



The *TRANSECTS* Program Institute in Canada – September 2023

Summary Report



Image: Program Institute participants gather for a group photo onsite at the Barrier Lake Field Station. Photo credit: Marlis Merry.

Report prepared by Marlis Merry
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TRANSECTS



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INTRODUCTION TO THE PROGRAM INSTITUTE

The *TRANSECTS* Canadian Program Institute was held from September 10th to 13th, 2023, as a national gathering for the *TRANSECTS* network in Canada. A group of 17 *TRANSECTS* members and TILL alumni met in Kananaskis, Alberta, at the Biogeoscience Institute: Barrier Lake Field Station. The Program Institute was centred around three main goals, each reflected in the topics and activities:

1. To deepen collective understandings of transdisciplinarity (transD) in research and practice from different perspectives and return home better equipped to discuss transD research and practice with one another and to people outside of the *TRANSECTS* partnership.
2. To strengthen relationships within *TRANSECTS* and commitments to the work of *TRANSECTS*.
3. Deeper appreciation for the work and challenges facing Biosphere Regions (BRs) in Canada.



Image: Great Barrier Lake Field Station sign in Kananaskis, Alberta. Photo credit: Marlis Merry.

The Program Institute was hosted by the *TRANSECTS* team based at the University of Saskatchewan, with support from the *TRANSECTS* members and Transdisciplinary International Learning Lab (TILL) alumni participants. A majority of those attending planned and facilitated the topics and activities throughout the event. This format helped to engage participants and promote learning and exchange. The main topics included (in no particular order):

1. **Transdisciplinarity (leads: Drs. Maureen Reed and James Robson)**
 - What ‘transD’ can mean from different perspectives and what it looks like in action.
2. **Curriculum Design (lead: Wendy James)**
 - Discuss the backward design of the Foundational Course and TILL curriculum. Consider the distinctions between a learning lab and a field course.
3. **Biosphere Regions (leads: John Kindrachuk, Dr. Pam Shaw, Graham Sakaki, and Anthony Blair-Dreaver Johnston)**



Image: SENS students with Dr. James Robson (USask) exploring Canmore, Alberta. Photo credit: Marlis Merry.

What are they and how has their work changed over time (leads: John Kindrachuk, Dr. Pam Shaw, Graham Sakaki)

- Experiences and evolution of practices within BRs over the last 20 years, including accomplishments, challenges, student work, and transD research.

Reconciliation and Equity, Diversity, and Inclusion (EDI) in United Nations Educational, Scientific and Cultural Organization (UNESCO) BRs (lead: Anthony Blair Dreaver Johnston)

- Can transD research support reconciliation and EDI in UNESCO BRs? How? Includes examples of good practice within and outside of Canada.

4. Professional Development: Good Practices in Student Mentoring (Student-led) (leads: Danielle Spence, Michaela Sidloski, Mariana Campos Rivera)

- Opportunity for students to lead the discussion about working with BRs (e.g., relationships between practitioners and students) and transD. in practice in different contexts.

5. Upcoming Project Collaborations

- Determine what *TRANSECTS* can do this year and in subsequent years while brainstorming ideas for collaborations.

6. Presentations from Partners (lead: Dr. Harry Penn)

Two additional topics were interwoven throughout the Program Institute:

7. Connection and Team Building

- Indoor and outdoor social activities and excursions throughout the Institute.
- Allowing adequate time for discussion, both formal and informal.

8. Reflections and Learning

- Reflecting on topics and conversations throughout the Institute.



Image: Exploring Canmore, Alberta, Gilbert Adum, a PhD student from the University of Saskatchewan (USask), takes a stroll along a scenic river. Photo credit: Marlis Merry.



Image: Program Institute participants arrive at Barrier Lake following a group hike, capturing the camaraderie and accomplishment of their outdoor expedition.

