Strategic Assessment of Institutional Learning

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Practitioner Handbook

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Welcome to the Handbook

In Fall 2020, teaching and learning scholars at a regional university in Western Canada launched SAIL — the Strategic Assessment of Institutional Learning — an action research project investigating student achievement of institutional learning outcomes.

This Handbook provides a coordination-level view and practical design considerations for implementing a learning outcomes and assessment process in an educational setting. The Handbook is relevant to curriculum committees, higher education leaders, faculty members, quality assurance practitioners, and educational developers who are engaging in assessment of program and institutional learning outcomes.

Purpose of SAIL

More and more frequently, publicly-funded post-secondary institutions are called to justify their value by demonstrating evidence of student learning. Institutions collect a plethora of direct and indirect student learning data and are increasingly reporting out on assessment findings; however, they typically stop short of acting on the results gathered. Colloquially known as “closing the loop” or “closed-loop assessment” (Alstete, 1995; Maki, 2002), using assessment findings to improve student learning requires a well-articulated, detailed, and reflexive process. If successfully implemented, this process can increase the likelihood of improved student outcomes (Reich et al., 2019). Yet, few examples exist of institutions that use assessment findings to spur change and assess the impact of those changes on student learning(Banta & Blaich, 2010).

SAIL responds to the call to “close the loop”.

SAIL is driven by faculty members’ desire to further their students learning and educational institutions’ aspirations to engage faculty and students in ongoing formative assessment. Provincial regulations in Canada and institutional and programmatic accrediting bodies are increasingly requiring that post-secondary institutions engage in regular quality review and improvement processes.

Research-informed practices place faculty at the heart of

these quality improvement efforts.

Faculty are called to collect, reflect on, and act as appropriate on meaningful data regarding student learning and student achievement of core competencies.

SAIL investigates methods for assessment of student learning to help faculty (and institutions) better adapt to current and changing needs of learners, while honouring disciplinary diversity and faculty autonomy over teaching and learning. SAIL is designed to encourage meaningful and actionable conversations about how to teach and assess institutional learning outcomes. Our research seeks to further educational excellence, knowledge-sharing, and reflective practices. SAIL contributes as a research project to the Scholarship of Teaching and Learning.

Institutional Learning Outcomes

Institutional learning outcomes (ILO) are direct statements that describe what students should know and be able to do upon graduation from a post-secondary institution. Many institutions articulate ‘signature’ learning outcomes that focus on transferable knowledge, skills, attitudes, values, and behaviours that can be evaluated and assessed.

When ILOs reflect the mission and vision of an institution and are explicitly linked to institutional, college, and departmental plans, they can support mission fulfilment. This is best supported when intentional efforts are made to embed ILOs into quality assurance processes, such as cyclical program review, strategic planning, and resource allocation; and is further enhanced when ILOs are incorporated into faculty learning and development opportunities, such as programming offered through centres of teaching and learning. For example, curricular mapping and scaffolding of course and program learning outcomes to institutional learning outcomes can illuminate insights into student learning. The information gathered can be used to support institution-wide initiatives and inform learning support planning and practices to continuously improve student learning.

Principles for Learning Outcomes Assessment

SAIL follows a principled-approach and is based on six principles for learning outcomes and assessment. These principles were collaboratively developed by faculty with engagement from students and, with appropriate consideration for local contextual factors, we suggest that the principles can act as guiding posts for any scholarship of teaching and learning project.

1. Growth and learning-oriented
2. Equitable and learner-centered
3. Faculty-driven
4. Ongoing cyclical improvement
5. Purposeful and holistic design
6. Reflexive approach to learning

These principles guide conversations and inform decision-making about learning outcomes and assessment throughout the study.

Collaborative Coordination

SAIL is collaboratively coordinated by quality assurance practitioners, educational developers, and faculty researchers with the overarching aim to improve student learning.

SAIL Pilot Projects

The SAIL approach to assessment of institutional learning outcomes is based on the use of a shared rubric and faculty peer-to-peer learning. The first three action research cycles consisted of the following elements:

- co-creation of a shared rubric to assess student achievement of an institutional learning outcome;
- identification of relevant student artifacts (course assignments);
- assessment of student artifacts using the shared rubric;
- review of a course report based on the assessments of two peers; and,
- feedback on the efficacy of the SAIL process.

Faculty are provided with a course report for their own use to reflect on and consider improvements to student learning. In addition, an aggregate report may be prepared based on the results of each ILO to inform institutional and departmental planning if sufficient comparable student data is gathered during the pilot.

Pilot #1 (2020 – 2021)

In 2020-21, three faculty-led communities of practice ("ILO Pods") assessed student achievement of Lifelong Learning, Social Responsibility, and Critical Thinking and Investigation during the Winter 2021 semester. Six disciplines were represented in the initial study: tourism management, sociology, social work, education, cooperative education, and communications and media. In addition, faculty from the disciplines of biology and nursing participated in the development of the rubric for Lifelong Learning to ensure a diversity of disciplines were reflected in the development of each rubric. This pilot followed an opt-in student consent process.

Pilot #2 (2021 – 2022)

The second iteration of SAIL involved two faculty-led ILO Pods aimed at assessing student achievement of Lifelong Learning and Social Responsibility during the Winter 2022 semester. Five disciplines were represented in the second study: social work, cooperative education, sociology, geography, and business.

Pilot #3 (2022 – 2023)

The third cycle of SAIL involved two faculty-led ILO Pods focused on Communication and Critical Thinking

and Investigation during the Winter 2023 semester. Two disciplines were represented in the third study: natural resource science and tourism management. This pilot followed an opt-out student consent process and used capstone research papers from fourth-year Capstone courses.

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How to Use the Handbook

This SAIL Practitioner Handbook is based on our experience at a regional university in Western Canada with a range of comprehensive programming in a variety of delivery modalities. The action research design and resources described in this Handbook were developed with the local context in mind.

We encourage you to borrow and adapt our methodology and resources to develop a process that best fits your institution's needs.

Photo by Duy Pham on Unsplash

The audience for the SAIL Practitioner Handbook includes leaders and committees visioning how to assess institutional learning outcomes; and quality assurance practitioners, educational developers, program leaders, and faculty planning and implementing assessments.

The Handbook includes:

- an overview of the SAIL methodology, including strengths and limitations, and the research findings;
- step-by-step instructions for implementing a SAIL pilot project at your educational institution;
- resources for quality assurance practitioners and educational developers to facilitate faculty learning and development, including rubric creation workshops and *Assessor Training;*
- templates and supporting documents; and,
- articles for further reading.

Share and Adapt!

We hope that you find these materials useful in your own practice! You are welcome to share and adapt the materials (CC BY-NC-SA 4.0); however, we ask that you include the following attribution:

> Hoessler, C. & Hoare, A. (2022). *Strategic assessment of institutional learning: Practitioner handbook.* TRU Pressbooks. https://sail.pressbooks.tru.ca/

I

Step-by-Step Guide

Action Research Design prioritizing Qualitative Methods

SAIL methodology is based on an action research design, which has the dual benefit of generating practical solutions and empowering practitioners.

The process of action research involves engaging practitioners in systematic enquiry focused on generating solutions to practical problems and the subsequent development of activities to improve outcomes across multiple cycles (Koshy et al., 2010).

Quality action research, according to Levin and Greenwood (2001), is:

- contextually-grounded;
- addresses real life problems; and,
- involves participating practitioners constructing meaning through reflection that leads to action.

Each cycle of action research includes a plan-act-evaluate-reflect cycle. The cycle involves identifying the focus (e.g., a problem, changes for improvement, learning outcomes), developing a plan to assess progress, implementing the plan, reflecting on progress, and identifying necessary changes to improve and re-implement the plan thereby stimulating a new cycle (Koshy et al., 2010; Macintyre, 2000).

The *SAIL Planning Cycle* includes the application of qualitative methods (focus groups, rubric-based descriptive assessments, community consultations) with some initial quantitative descriptive analysis of consent rates. The eight-step *SAIL Planning Cycle* (Figure 1) is depicted below.

