impacts.

B7 — Income/Timing Gap (In School)

Late EI/allowance during in-school blocks → financial stress → withdrawal risk until timing improves or bridge support is added.

B8 — Intake Window Mismatch (Post Secondary deadlines)

Fixed application deadlines → missed windows → deferral/attrition until rolling micro-intakes or bridging supports reduce timing mismatches.

B9 — Deposit/Timing Squeeze

Month-end allowance deposits + upfront books/tools → cash squeeze → attendance issues → progress risk until vendor-pay or advances remove the pinch

Appendix F - Participant One-Page Apprenticeship Map

Participant One-Page Apprenticeship Map

Journey Icons: Try a Trade → Find Sponsor → Register → Work (80%) → School (20%) → COA → CQ Exam

Journey Bar (Icons Placeholder)

Supports & Helpers (Stickers Section)

Money Timeline (Deposits, EI, Tools/Books)

Appendix G - Impact Leverage Matrix

Impact × Feasibility — Leverage Matrix

	High Impact	
High Feasibility	Dream Big / High Leverage Ideas	Long-term / Structural Changes
	Quick Wins / Next Moves	Low Impact / Low Feasibility

Appendix H - Apprenticeship Pathways Co-Design Workshop





Safety & Comfort

We want this space to feel respectful, welcoming, and voluntary. Share only what you're comfortable sharing. You can pass on any question or activity or take a break at any time. We focus on experiences, not individuals, and we will photograph workshop outputs only (not people) for the research share-back. A quiet space will be available.

Purpose (Why You're Here)

We're mapping the real experience of apprenticeship and training as First Nations learners. Your lived experience will help make the pathway smoother for future apprentices.

What We're Doing Today

-  Walk through a simple journey map of the apprenticeship pathway.
-  Mark where things helped, hurt, or slowed you down.
-  Spot opportunities to improve the pathway.
-  Vote on a few high-impact actions.





What Is a System? (Simple)

- Parts (people, rules, supports, obstacles)...
- ...that connect and influence each other...
- ...creating patterns we experience again and again.

What Is Systems Mapping?

- Shows what's connected to what.
- Surfaces delays, bottlenecks, and hand-offs.
- Reveals where a small change could have a big impact.


How We'll Work Together (Sticker Legend)

-  Delays/challenges
-  Supports / bright spots
-  People/places involved
-  Wait times

Your Voice Matters

Your insight will inform practical improvements and contribute to a Major Research Project on First Nations apprenticeship pathways. We will photograph workshop outputs (not individuals) for the share-back and research summary.

Page 2 — Examples & Notes

 Examples to Spark Ideas

Topic

Delays we often see

Supports that help

Quick wins to test


Example

Waiting weeks for a sponsor to sign paperwork

• Long gaps before deposits • Seats not available for in-class training

A patient mentor who gives weekly feedback • Shuttle or gas cards • Childcare that matches early starts

Micro-advance for tools/books • Vendor-pay for tools/books • Text reminders for grade uploads and exam windows

 Your Notes (use this space)

Miigwech / Yaw'á·koh / Thank you for sharing your experience and wisdom.