PRESENTATIONS AND ACTIVITIES

TRANSECTS members and TILL alumni were actively involved in planning and facilitating the discussions, preparing presentations, and organizing activities for the Program Institute. Given that September is the beginning of the academic year in Canada, the timing of the Program Institute was suitable for both faculty and students to attend before the fall term gained momentum. With a variety of *TRANSECTS* members and TILL alumni in attendance, the diversity amongst the group created a thought-provoking environment and encouraged dynamic group discussions following each topic. A comprehensive overview of each session is provided below, along with the key points captured during the group discussions.

Transdisciplinarity (leads: Drs. Maureen Reed and James Robson)

The Program Institute began with a presentation led by Drs. Maureen Reed (Distinguished Professor and UNESCO Co-Chair in Biocultural Diversity, Sustainability, and Reconciliation, School of Environment and Sustainability (SENS), University of Saskatchewan) and James Robson (Associate Professor, Assistant Director Academic (External), and UNESCO Co-Chair in Biocultural Diversity, Sustainability, and Reconciliation, SENS, University of Saskatchewan) leading a presentation on the meaning of transD. They offered various definitions of transD to the group, followed by a discussion identifying similarities across definitions. The group highlighted the use of a “Co-” pre-fix in various ways, including “co-production” and “co-creation.” The group also noticed that the definitions emphasize real-world problems and the science-society interface. The importance of language in each definition was also discussed, with the tendency to use binary terminology having the capacity to marginalize people outside of academia (e.g., “non-academics”). Along with language, the phrasing and order of ideas or words can affect what is perceived as the essence of transD.

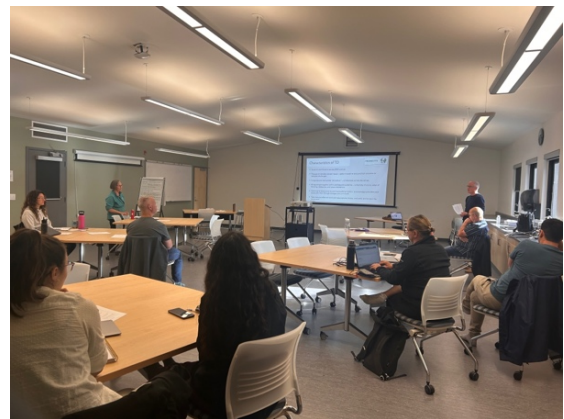


Image: Drs. Maureen Reed and James Robson deliver a comprehensive presentation to Program Institute participants, exploring the nuanced understanding of transdisciplinarity. Photo credit: Marlis Merry.

While there may not be a singular correct definition of transD, the group concluded that it is crucial to adopt a definition that resonates personally and to comprehend the motivations behind this choice. Identifying key characteristics is instrumental to forming a nuanced understanding of transD. Some of these characteristics encompass the integration and transcendence of disciplines and the dissolution of boundaries between science and society. Additionally, transD involves recognizing rights holders and shared responsibility holders as knowledge holders. The group emphasized the importance of understanding the significance of involving knowledge holders as active collaborators in the co-production of knowledge throughout the transdisciplinary research process. Lastly, transD involves a reflective process concerning one's assumptions, biases, and continuous learning for future work.

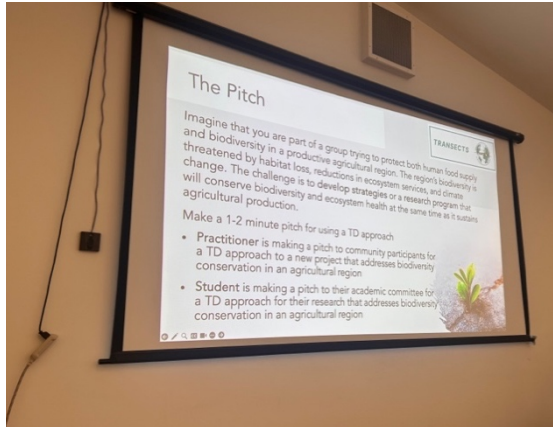


Image: A sample Program Institute group activity, which focusing on developing a pitch for employing transD methods as a student or practitioner. Photo credit: Marlis Merry.