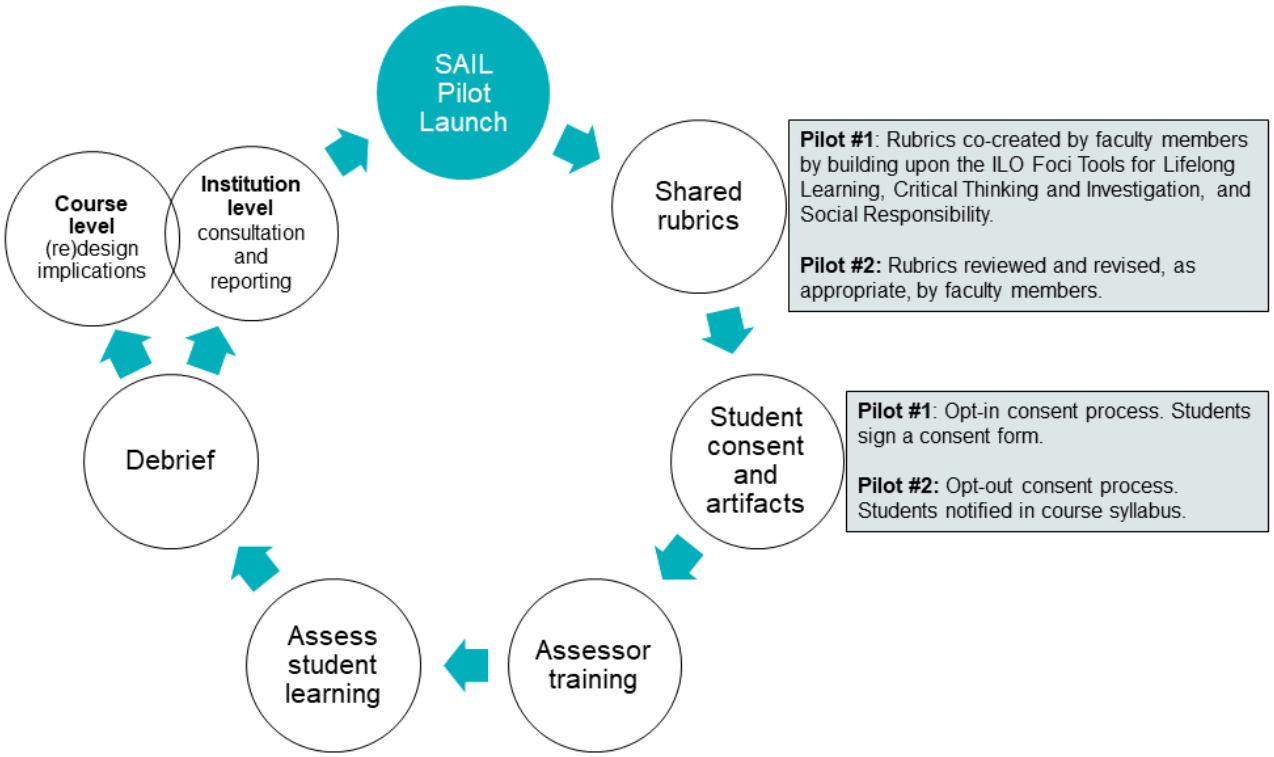

Figure 1. SAIL Planning Cycle (Hoessler & Hoare, 2022)

The first and second iterations of SAIL involved the use of faculty-developed institutional rubrics and the collection of data to evaluate the extent to which students were achieving Critical Thinking and Investigation, Social Responsibility, and Lifelong Learning in courses designated as meeting these three institutional learning outcomes (ILO) – also referred to as *ILO-approved courses* at the institution under study. The data was gathered through faculty applying a shared rubric to their peers' course-embedded assignments.

> **ILO-approved courses:** Refers to courses designated as meeting one of the university's eight institutional learning outcomes (ILO). Faculty can seek an ILO designation for any three-credit undergraduate academic course by demonstrating a substantive alignment between the ILO foci and the course learning outcomes. Using the ILO Foci Tools (see Table 2.2), faculty apply for designation through the university's curricular approval process. Approval of ILO designation is granted by Senate.

Once the faculty-led communities of practice ("ILO Pods") are formed for each of the ILOs being assessed the following steps are undertaken:

Table 1.1 SAIL Planning Cycle

	Description
1. Preparation, Recruitment, and Launch	Involves preparation, including consultation and approval, review of policies and compliance check (including Research Ethics Board), and recruitment of faculty members.
2. Shared Rubrics	Involves the development (or refinement) of shared institutional rubrics.
3. Student Consent and Artifacts	Involves the identification of appropriate student artifacts (course assignments) for assessment using the rubrics; and, notification to students of the consent process (e.g., opt-in or opt-out).
4. Assessor Training	Faculty participate in *Assessor Training* delivered by an educational developer and quality assurance practitioner.
5. Assessment of Student Learning	Faculty assess two of their peers' assignments using the shared rubric and rating sheet.
6. Debrief	Faculty participate in a focus group and are guided through semi-structured prompts led by the SAIL Coordinators to determine the efficacy of the SAIL pilot project.
7. Institutional Consultation and Reporting	Findings and recommendations are drafted, reviewed, and disseminated.
8. Course (Re)Design Implications	Faculty review and discuss their peers' assessment and feedback of the evidence provided on student learning. Faculty consider, adapt, and modify their courses, as appropriate, based on the feedback they received from their peers.

Institutional Consultation and Reporting and *Course (Re)Design* occur concurrently with SAIL Coordinators reporting along with faculty, and faculty engaging in course redesign. A detailed description of each step is provided in subsequent sections of this Handbook.

Coordination

SAIL was originally co-led by an educational developer and quality assurance practitioner; however, in its third iteration was driven by teaching faculty in partnership with faculty researchers from across the university.

Members of SAIL Pilot Projects

SAIL Coordinators (Co-Principal Investigators): The primary role of SAIL Coordinators is to facilitate the components of the research project, including overseeing the Research Ethics Board (REB) process, facilitating the development of resources (i.e., institutional rubrics, rating sheets), providing *Assessor*

Training, creating opportunities for team-building within the ILO Pods, maintaining the SAIL shared site (e.g., Moodle, Teams, etc.), and promoting the dissemination of research findings. In addition, SAIL Coordinators respond to faculty and student inquiries related to the research project.

A SAIL Coordinator Check List from project start to close is available here: SAIL Coordinator Check List (PDF)

Faculty Members (Co-Investigators) organized as ILO Pods: Each ILO being assessed involves a community of practice of faculty members ("ILO Pod") focused on student achievement of an ILO. A community of practice is formed when a group of people want to share common experiences and knowledge that are related to a particular area of expertise.

Faculty members teaching ILO designated courses volunteer to be co-investigators collaborating on SAIL as part of their research and scholarship. Within their ILO Pod, faculty members are co-researchers/co-assessors who:

- select one of their courses to be part of SAIL;
- collaboratively review (or co-create) an ILO rubric;
- select a course assignment;
- provide students with the consent process;
- assess a sampling of two colleagues' assignments;
- review report of colleagues' ratings; and,
- discuss recommendations resulting from the process during the *Debrief*.

The ILO Pods are fundamental to the SAIL methodology and were continued across all iterations of the action research approach. Each interdisciplinary ILO Pod has its own shared institutional rubric, series of meetings and opportunities for building trust, shared website, assessor training, and project debrief/ collaborative self-study process.

Students (Study Participants): Within the SAIL framework, students represent the study participants. Specifically, they are students enrolled in participating ILO-approved courses. Students contribute their data via course assignments through an REB-approved consent process (REB No. 102,637*)*. In addition, student perspectives were sought and integrated into the second iteration of SAIL as part of the *Institutional Consultation and Reporting* phase.

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1.

Preparation, Launch and Recruitment

Preparation

Before the idea of SAIL was fully formed, we were motivated to explore different ways to assess student achievement of program and institutional learning outcomes but we were unsure about what that could look like in our institutional context.

Prior to the creation of SAIL, we engaged with our community members, conducted a preliminary scan of best practices in the North American post-secondary sector, reviewed the literature, and invited guests speakers to share their experiences in undertaking a learning outcomes and assessment SoTL project. Specifically, we undertook two key steps prior to launching a Strategic Assessment of Institutional Learning (SAIL) initiative.

Preparing to Launch a SAIL Initiative

Step 1. Identification of existing policies, processes, and resources: In seeking to develop a process that fit with the university's culture, leveraged existing processes and systems, and built upon the internal expertise of faculty and staff, we looked at the wealth of strategies and tools that had been developed during the creation of the university's institutional learning outcomes. Namely, we drew upon the ILO Foci Tools, ILO-approved courses, and the *Principles for Learning Outcomes and Assessment.* We were incredibly fortunate to have these resources to draw upon. If there had been no established learning outcomes definitions or criteria, then the *SAIL Planning Cycle* and timeline would require additional engagement steps with the local community.

Step 2. Creation of a timeline: The success of the SAIL initiative is tied strongly to a well-organized, pre-planned timeline that takes into consideration the multiple demands on faculty time (e.g., beginning of classes, exam season, Reading break), potential delays (e.g., REB approval), and technical difficulties (e.g., uploading and downloading student assignments in the learning management system). Prior to launching a pilot, the SAIL Coordinators drafted a timeline, including key dates, milestones, and responsibilities of Coordinators and faculty members. The timeline included consultations and reviews by privacy and ethics, faculty member recruitment and engagement within the context of scheduled courses and semesters, development of a shared website, and several other logistical factors. The timeline is not static but rather acts as a guiding document and planning tool.

Launch and Recruitment

Invitations to participate in SAIL went out to the university community via multiple channels, including: the teaching and learning centre, the university's newsletter, and direct emails to faculty teaching relevant courses. The open call for faculty did not specify which institutional learning outcomes would be assessed during the pilot in order to gauge interest and allow the pilot to adapt based on faculty engagement. During this early phase, several of the ILOs rose to the forefront as popular based on the number of faculty curious about the research study and the specific ILOs that they teach. Once we had determined two to three ILOs, we then more actively recruited faculty by reaching out to individuals that we knew taught an ILO-approved course and invited them to attend an info-session or one-on-one meeting with the SAIL Coordinators. Where further disciplinary breadth was needed, faculty who had previously taught such courses were invited for the rubric design step.