Maureen and Jim’s presentation was followed by an activity to increase involvement and engagement while promoting group discussion. Everyone was divided into working groups with either a student (research) or practitioner (practice) lens when undertaking transD. The groups were tasked with developing a short pitch to justify the adoption of a transD approach when tackling a pre-determined challenge. This exercise aimed to assist the groups in understanding that transdisciplinary processes can differ based on the initial context, leading to variations in perceived values and benefits when engaging in transD research and practice.

Following the presentation of each group’s pitch, a noticeable distinction between the student and practitioner groups emerged approaches used to connect with each of their perceived audiences. Additionally, various challenges were highlighted, such as fatigue, measuring progress and success, ethics approvals and other requirements, and short timeframes inhibiting trust-building overtime. Lastly, participants brainstormed the personal benefits of transD research, including the joy of working with others, widening personal and professional networks, personal growth through self-awareness, humility, and empathy, increasing one’s resilience and flexibility, incorporating creativity in one’s work, and the sense of direct impact. The group discussed that a transD approach is most valuable when dealing with complex problems, where strategies directly impact community members and local residents, and when opportunities exist for collaboration among diverse groups.



Image: Danielle Spence (USask) and John Kindrachuk (RLBR) presenting their pitch for using a transD approach (L-R). Photo credit: Marlis Merry.

Curriculum Design (lead: Dr. Wendy James)

Dr. Wendy James (Director, Gwenna Moss Centre for Teaching and Learning, University of Saskatchewan) led a session on curriculum design for the *TRANSECTS* TILLs. This session focused on how to (i) teach the key competencies to students that we want them to develop, (ii) provide students with learning experiences related to the key competencies, and (iii) offer students feedback on their development of the key competencies. The session began with a concise overview of aligning outcomes, activities, context, and assessment in learning experiences. Wendy then guided an introductory activity in which small teams designed and shared their own misaligned learning experiences, providing an opportunity to practice aligning and assessing alignment.

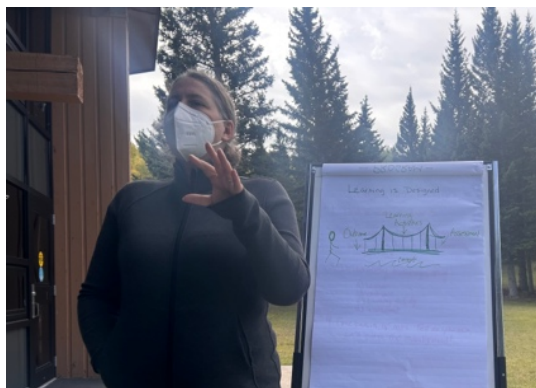


Image: Dr. Wendy James (USask) teaches the group about designing a learning experience during an outdoor session. Photo credit: Marlis Merry.

Wendy facilitated the main activity of the session, where small groups reviewed the TILL vs. Field School table (v.4 document), derived from data collected in the pilot TILL (2022) and first long TILL (2023). Program Institute participants offered their reflections and suggestions, responding to feedback from the Monitoring, Evaluation, and Learning Team (MELT), thereby contributing to the redesign of the existing TILL curriculum to enhance the effectiveness of the learning experience. Groups shared their results and posted their sticky notes in clusters based on the key elements in the table. Dr. Pam Shaw (Director, Master of Community Planning Program and Research Director, Mount Arrowsmith Biosphere Region Research Institute), Graham Sakaki (Regional Research Institute Manager, Mount Arrowsmith Biosphere Region Research

Institute), and Dr. James Robson, responsible for overseeing the curriculum design of the second full-length TILL in 2024, reviewed and summarized the sticky notes into collective insights.