To include an ILO in the pilot, we decided that there must be a minimum of three faculty members per ILO Pod in order to create a community of practice environment and provide for two peer assessors for each faculty member.

The subsequent chapters and sections in this Handbook describe the eight-step *SAIL Planning Cycle* and document workshops, resources, reflections, and considerations for implementing a SAIL initiative in an educational setting.

2.

Shared Rubrics

Using Institutional-level Rubrics to Assess Student Achievement of Institutional Learning Outcomes

Curcio (2018) suggested that the use of rubrics is an accepted method in assessing learning outcomes in undergraduate education. Extending the use of existing rubrics to institutional learning outcomes (e.g., Simper et al., 2018), SAIL aims to determine the utility of faculty-created institutional rubrics for assessing student achievement of ILOs in courses that have been designated as meeting an ILO.

During the first iteration of SAIL, faculty collaboratively developed rubrics, sought student consent, and assessed anonymized students' assignments to determine the degree of student achievement of three ILOs: Critical Thinking and Investigation, Social Responsibility, and Lifelong Learning. Piloting three ILOs is adequate for testing as demonstrated by Norman's (2017) use of three VALUE (AAC&U) rubrics: critical thinking, quantitative literacy, and written communication.

For each ILO, a rubric was developed by faculty in sessions facilitated by an educational developer and quality assurance practitioner. The rubrics included consideration of theoretical principles, knowledge, reflection, application, and other skills that align with assessable knowledge, skills, and attitudes (Stassen et al., 2004).

Co-Creation of Shared Institutional Rubrics

The ILO Rubrics are based on the criteria listed in the ILO Foci Tools used at the university under study for identifying courses that meet institutional learning outcomes.

During the first iteration of SAIL, faculty within each ILO Pod were tasked with determining the number of levels (columns) and associated titles, as well as co-writing the descriptions (cells) of each level of performance (column) for each criteria (row). Additional faculty were involved at this stage of rubric co-creation to broaden disciplinary perspectives, as needed.

Following Pilot #1, feedback during the *Debrief* was incorporated into the revised rubrics. During the second iteration of SAIL, faculty within each ILO Pod were tasked with reviewing the descriptions and refining the rubrics, as appropriate. So far, through this research, we have collaboratively developed four ILO Rubrics (Table 2.1).

Table 2.1 ILO Rubrics

Institutional Learning Outcome	ILO Rubric
Communication	Rubric – Communication Rubric (PDF)
Lifelong Learning	Rubric – Lifelong Learning (PDF)
Social Responsibility	Rubric – Social Responsibility (PDF)
Critical Thinking and Investigation	Rubric – Critical Thinking and Investigation (PDF)

The rubric **levels (column headings)** of *Beginning*, *Developing*, *Meeting*, and *Exceeding* were chosen by faculty during the first pilot to reflect student growth over time as they progress through their degree. The levels reflect that some students are *beginning* to demonstrate the ILO, while others are at the *meeting* level. Across programs and within a degree, a course that is introducing the ILO may be satisfied with achieving the *beginning* level. For example, a first-year course may expect and see most students at the *beginning* or *approaching* levels. Whereas, an upper-year course may expect and see most students at the *approaching* and *meeting* levels if still a new outcome for students, or at the *meeting* and *exceeding* levels where taught and practiced multiple times during the program.

The rubric **categories/criteria (rows)** are the ILO foci. The foci were developed to provide evidence of a substantive match between the ILO foci and a course's learning outcomes. The ILO foci refer to the central topic or intent of an ILO with four areas in mind (analysis, theory, application/demonstration, reflection) that are applicable from first through fourth year of baccalaureate degree programs, and consider the diversity of disciplinary principles and methodologies. Below are the Foci Tools for each ILO (Table 2.2; Thompson Rivers University, 2020).

Table 2.2 ILO Foci Tools

Institutional Learning Outcome	Foci Tool
Communication	COMMUNICATION (PDF)
Teamwork	TEAMWORK (PDF)
Social Responsibility	SOCIAL RESPONSIBILITY (PDF)
Lifelong Learning	LIFELONG LEARNING (PDF)
Critical Thinking and Investigation	CRITICAL THINKING and INVESTIGATION (PDF)
Knowledge	KNOWLEDGE (PDF)
Intercultural Awareness	INTERCULTURAL AWARENESS (PDF)
Indigenous Knowledges and Ways	INDIGENOUS KNOWLEDGES AND WAYS (PDF)

Each ILO has approximately five to eight foci that characterize the ILO. A course only needs to meet three of the ILO foci to be deemed a substantive match. The ILO foci were used as the categories (rows) for the shared institutional rubrics.

The **descriptors (where each criterion intersects with a level)** were created by SAIL faculty members in 2020-21 for Social Responsibility, Critical Thinking and Investigation, and Lifelong Learning. One of the primary tasks of each subsequent pilot and use of the rubric includes a review of the descriptors at the course level, as well as at the institutional level. This ongoing opportunity to provide feedback ensures that the rubrics continue to attend to cross-disciplinary utility.

Rubric Creation Workshop

Rubric Creation Workshops are facilitated by trained faculty and are customized for each ILO Pod. The workshop is roughly two hours in duration. Below are instructions for SAIL Coordinators to facilitate a *Rubric Creation Workshop* with participating faculty members (Table 2.3).

Table 2.3 Rubric Creation Workshop

Duration	Activity	Resources
15 min.	Review ILO Foci Tool and ILO foci.	ILO Foci Tool
20 min.	Determine the number of levels (column headings) and brainstorm titles for each level.	Sample rubrics (e.g., AAC&U Value Rubrics)
20 min.	Brainstorm key words for each of the descriptors.	Sample rubrics (e.g., AAC&U Value Rubrics)
20 min.	Draft descriptors.	
30 min.	Discuss assignments within participating faculty members' courses that best align with the rubric; discuss which foci are relevant and confirm that the descriptors make sense for the chosen assignment. Revise the descriptors, as appropriate based on the discussion.	
15 min.	Wrap up and discuss next steps. Remind faculty members of the student consent process.	Data Collection Notice (PDF)

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3.

Student Consent and Artifacts

SAIL explores the extent to which students' achievement of institutional learning outcomes can be assessed through evaluation of course-embedded assignments. Each faculty member participating in SAIL identifies a relevant assignment from an ILO-approved course that they teach. This use of direct (e.g., Allen, 2008) and authentic task assessments and rubrics reflects established practices in the United States (e.g., NILOA, 2016; Nunley et al., 2011), though is still relatively uncommon in Canadian contexts outside HECQO and OCAV funded projects in one Canadian province (e.g., Simpler et al., 2018).

Course Selection

The university's eight ILOs are embedded in select three-credit academic courses, as well as fourth year capstone courses. Courses are identified as meeting an ILO based on a substantive alignment between the ILO foci and the course description and course learning outcomes. As described under *Shared Rubrics* (Table 2.2). Foci Tools are used to help faculty determine whether a course meets the requirements for an ILO.

Each bachelor's degree program has a program curriculum map that includes the ILO courses, a high impact practice course, and a capstone course, as part of the university's general education model. The process of curriculum mapping provides a visual representation of the program curriculum, including how courses contribute to students' learning, and facilitates course assignment and assessment design to support achievement of program and institutional learning outcomes. Therefore, course-embedded assignments are a logical source of data for assessing student achievement of ILOs.

Course-Embedded Assignment Selection

In each ILO Pod, faculty identified a relevant course-embedded assignment where students were likely to demonstrate the ILO rubric criteria. A variety of assignments were chosen including: written, round table discussion notes, video-recorded presentations using PowerPoint, posters, and visual diagrams.

To allow for adequate assessment of an ILO, it is pivotal that the assignment includes sufficient opportunities for students to demonstrate the rubric criteria. In some courses, demonstration of ILO criteria occurred across multiple assignments or assignment components. There were practical limits on the number of assignments that could be assessed; therefore, we relied on each ILO Pod to collectively decide assignment selection and interpretation of results.

Student Consent

To retain ethical integrity of the SAIL research project and align with the six principles for learning outcomes and assessment (specifically, e*quitable and learner-centered)* it was important to ensure informed consent from the study participants – *the students*. All efforts were made to avoid coercion of students, and protect them from any potential harm that may result from participating in the pilot.

The SAIL Coordinators consulted with the student union, privacy, ethics, and the faculty co-investigators to collaboratively design the consent request. We also sought the university's Research Ethics Board approval (REB No. 102,637).

The results of SAIL are intended to support teaching and learning at the institutional, program, and course level and it is our hope that future students will benefit from the impact of SAIL.

Opt-in or Opt-out Student Consent

Within legislative and local privacy and ethical guidelines, students assignments can be accessed and assessed by faculty and institutions for program improvement via either an opt-out or opt-in model. Both approaches were trialed during the SAIL pilots with an opt-in during Pilot #1 and opt-out during Pilots #2 and #3. Following consultations with student representatives, departments, and privacy and ethics offices, and based on our experience during Pilot #2 and #3, we highly recommend the opt-out approach for anyone considering implementing a SAIL initiative.

Pilot #1 – Opt-in

In 2020-21, we piloted an opt-in consent process. Students enrolled in participating courses were invited to voluntarily consent to have one of their course assignments assessed by two faculty members who were not their course instructor. Student consent was sought within an ethics and privacy reviewed protocol to collect, anonymize, and assess one course assignment for the pilot project.

The opt-in survey was announced in students' online learning management system (Moodle) and during class. SAIL Coordinators provided a brief presentation, upon request, in some of the classes. Notably, as courses were taught online during Pilot #1, the option of paper permission slips, which have had higher rates of submission and consent at another institution, was unavailable.

The SAIL Coordinatorsanonymized the student assignments by removing any identifying information (i.e., gender identity, sexual orientation, racial/ethnic identity, socioeconomic status, citizenship, place of birth, etc.) and replaced it with categories in square brackets (e.g., [gender identity] or [sexual orientation]). In addition, the students' instructors did not know who consented.

Consent Rate: The overall student consent rate was 14.6 percent (46 out of 316 enrolled students). Response rates ranged from 2.4 to 50 percent across the participating courses. Given the low consent rate, we were not able to draw conclusions about the degree of student achievement of an institutional learning outcome. Instead, we focused our attention on the efficacy of the SAIL process, particularly the community of practice approach.

Pilot #2 – Opt-out

In 2021-22, we piloted an opt-out consent process following consultation with key stakeholders and an amendment to the REB proposal. The opt-out process involved the inclusion of a collection notice in the course syllabus, as well as verbal notice from the course instructor and/or SAIL Coordinators, and an announcement in Moodle. A sample data collection notice is available here: Data Collection Notice (PDF)

To ensure tracking of opt-outs, we created a SAIL email address. The use of a shared SAIL email address also allows for record retention across time and across SAIL Coordinators.

In addition, we sought and received REB-approval to remove the requirement to anonymize course assignments. This change was undertaken so that we could expand the type of course assignments for inclusion in the project based on feedback from Pilot #1. Specifically, removing the requirement to anonymize assignments allowed us to include video-recordings of student presentations. As a result, assessors had access to the course assignments as submitted and thus had access to student names, and other identifying information provided by the student in the assignment. However, students were not identified in any level of reporting (see *Institutional Consultation and Reporting)* and their course instructor did not know who consented.

Consent Rate: The overall student consent rate was 98.9 percent (196 out of 198 enrolled students). This highly representative sample allowed for a random subset to be selected and assessed in all courses with over 10 students with reasonable confidence that students were well-represented.

Random Selection from Consented Artifacts

In all courses with over 10 students, a random selection of students' artifacts were assessed. In courses with fewer than 10 students or in the case of Pilot #1 where fewer than 10 students opted-in, all available student assignments were included in the assessment stage.

The use of random selection of students is intended to reduce sampling bias and produce a generalizable sample and reasonable workload for faculty. General trends would be discernible for the cohort based on the random sample as is used for the AAC&U VALUE Rubrics (e.g., Turbow & Evener, 2016).

Note that inter-rater reliability was not computed for Pilot #1 due to sample size and for Pilot #2 due to qualitative feedback strongly suggesting limitations in the ratings. Future iterations of SAIL are anticipated to consider this limitation. See the section on *Institutional Consultation and Reporting* for more information regarding inter-rater reliability and potential solutions for producing meaningful and educative aggregate reports of student achievement of institutional learning outcomes.

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4.

Assessor Training

Assessor Training is delivered by the SAIL Coordinators. Within the Coordination Team are trained faculty members. This team-based facilitation leverages the strengths of quality assurance practitioners who bring a “deep knowledge of internal and external educational policies and processes, project management skills, access to resources, and familiarity with curricular governance systems” (Hoare et al., 2022); and, educational developers and teaching faculty who bring knowledge of enhancement of teaching effectiveness, assessment design, research on teaching, teaching and learning theory and practice, facilitation skills, and understanding of collegial governance (Sharif, et al., 2019; Steinert, 2016; Wilcox, 1998).

Assessor Training is customized for each ILO Pod and is roughly two hours. Below are instructions for SAIL Coordinators to facilitate *Assessor Training* with participating faculty members (Table 3.1).

Table 3.1 Assessor Training

Duration	Activity	Resources
15 min.	**Review the ILO Rubric with ILO Pod members.** Are the categories and descriptions (rows) clear? Are the levels (columns) sufficiently distinct?	Rubric – Lifelong Learning (PDF), Rubric – Social Responsibility (PDF), Rubric – Critical Thinking and Investigation (PDF)
15 min.	**Review the sample assignment and description.** Are all of the categories evident in the assignment description? Can the categories be assessed using the rubric?	Sample Assignment: A public (non-confidential) assignment sourced from institutionally posted examples online.
15 min.	**Review the ILO Rating Sheet.** The Rating Sheet is used to track the results of multiple students depending on the sample size used for the SAIL project (e.g., $n = 10$). Note the level of achievement for each category in the rubric for each student. Indicate any categories that were not applicable with "N/A". Provide a brief description of each student's strengths (e.g., efficient strategies for seeking information). These strengths will be themed across the sample of students. Provide a brief description of an area to develop further (e.g., limited ambiguity addressed). These areas for further development will be themed across the sample of students.	Lifelong Learning Assessor Rating Sheet (PDF)
30 min.	**Practice using the forms.** Individually, faculty practice using the ILO Rubric and Rating Sheet with the sample assignment provided.	Sample Assignment, ILO Rubric, ILO Rating Sheet
30 min.	**Within the ILO Pod, debrief the activity and provide feedback on the ILO Rubric.** For each category, faculty members share the ratings that they chose for the sample assignment, as well as the strengths and areas for further development. Was there consensus in ratings among the ILO Pod? If not, discuss the different assessment ratings. Are any of the categories difficult to assess? What made it difficult? Are any of the categories clear or easy to assess? What made it easy? Are the levels easy/difficult to differentiate? Are there any changes that you would make to the rubric?	
15 min.	**Wrap up and discuss next steps.** Remind the ILO Pod members of the deadlines for uploading the student artifacts to Moodle, for assessing their peers' artifacts, and for submitting the completed ILO Rating Sheets for their peers.	Moodle Site (including where to upload ratings, templates and deadlines).

Based on our experience delivering five *Assessor Training* sessions across two pilots, we suggest that future iterations allow for a longer training session with time to begin assessing course assignments and discuss initial ratings. This extended session was suggested by faculty as a way to further collegiality and improve inter-rater interpretation. Considerations for confidentiality about student artifacts and who contributed to the sample will need to be attended to as faculty would be able to recognize which students participated from their course. Suggestions for improving *Assessor Training* are discussed further under *Future Considerations*.

5.

Assessment of Student Learning

Each faculty member engaging as a co-researcher with an ILO Pod is responsible for assessing two of their peers' course assignments.

Faculty are provided a random sample of course assignments. The sample size can vary by ILO Pod. For example, an ILO Pod may collectively decide to assess 10 assignments, while another ILO Pod may choose to assess 15. Typically, ILO Pods opted for 10 random course assignments selected from each course, requiring that each faculty member assess 20 course assignments using the shared rubric.

Depending on the faculty members' experience with using rubrics, their familiarity with the discipline they are assessing, and the relevance of the rubric to the course assignment design, it can take between 15 and 30 minutes to assess each assignment. In Pilots #1 and #2, faculty conducted the assessment during a time of their own choosing, rather than simultaneously with their peers, and submit their ratings by a pre-determined deadline. In Pilot #3, to address challenges with inter-rater reliability, peers assessed student assignments during a two-day assessment institute with multiple comparison checks (Hoare et al., *forthcoming*).

The following instructions are provided to faculty members to guide them through the assessment of selected course assignments (Table 4.1).

Table 4.1 Assessor Instructions

	Instructions
1. Review the rubric	• Are any of the descriptions unclear? • Are the levels (*beginning*, *developing*, *meeting*, *exceeding*) sufficient for the course assignment being assessed?
2. Review the assignment description	• Are the categories (rows) relevant to the assignment?
3. Assess the assignments using the rubric and rating sheet provided	• Provide your rating, and identify strengths, and areas for the student to further develop using the Assessor Rating Sheet (PDF). • Which level (column) did the student achieve for each criteria (row)? • Indicate any criteria that is not applicable as "N/A". • Provide a brief description of a strength. These strengths will be themed across course assignments. • Provide a brief description of an area for the student to further develop. These areas will be themed across course assignments.
4. Provide feedback on the rubric	• Are any criteria or descriptions difficult to assess? If so, what made it difficult? • Are any criteria clear or easy to assess? If so, what made them clear? • Do you have any suggestions for improving the rubric?