Lastly, the group engaged in a discussion aimed at formulating key concepts, learning activities, and assessments pertinent to learners achieving the goal of reflexivity within a TILL. It was emphasized that reflexivity transcends a 'review' or 'debriefing' exercise, requiring learners to be educated on the intricacies of reflexive practice. This involves understanding how to self-position, be metacognitive, and use reflection. Subsequently, learners will be equipped to practice reflexivity throughout the TILL while receiving feedback on their reflections. This recommendation has implications for the design of the TILL, including weekly group reflection sessions, a reflection journal, and direct feedback for the learners from mentors. These suggestions are anticipated to steer TILL learners toward the intended outcome of reflexivity: Incorporate reflexive practice to foster adaptive learning in a transD research setting.



Image: Leading the session, Dr. Wendy James (USask) directs a group task, prompting participants to discern misaligned learning experiences posed by other groups. Photo credit: Marlis Merry.

Biosphere Regions: What Are They and How Has Their Work Changed Over Time (leads: John Kindrachuk, Dr. Pam Shaw)

John Kindrachuk (Executive Director, Redberry Lake Biosphere Region [RLBR]) and Dr. Pam Shaw each delivered presentations on their respective BRs, offering the group insights into the BR's background and historical context, current priorities, and evolution over time. They emphasized the increasing focus on transdisciplinary approaches in their work within the BRs and underscored the numerous advantages of adopting a transD approach.



Image: Dr. James Robson (USask) introduces Dr. Pam Shaw (VIU), who presented on the Mount Arrowsmith Biosphere Region (R-L). Photo credit: Marlis Merry.



Image: Graham Sakaki (VIU) presents to the group on the upcoming TILL. Photo credit: Marlis Merry.

Graham Sakaki presented on the upcoming TILL, to be hosted by the Mount Arrowsmith Biosphere Region Research Institute (MABRRI) at Vancouver Island University (VIU). The TILLs, designed as immersive, multi-week learning experiences within a host BR, aim to equip students with the professional, intercultural, and relational skills needed to be sustainability change makers. From April to June of 2024, TILL learners, following a two-week virtual foundational course, will embark on an onsite research training program in the Mount Arrowsmith Biosphere Region (MABR). Their primary focus will be investigating the impact of invasive species on the achievement of the

Sustainable Development Goals (SDGs). TILLs offer learners the opportunity to apply transD approaches to an experiential research project. Throughout the six weeks onsite, TILL learners will explore the MABR and meet community partners, First Nation representatives, local government employees, and others relevant to their research needs. Additionally, learners will participate in restoration activities related to the research, gaining hands-on experience within the community.

Biosphere Regions: Reconciliation and Equity, Diversity, and Inclusion in UNESCO BRs (lead: Anthony Blair Dreaver Johnston)

Anthony Blair Dreaver Johnston (Special Projects Coordinator, Mistawasis Nêhiyawak) led a session on reconciliation within BRs through video. The group watched “**Star Blanket: A Story of Reconciliation in the Redberry Lake UNESCO Biosphere Region,**”¹ where Anthony shared reflections on reconciliation and his long-standing friendship with John Kindrachuck and the RLBR. Over time, they have developed mutual trust through sharing information, being open, and fostering bonds of friendship, all under the understanding that their actions are considerate of one another and their communities.



Image: The group engages in an outdoor discussion around reconciliation and EDI. Photo credit: Marlis Merry.

Following this video, the group discussed reconciliation and EDI within and outside of BRs. Pam and Graham explained how the roundtable structure of the MABR supports reconciliation, providing space for necessary conversations to happen with members from the shared responsibility holder groups in the MABR. This illustrates how intimate knowledge of place informs important questions and priorities of the region. Many international TILL alumni and SENS students shared the presence of reconciliation and EDI within their

¹ CCUNESCO, “Star Blanket: A Story of Reconciliation in the Redberry Lake UNESCO Biosphere Region,” YouTube Video, 4:43, June 11, 2019, https://youtu.be/l_oL3UkU_Nw?si=ZCCkOjNdCoty710p.

home country, which was suggested to be a discussion post activity for future TILL learners. The group then generated shared attributes to respectful communication and collaboration to promote reconciliation and EDI, including:

- Being a good listener.
- Learning to abandon ego.
- Be aware of any existing relationship protocol documents, including a culture of engagement document.
- Do not be afraid to ask questions respectfully.
- It is most important to try and to demonstrate that you are trying.
- Reciprocal support helps to build trust – offer support and resources for free to demonstrate that you are willing to invest in relationships.



Image: Dr. James Robson (USask) and John Kindrachuk (RLBR) (L-R). Photo credit: Marlis Merry.

Professional development: Good Practices in Student Mentoring (leads: Danielle Spence, Michaela Sidloski, Mariana Campos Rivera)

The Program Institute included a strong presence from TILL alumni and SENS students as both facilitators and participants, many of whom are currently serving as Student Advisors on the Student and Trainee Advisory Round Table (START). START informs *TRANSECTS* of ways to support and engage students and early career researchers in becoming successful transD researchers, as well as how to strengthen connections between students and the broader *TRANSECTS* network. The START team will plan facilitate opportunities to connect with incoming TILL learners. This includes implementing a peer support program to link TILL alumni with new TILL learners before and during the 2024 TILL.

Survey and focus group data collected prior to the Program Institute by Danielle Spence (SENS Graduate Student, University of Saskatchewan) was presented by TILL alumni Danielle Spence, Mariana Campos-Rivera (SENS Graduate Student, University of Saskatchewan), and Michaela Sidloski (SENS Graduate Student, University of Saskatchewan) to the Program Institute participants. The data indicated that TILL alumni were primarily interested in:

- Skill-building workshops (e.g., developing relationships with communities/project partners, conflict management, teamwork, facilitation).
- Professional development modules.
- Working with and learning from BRs (e.g., work experience and/or research).

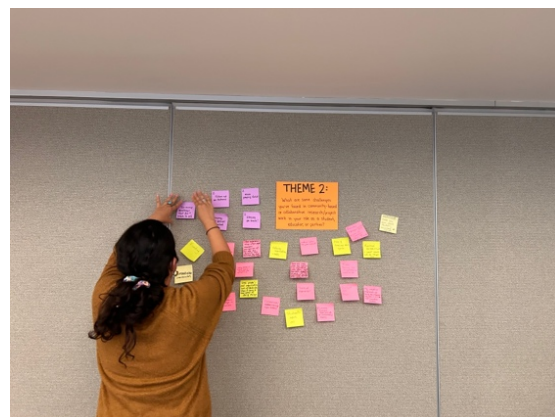


Image: Mariana Campos-Rivera (USask) leads a group activity at the Program Institute. Photo credit: Marlis Merry.

The students facilitated an activity concentrating on three main themes with guiding topics and questions:

1. Build a collaborative network: What activities would you enjoy participating in that would bring us together and build relationships?
2. Build capacity (e.g., training, professional development): What are some challenges you've faced in community-based or collaborative research/project work in your role as a student, educator, or partner?
3. Cultivate a nurturing, supportive environment: What makes you feel supported in a transD research project/environment?

Program Institute participants reflected on each theme from the perspective of their current role as either a student, practitioner, researcher, or other (e.g., coordinator). Common answers for theme one included sharing and open dialogue, field trips and in-person gatherings, and collaborative data collection and engagement with key stakeholders. Some shared challenges mentioned in response to theme two included differing expectations and goals, communication, timelines, and funding opportunities and restrictions. Lastly, support mechanisms mentioned in theme three included open and constant communication, strong coordination, open-mindedness, patience, and recognizing the value of transD work.



Image: Participants engage in discussion during a collaborative activity. Photo credit: Marlis Merry.