The Assessor Rating Sheet provides assessor ratings for 10 course assignments with each column representing a student, and each row the rating, a strength, and an area to further develop. *Strength* and *Area to further develop* descriptions are brief and often informed by the rubric descriptions. The fourth section of the Assessor Rating Sheet gathers insightful feedback that helps to inform *Debrief* discussions and improvements to SAIL.

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6.

Debrief

A collaborative self-study approach, including co-researcher focus groups ("Debrief"), is employed to provide the opportunity for guided reflection on the experience. Additionally, the Debrief is a qualitative evaluation technique that can be used to capture faculty members' perceptions of the efficacy of using institutional rubrics as part of the action research *SAIL Planning Cycle*.

The Debrief is scheduled for 90 to 120 minutes, depending on group size, and engages faculty co-researchers in a reflective assessment of the SAIL process, and overarching *Research Questions* that ask about the efficacy and utility of the institutional rubrics and results. In addition, the Debrief gathers feedback on the alignment of the project with the six principles for learning outcomes assessment. Information gathered during the Debrief and from the written feedback during the assessment of learning process, is used to inform recommendations for future action research cycles.

Semi-Structured Debrief Prompts

The Debrief Prompts (listed below) are organized according to three themes aimed to address the two research questions and whether the SAIL method followed a principles-focused approach. The semi-structured prompts are intended to guide the conversation; however, space is created for dialogue to flow in the direction that faculty members deem important. The Faculty Debrief Questionnaire (PDF) for conducting the Debrief focus group is also available for easy download.

Focus Groups: Semi-Structured Debrief Prompts

Opening

How was your overall experience of the process, the rubric, the assessing, and the course-specific report?

Potential Prompts:

- In what ways were they useful?
- In what ways were they not useful?
- Was the course-specific report readable/clear?
- What are insights from the results for improving your course going forward?
- What are insights from the process for improving your course going forward?

Theme 1: Efficacy of institutional rubricsfor assessing and demonstrating the degree of student achievement of ILOs in ILO-approved courses

- How effective were ILO rubrics for understanding student achievement of the ILO?
- How about at the program and course level?In what ways was the rubric effective?
- In what ways was the rubric not effective?

Theme 2: Utility of processfor informing curriculum and learning planning and practices to continuously improve student learning

How useful are the results that you/faculty received as part of the pilot project for informing curriculum changes?

- How feasible is embedding institutional rubrics in ILO-approved courses? Prompt for perceptions related to their usefulness, meaning, integrity, and adaptability?
- What is the likelihood of colleagues/other faculty members adopting the institutional rubrics?
- What is the scalability of this process?
- What would help with sustainability (e.g., ongoing community, consistent interface)?
- Next steps and future considerations:
    - What to keep doing?
    - What to try next?

Theme 3: Alignment with Principles for Learning Outcomes and Assessment

3.1. Equitable and Learner-centred

- How well did the process and rubric reflect (and represent) the diversity of student learning?
- Does the rubric privilege one or more ways of knowing?

3.2. Growth and Learning-oriented

- How can we maintain a growth focus?
- How can we maintain an environment in which faculty feel safe, with a focus on formative improvement for learning?
- How can we be transparent with students?

3.3. Purposeful and Holistic Design

- Did the rubrics feel like they reflected the ILO you were assessing?
- How well did the process and rubric reflect authentic assessment?
- How can we best assess teams-based learning going forward?

3.4. Ongoing Cyclical Improvement

- How credible did the rubric feel? How credible did the process feel? Any concerns about the process?
- How could the process be made more sustainable?
- Did the process feel clear, transparent, and collegial?

- Are rubrics a viable approach?

3.5. Faculty-designed for Learning

- How well did the assessment approach reflect the work and knowledge of your/the discipline?
- How well did the assessment approach align with existing governance structures and faculty-led teaching and learning?
- What was it like having a colleague evaluate your students' work? Would it be the better/same/worse if you assessed the students? Why? Would the rubrics be relevant to grading? Or would it be best to keep separate?
- What would collegial reporting and sharing look like?

3.6. Reflexive Approach to Learning

- How useful is this process for intentionally reviewing and using assessment data to inform teaching and learning changes?
- How supportive is this process for continuous improvement through creative inquiry and curiosity?
- Are the results received as part of the pilot project process useful for informing curriculum changes?

Interpretation of Faculty Responses and Creation of Final Report

The Debrief is facilitated by a SAIL Coordinator. During Pilot #1, we hosted a joint Debrief that was inclusive of all ILO Pod members. During Pilot #2, we hosted a separate Debrief for each ILO Pod due to difficulties finding a mutually available time. During the Debrief, one of the SAIL Coordinators recorded the faculty responses in a shared document. Figure 3 graphically depicts the methodology used for interpreting the faculty responses gathered during the Debrief as well as how the data contributes to the creation of a SAIL Pilot Final Report.

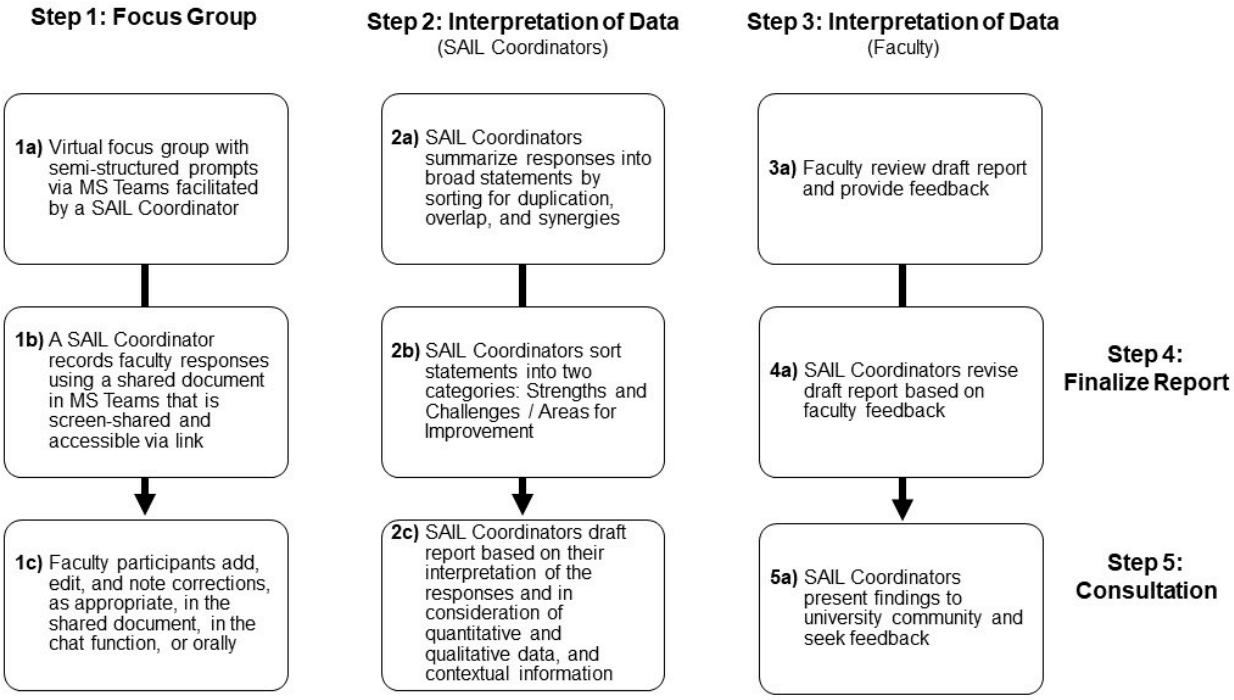

Figure 3. Debrief Methodology and Creation of Final Report (Hoessler & Hoare, 2022)

Following the Debrief, the SAIL Coordinators collaboratively reviewed the recorded responses and completed the following steps to interpret the data collected:

- organized responses by the three themes described in the Debrief questionnaire;
- summarized responses into broad statements by sorting for duplication, overlap, and synergies;

Note: Considering the small size of the focus groups (n = 4 to 12 faculty members), all of the comments are included in this step, even if there are contradictory statements. Competing perspectives are later contextualized based on additional data gathered during the *SAIL Planning Cycle*, and outliers are critiqued and clarified during the faculty feedback, community consultation, and final reporting stages.

- sorted statements into 1) Strengths and 2) Challenges/Areas for Improvement;
- incorporated quantitative analysis of student consent rates, descriptive assessor ratings, and relevant contextual information that emerged during the pilot (e.g., internal and external environmental factors such as the global pandemic, participation rates of faculty in ILO Pod activities, time delays);
- drafted a summary report, including recommendations based on the SAIL Coordinators' interpretation of the faculty responses in the context of the additional quantitative and

qualitative data, and environmental factors;

- shared, via email, the summary report with faculty and provided an opportunity for faculty to edit, comment, and clarify findings using track changes;
- revised the report based on faculty feedback; and,
- initiated the Consultation phase.

See *Institutional Consultation and Reporting* for more details regarding the Consultation phase, including a description of the knowledge dissemination channels at the course, departmental, and institutional level.

7.

Reflection and Iterations

SAIL is a formative assessment practice focused on improving student learning. Assessment practices used for formative purposes are underpinned by an engagement ethos and include multiple triangulated measures, including both quantitative and qualitative, that are tracked over time. Assessment measures used for improvement stem from an established goal or objective that is defined by members of the community, and multiple communication channels and opportunities for dialogue exist, so that results can be used to stimulate change (Ewell, 2009). SAIL incorporates several avenues for scholarly knowledge dissemination both within the university as well as external to the university to promote scholarly teaching and the scholarship of teaching and learning.

Reporting the Degree of Student Achievement of Institutional Learning Outcomes

Reporting of ILO-assessment findings occurs at three levels:

- **Course-level** with a focus on using the results from a SAIL project to inform changes to course, assignment, and/or assessment design;
- **Program- or departmental-level** with a focus on improving program learning outcomes through an effective, ongoing, and regular system of assessment. This is greatly facilitated when programs have clearly articulated program learning outcomes and curriculum maps; and,
- **Institutional level** with a focus on documenting and demonstrating, at a high level, student achievement of ILOs.

Course Report

As previously mentioned, reporting at the course-level is focused on using the results from a SAIL project to inform changes to course, assignment, and/or assessment design. Faculty co-researchers are provided with a course-specific report for their own use to reflect on and consider improvements to student learning. We recognize the central role of faculty to establish curricula, assess student learning, and improve educational programming. Therefore, the first level (i.e., the faculty members' course) is the primary focus of any SAIL project.

Here is a Sample Course Report – Lifelong Learning (PDF) that faculty members receive from their peers. This example reflects results from a single assessor (faculty peer) who assessed a random sampling of 10 students.

Programmatic or Departmental Report

The second level is focused on improving program outcomes through an effective, ongoing, and regular system of assessment. To inform program-level planning, Deans and Chairs may be provided with an aggregate report based on the results of each ILO assessed within their department during a SAIL pilot. If there are sufficient faculty co-researchers from one program (e.g., Bachelor of Arts, Bachelor of Education) then a program-level report can be produced that provides aggregate results from multiple courses or sections of courses within a program that meet an ILO.

If only one course is assessed within a department, an aggregate report is not provided because the focus of SAIL is ***formative assessment for*** student learning and we want to avoid any potential for the evaluation of individual faculty members. During Pilots #1 and #2, we did not have sufficient representation from one program to produce a program-level report.

Institutional Report

Similarly, an institutional aggregate report based on the results of each ILO assessed during the SAIL pilot may be disseminated within the university if the SAIL Coordinators and faculty co-investigators determine that there is sufficient data to reliability demonstrate the degree of student achievement of the ILOs assessed.

Cautionary Considerations for producing Aggregate Reports

Within the pilot phase, comments were raised about the comparability of results, scalability of the process, and the level of interpretation of assessors which could impact inter-rater reliability.

Course reports provided the ratings and comments as submitted. Interpreted alongside strengths and areas for further development, the course reports provide faculty with insights into the level of ability of their students. However, discussions during the *Debrief* and *Assessor Training* reflected nuanced differences in interpretation of the rubric criteria and the descriptions when applied to specific assignments across courses. What appeared as differing ratings may be a result of differing interpretations of the rubric criteria.

At this stage, the assessor ratings were more qualitative than quantitative based on *Debrief* discussions as interpretations varied, and cannot, at this time, be aggregated — *Akin to how the average of two apples and three pears is not two-and-a-half apples; two scores (the apple score and the pear score) are based on different concepts and thus cannot be aggregated.*

To improve the value of reporting, we suggest two options:

> **1. Emphasize Qualitative Descriptions:** We can focus on enhancing the qualitative contextual conversations within the ILO Pods about the assignment ratings and course reports. When there is variability in interpretation, there is a basis for interesting and insightful discussion that can inform both the faculty members' ratings and their peers' teaching. Leaning into these structured dialogues, encouraging faculty to discuss assignments and what they see in those specific assignments, could further course redesign and reflective teaching practice towards better student learning.
>
> **2. Seek Numerical Consistency:** We can seek consistency in course level, assignment type, and between raters to further a numerical-consistent score that could be aggregated (i.e., numerically representative of a single understanding). Aggregatedassessors' scores that can be averaged, summed, and compared over time, need to represent a single consistent understanding applied to all

assignments. Often called “inter-rater reliability”, consistency requires that two raters arrive at the same score. Consistency is also necessary for validity. This requires that the descriptions and criteria are understood to mean a single concept regardless of discipline, assessor, and context. For examples of inter-rater reliability focused assessment see Simpler et al. (2018) and Turbow and Evener (2016).

The pilots also included a range of course levels from first through fourth year, as such we would expect to see a range of skills across course assignments within an ILO Pod. To capture this range when evaluating across years we must look for appropriate ***progression***, not solely student ***achievement***.

A comparison of options for adapting assessment of ILOs to an intended purpose is described below (Table 5.1). Note that the purposes are not mutually exclusive and could be sought within a single program or in parallel offerings within an assessment of learning outcomes ecosystem.

Table 5.1 Adapting Assessment of ILOs to Intended Purpose

Purpose of Assessing ILOs	**Approaches to Adapting**
Focus on measuring and comparing over time achievement at the highest course level	***Collection*****:** only upper year courses
	Assignments**:** similar or consistent assignments (e.g., capstone portfolio, written reports)
	Assessing**:** focus on inter-rater reliability with mid-assessment checks-ins and feedback discussions; can be faculty colleagues or research assistants
	Coordinator Task**:** improve reliability, validity checks, and aggregate report creation
Focus on faculty interactions to support peer feedback and course redesign through facilitated conversations within an ILO Pod	***Collection*****:** any relevant ILO course
	Assignments**:** any relevant assignment
	Assessing**:** focus on faculty engaging in collegial review of student assignments, documenting ratings and comments; structured discussions should focus on surfacing contextual factors that may impact assessor ratings or student performance with an emphasis on formative learning and reflection towards course redesign; recommended to be faculty colleagues
	Coordinator Task**:** facilitating discussions, creation of structured time and space for dialogue, walking with faculty through the process of reflection and change and further review; working with faculty to contextualize findings and celebrate/report on changes to courses
Focus on student-driven curation and sense-making	***Collection*****:** any relevant ILO course with significant experience or prior experience, typically capstone
	Assignments**:** portfolio or reflection-based assignments that invite students to curate, present, and contextualize evidence of their ILO achievement or learning
	Assessing**:** focus on confirming achievement with notes about nuances in strengths and weaknesses noted by the student or present in their work; can be rated by faculty teaching the course, by colleagues, or by research assistants
	Coordinator Task**:** collecting examples of assignments by committee; identifying with faculty relevant courses and assignments; providing assessor training; working with faculty to contextualize findings; provide encouragement/feedback to students; celebrate/report on changes to courses or programs

If we seek to investigate student ***achievement*** alone then we suggest modifying SAIL to include capstone

courses or final year courses as the defining student artifact, as was piloted in the third action research cycle. In addition, attention should be given to the overarching *Research Questions*, including whether the research questions should be modified to include investigation of student progression in addition to student achievement of institutional learning outcomes.

Ensuring reflection and interaction with the *how* and *why* of results takes time both for the faculty members involved and for the process of implementing changes in teaching and learning. While it can be considered resource intensive, change in dozens of courses by dozens of people learning and creating takes time.

Finally, for scalability and consistency, we suggest shortening the time between training and assessment, incorporating a mid-assessment check-in or two-day assessment institute as was piloted in the third cycle, and discussion of ratings to improve consistency and viability for faculty members.

It is also possible to include trained research assistants in a SAIL pilot. Research assistants can rate additional assignments thus removing time constraints placed on faculty, and provide feedback to instructors for review and contextualization.

Iterative Action Research Cycles

Critical reflection is embedded in the SAIL process. Feedback during the *Debrief* on the efficacy and utility of the process are incorporated into a summary report or presentation, which includes recommendations for future iterations of SAIL.

In Fall 2021, the SAIL Coordinators engaged in a fulsome consultation process to gather feedback on the findings and recommendations from Pilot #1. The consultation included presentations to faculty councils and curriculum committees and the student union. In addition, an online survey was distributed through multiple channels. Results from the Fall 2021 consultation informed the second iteration of SAIL. For example, based on the feedback we received, we modified the student consent process (from opt-in to opt-out) to address low consent rates, selected a different platform (from MS Teams to Moodle) to increase efficiency and usability, and sought greater disciplinary diversity and variability in course assignments (e.g., oral presentations, round table discussions, projects) to test the efficacy of rubric-based assessment.

Findings from Pilot #2 suggested that we need to explore methods to modify and enhance ILO Pod discussions to improve inter-rater reliability to ensure consistency in ratings using the shared rubric, and explore the impact of context on the ratings.

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8.

Course (Re)Design Implications

Value of Peer-to-Peer Feedback

SAIL follows the classic curriculum improvement principles of being faculty-driven, educational developer supported, and data informed (Wolf, 2007). Most importantly, SAIL incorporates the wealth of rich experiential and theoretical expertise of faculty within a postsecondary institution.