Presentations from Partners: Bringing Together Indigenous and Other Knowledges for Climate Resilience (lead: Dr. Harry Penn)

Dr. Henry (Harry) Penn (The Resilience Institute) provided an example of transD in action, presenting virtually to the Program Institute participants on his transD approach to building local capacity for climate adaptation and mitigation. Harry explained that The Resilience Institute develop partnerships with local and Indigenous communities, academia, government, and organizations on



Image: Dr. Harry Penn (The Resilience Institute) engages in discussion with TILL alumni, Hakan Armagan, and Dr. Maureen Reed (R-L). Photo credit: Marlis Merry.

initiatives to co-develop activities that unite diverse groups of knowledge holders in learning and sharing. They provide local and Indigenous communities with a co-generated Impact Statement and Consequence Score with interwoven local knowledge of natural, built, social, and economic systems. Harry emphasized the presence of transD in the work of The Resilience Institute and displayed the importance of building the skills critical for transD processes (e.g., relationship building, collaboration), which are pivotal for the success of the work being done.

REFLECTIONS AND OUTCOMES

Participatory Format

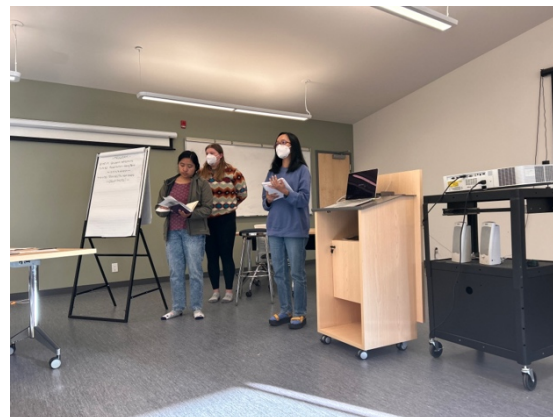
The Program Institute was a valuable opportunity for the Canadian *TRANSECTS* network to gather in-person, fostering a deeper collective understanding of transD, a greater appreciation and awareness of BR partners within *TRANSECTS*, and stronger personal connections. It is important to acknowledge the diverse entry points and perspectives of participants, which emphasizes the need to begin with an introduction to *TRANSECTS* and transD. Many participants actively contributed to the facilitation of presentations and activities, a feature well-received by the group as it enhanced involvement and engagement in sessions. This format proved valuable in bringing together diverse topics and perspectives, with each participant contributing a unique style of engagement. A notable observation from the group was that the Program Institute provided participants with a space to engage simultaneously in both discussions and practical transD research for *TRANSECTS* and beyond.



Image: Students collaborate at the Program Institute.

Reflexivity

Throughout the Program Institute, there was a strong emphasis on the presence and significance of reflexivity in a transD approach. The group discussed the concept of reflexivity and its distinctions from reflection. Reflexivity can be viewed as a way of being, which comes instinctively to some and can be learned through practice by others; however, there are various perceptions and understandings of reflexivity and the purpose of being reflexive. While not obligatory, reflexivity plays a crucial role in accomplishing work in a transD space. Student rapporteurs provided reflections on the previous day's activities and discussions as an effort to incorporate reflexivity into the Program Institute. Recognizing that reflexivity and other important components of transD research may not come naturally to some learners, a structured framework can provide a foundation for those practicing transD to explain why certain skills are important and how they are incorporated into a transD approach.



Images: Student rapporteurs present their reflections of the previous day's discussions. Photo credits: Marlis Merry.

Curriculum Redesign

With TILL alumni present at the Program Institute, hearing their insights and perspectives was very valuable for the evolution of the TILL learning and research training experience. It was noted that it was useful and interesting to have both TILL experiences represented, including short and long TILL formats. As student feedback drives the redesign of the TILL curriculum, *TRANSECTS* must create and uphold a safe and comfortable environment for learners to share their experiences. Both how we ask for feedback, as well as the spaces that we create to ask for feedback, must prioritize inclusivity to ensure that all learners have an opportunity to share. As we continue to gather feedback from TILL alumni through various mechanisms, such as Program Institutes, *TRANSECTS* is continually shifting the thinking of what a TILL is conceptually, what it means in practice, and how it varies from a conventional field school. As progress unfolds gradually, the team must recognize that defining and achieving success may vary for each TILL.