Evidence-based practice suggests that peer review is most effective when it follows an iterative and reflective process designed to improve teaching (Chism, 2007; Hyland, et al., 2018; Keig, 2000). Formative peer feedback and opportunities for peer-to-peer learning were identified as the greatest strengths of SAIL by faculty participants in Pilots #1 and #2. SAIL's developmental, faculty-led approach has been shown to foster trust, collaboration, and cross-disciplinary conversations, and to support a reflexive approach to learning (Hoessler et al., 2023).

> *I think it's super important to team teach, collaborate with co-workers etc. This pilot program has been a very big learning opportunity for me to learn from peers and also to mentor some junior members.*
>
> – Faculty member, Pilot #1

Faculty members' feedback highlighted the sensitive nature of teaching. One faculty participant commented that it was a "little nerve-wracking to have a peer assess your students' work. It felt a bit like a performance evaluation" (Pilot #2). The past couple of years were noted as especially challenging due to the global pandemic. Faculty reflected upon feeling vulnerable and forced to take risks in their teaching as they rapidly pivoted to remote learning. This highlights the importance of building trust within the ILO Pods.

Implementing a community of practice approach needs to be done with care. Significant attention should be given to building an environment in which faculty feel safe to share, be vulnerable, and take risks with their colleagues. We believe that adequate time spent together in the ILO Pods is, therefore, critical to success.

> *Favourite part of the process was the collaborative rubric design, reflecting together, debriefing together, building a community of practice in an interdisciplinary team. Build in more opportunities to collaboratively assess assignments and debrief!*
>
> – Faculty member, Pilot #1

> *I did crave the opportunity to return to the student work and discuss it with the assessors. I think that would help me think through how I might improve the assignment (but this was not possible under the REB approval).*
>
> – Faculty member, Pilot #2

To increase the time spent together while ensuring the time is well-spent, we suggest that future iterations of SAIL consider running ILO Pods on a three-semester cycle where faculty plan and develop their course in the first semester, deliver and assess their course in the second semester, and review and revise their course in the third semester all while maintaining the supportive environment of their ILO Pod.

Impact on Teaching Practice

During the *Debrief*, faculty noted several opportunities for improving their teaching practice, such as: revising course assignments to more intentionally address an ILO, mentoring junior faculty members within their department, using the rubric as a pedagogical tool to teach students about the skills they are learning, and modifying assignments to push students from strategic thinking to action, just to name a few.

> *I think this process was very helpful and insightful. As a co-op team, my recommendation is for us to review/revise curriculum so we can adjust and align better. Through developing the rubric and seeing what the institutional learning outcomes are, I see where there are ways to improve. I would like to take our course back to the drawing board and ask those tough questions about how it aligns with the rubric and overall ILO for Lifelong Learning.*
>
> – Faculty member, Pilot #1

Hutching et al. (2013) argue that effective assessment requires processes that produce evidence that is "credible, suggestive, and applicable to decisions that need to be made." This further requires that consideration is made in advance about how the assessment results will be used, by whom, and for what

purpose. Therefore, careful consideration is given to the level of reporting (i.e., course, departmental, institutional) and the primary usage of results (i.e., formative or summative). These decisions take place within each ILO Pod and are based on consensus among the participating faculty members.

> *Assessing outside one's own discipline was challenging but assisted by having assignment instructions. This relates to your point about inter-rater reliability; key terms in the rubric descriptions can be interpreted differently by discipline. I would endorse ongoing reflection on the breadth of the rubrics to ensure inter-disciplinarity.*
>
> – Faculty member, Pilot #2

> *The opportunity to think more deeply about your assignment was valuable. The intentional thinking time was so valuable. I appreciated the facilitated process. It makes you think about how much of a priority Social Responsibilityis in the curriculum at the course level and how important your role is in helping students meet the program and institutional learning outcomes.*
>
> – Faculty member, Pilot #2

> *ILOs at TRU are still new to us. I did not but will in future have a more specific intention in my assignments to achieve certain foci. Then a SAIL assessment could focus on those foci only.*
>
> – Faculty member, Pilot #2

SAIL provides faculty with the data and words to communicate information about student learning. It helps them to name expectations for learning and communicate those expectations to students. It helps them to determine the extent of student learning and then strategize how to close the gap between expectations and results.

> *I felt inspired by the students' assignments that we had to review and I'm motivated to incorporate those ideas into my own class.*
>
> – Faculty member, Pilot #2

> *Using course assignments is valuable because it is organic, even if it only captures part of a course.*
>
> – Faculty member, Pilot #2

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II

Research-Informed Design

From the beginning, SAIL was designed as a research-informed process that fosters scholarly teaching and promotes the scholarship of teaching and learning within and beyond the university; and follows a principled-approach (Thompson Rivers University, 2022):

1. Growth and learning-oriented
2. Equitable and learner-centred
3. Faculty-driven
4. Ongoing cyclical improvement
5. Purposeful and holistic design
6. Reflexive approach to learning

Action Research

To address the research questions about the efficacy and utility of shared ILO rubrics and assessment results, we chose to apply an action research design because action research engages faculty in systematic, reflexive enquiry into practice about student learning. Action research cycles, common to educational research, are focused on generating solutions to practical problems and the subsequent development of activities to improve outcomes across multiple cycles (Koshy et al., 2010): the findings of which can contribute to the scholarship of teaching and learning.

As part of the action research, we prioritized the use of qualitative methods. In particular, we applied collaborative self-study and focus group techniques, rubric-based descriptive assessments, and community consultations that included a mixed-methods survey and presentations to elicit feedback. Finally, we included some initial quantitative descriptive analysis of consent rates.

SAIL has always been and continues to be an iterative faculty-led process – hallmarks to SoTL research.

The SAIL research design fits within a subcategory of the Scholarship of Teaching and Learning (SoTL) called the Scholarship of Curriculum Practice (SoCP), which “uses an inquiry-based approach to gather data to better understand the curriculum, form the basis of evidence-informed discussions, and potentially lead to curriculum renewal.” (Huball & Gold, 2007).

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9.

Research Questions

The purpose of SAIL is to informimprovements in curriculum design with the ultimate goal of improving student learning, as well as contributing to broader conversations on teaching and learning within the field of educational research.

SAIL aims to align with the collegial culture and institutional values of a university, government regulations, and programmatic standards of accreditation.

SAIL is underpinned by a collective desire to bridge quality assurance and educational development so that the processes have educational value for faculty members.

With these guiding ideals in mind, SAIL aims to investigate two overarching questions:

Question 1: What is the efficacy of institutional rubrics for assessing and demonstrating the degree of student achievement of institutional learning outcomes (ILO) in ILO-approved courses?

Question 2: To what degree can the assessment results be used to inform learning support planning and practices to continuously improve student learning outcomes?

In sum, the research investigates a faculty-led, community of practice approach for designing, implementing, and evaluating student achievement of ILOs using a shared rubric and collegial assessment of student learning and feedback.

10.

Methodology

Research Ethics Board Approved

SAIL received Research Ethics Board approval in February 2021. In February 2022 and 2023, SAIL was renewed with amendments. (REB No. 102637)

Action Research Design prioritizing Qualitative Methods

We chose to apply an action research design because it has long been considered a method for improving practice (Koshy et al., 2010; Reason & Bradbury, 2008). Action research involves systematic enquiry into practice that incorporates action, evaluation, critical reflection, and changes to practice. It is focused on generating solutions to practical problems by engaging practitioners in research and the subsequent development of activities to improve educational outcomes.

The approach is participatory and democratic in nature (Carr & Kemmis, 1986) and was therefore intuitively appealing considering the principles and values that underpin our approach to learning outcomes and assessment.

Action research is based on a series of action planning cycles, which typically involves some variation of *planning*, *acting*, *observing*, *reflecting*, *re-planning*, *acting*, and so forth (Kemmis & McTaggart, 2007). We adapted and expanded upon this series to include elements of educational development and community-building (Figure 1).