Image: The group participants in an outdoor exercise to discuss reflexivity. Photo credit: Marlis Merry.

RECOMMENDATIONS AND NEXT STEPS

On the final day of the Program Institute, participants actively engaged in an open dialogue, addressing key questions that guided the discussion. This group exchange provided a space for participants to reflect on Program Institutes, TILLs, and the overarching partnership.

Key Recommendations and Considerations for Future Program Institutes and *TRANSECTS* Activities

Schedule

- Incorporate a range of topics, activities, and perspectives.
- Allow room for flexibility by planning for unplanned activities and schedule changes.
- Incorporate unstructured moments throughout the day, not just at the end of the day.
- Recognize that happy participants are more focused and productive.
- Plan a mid-event excursion for variation in visiting and interacting amongst the group.
- Schedule social time or extended coffee breaks for informal interactions and networking, especially between presenters and participants.
- Provide outdoor opportunities, whether causal or focused.
- Be strategic about the timing of Program Institutes, considering the potential for outdoor activities and the availability of participants.
- Account for the jet lag of those travelling long distances.



Image: Students walk on a trail in Canmore, Alberta.
Photo credit: Marlis Merry.

Emergencies

- Debrief with participants on the first day, outlining planned responses to specific situations.

Connection

- Highlight that those present are active members of a community of practice to connect with and depend on.
- Include an icebreaker for individuals to share their connection to *TRANSECTS* and their role in the community of practice.
- Integrate opportunities for BR practitioners to connect.
- Supply name tags and a map showing everyone's organization.
- Plan new and more efficient ways to meet and connect on an ongoing basis.

Local Culture and Sustainability

- Engage First Nations partners in the local area to establish new connections within *TRANSECTS*.
- Be mindful of cultural differences in meal preferences.

- Identify cultural food stores in the local area.
- Encourage purchases from local or Indigenous-owned businesses.
- Provide the opportunity for international guests to experience a local meal.
- Integrate sustainability throughout the activities.

Funding

- Offer more cost-effective options (e.g., camping).
- Explain to participants how funding plays a role in the logistics of the event, as well as the limitations of funding.



Image: Dr. Ryan Walker (USask) engages in a friendly discussion with students while at the Program Institute.
Photo credit: Marlis Merry.

Key Recommendations for TILL Planning and Curriculum Design

- Connect TILL alumni on the START with TILL applicants and learners at various stages of the TILL process.
- Let feedback drive the redesign of the TILL curriculum.
- Establish and maintain a safe, comfortable, and inclusive environment for learners to continually share their experiences, being aware of the ways in which we ask for feedback and the spaces that we create to gather feedback.
- Educate learners on reflexive practice, including how to self-position, be metacognitive, and use reflection throughout the TILL.
- Provide learners with a structured framework as a starting point for practicing transD in the TILL (e.g., why reflexivity is important and how this is incorporated into transD research).
- Offer feedback to learners on their reflections (e.g., reflection sessions, keeping reflection journals, and direct feedback from the Mentor Team).
- Have TILL learners reflect on the presence of reconciliation and EDI in their home country and describe the attributes of respectful communication and collaboration to promote reconciliation and EDI.
- Ensure alignment among outcomes, activities, context, and assessment when designing the TILL curriculum.
- Connect the VIU and MABRRI team planning the 2024 TILL with the South African members organizing the 2025 TILL, allowing the opportunity for planning suggestions and lessons learned.
- Develop a living handbook for how to plan a TILL, incorporating past and future reflections.
- Defining and achieving success may look different at each TILL.



Image: Participants begin to redesign the TILL curriculum, incorporating the key characteristics and distinctions of a 'learning lab' identified by the group.
Photo credit: Marlis Merry.