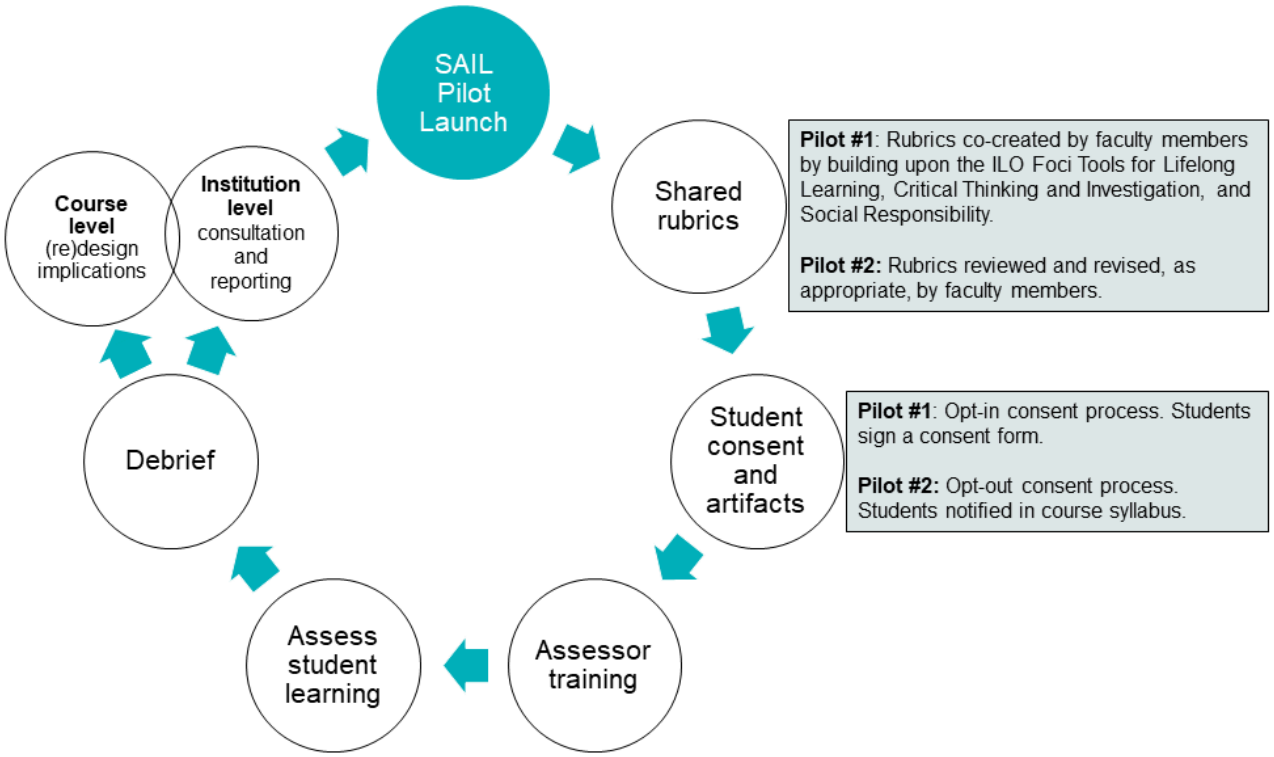

Figure 1. SAIL Planning Cycle (Hoessler & Hoare, 2022)

Below is a high-level summary of the steps in the SAIL action planning research cycle. Once the faculty-led communities of practice ("ILO Pods") are formed for each of the ILOs being assessed the following steps are undertaken:

1. Pilot launch including planning, preparation, and recruitment of faculty co-investigators.
2. Development (or refinement) of shared institutional rubrics.
3. Identification of appropriate student artifacts (course assignments) for assessment using the rubrics; and, notification to students of consent process.
4. Faculty participation in *Assessor Training* delivered by an educational developer and quality assurance practitioner.
5. Faculty assessment of peers' assignments using the rubrics and rating sheets.
6. Participation in focus groups ("Debrief") led by SAIL Coordinators to determine the efficacy of the SAIL pilot project.
7. Findings and recommendations drafted, reviewed, and publicly disseminated within and beyond the university.
8. Faculty review and discussion regarding peers' assessment and feedback of student learning; and modification of courses, as appropriate, based on feedback received.

In addition, we applied several qualitative approaches, which are listed below and described in greater depth at the following links:

1. Focus groups (“Debrief”)
2. Rubric-based descriptive assessments (“Assessor ratings”)
3. Community consultations, including a mixed-methods survey and presentations to elicit feedback

Finally, we included some initial quantitative descriptive analysis of consent rates, which appear more prominently in the third action research cycle (Hoare et al., *forthcoming*). Note that SAIL was originally designed to incorporate a quantitative analysis of rubric-based assessor ratings to produce aggregate reports of student achievement of the ILOs; however, upon review of the qualitative data, we discovered limitations to interpreting the quantitative results in Pilots #1 and #2, and which were addressed in Pilot #3 based on findings from earlier pilots. To provide aggregate reports we assert that the reliability of the assessor ratings needs attention, including focused training as part of *Assessor Training*. We discuss this limitation further under “Cautionary Considerations for producing Aggregate Reports“.

Communities of Practice: “ILO Pods”

SAIL involves communities of practice (“ILO Pods”) of co-investigators who plan, discuss, and learn about assessment of institutional learning outcomes. A community of practice is formed when a group of people want to share common experiences and knowledge that are related to a particular area of expertise. Communities of practice are organized around what matters to people (Wenger, 1998). The concept originated in learning theory and has been used successfully to create learning systems in higher education (for example, see Bosman & Voglewede, 2019).

The three main characteristics of communities of practice are: 1) a shared domain of interest or competence that is distinct from other domains, 2) community engagement in shared activities that support relationship building and learning, and 3) the practice of the practitioners as the focal point of the activity (Wenger et al., 2002).

Figure 2 depicts the community of practice approach via interdisciplinary ILO Pods that was adopted to assess the degree of student achievement of institutional learning outcomes (sometimes referred to as graduate attributes or transferable skills).

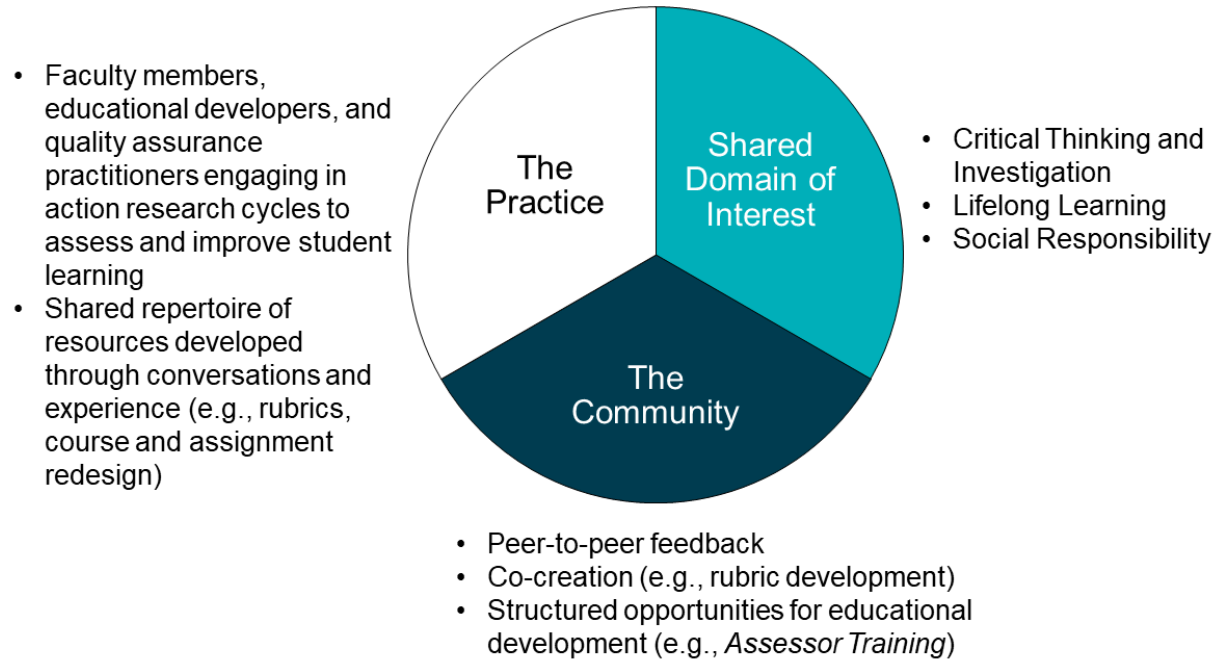

Figure 2. ILO Pods (Hoessler & Hoare, 2022; adapted from Wenger, 2015).

When faculty members were asked what the greatest strength of the SAIL pilot was, they agreed that the opportunity to collaborate across disciplines with colleagues was the most valuable aspect of the pilot. Faculty valued the ILO Pod format (particularly the small group feedback) that was used to collectively assess student learning. They described collaboratively designing the rubric and reflecting upon assessment as highlights of the experience. Faculty found their peers' interpretation of an ILO and how it was taught across multiple disciplines insightful; therefore, the interdisciplinary design of the ILO pods was perceived as an asset. Faculty appreciated the collaborative adventure as part of the co-creation of rubrics and missed the community when assessing assignments individually.

Co-Investigators

Faculty members participating in the research project join the research as co-investigators and contribute to the research design, implementation, and assessment of the effectiveness of the research methodology.

In 2020-21, a total of twelve faculty members engaged as co-researchers in SAIL and formed three ILO Pods (Social Responsibility n = 4; Lifelong Learning n = 4; Critical Thinking and Investigation n = 4). Six disciplinary perspectives were represented in the first pilot: tourism management, sociology, education, cooperative education, social work, and communications and media. In addition, faculty from the disciplines of biology and nursing participated in the development of the rubric for Lifelong Learning to ensure a diversity of disciplines were reflected in the development of each rubric.

In 2021-22, nine faculty members engaged as co-researchers and formed two ILO Pods (Lifelong Learning n = 4; Social Responsibility n = 5). Five disciplinary perspectives were represented in the second pilot: cooperative education, geography, business, social work, and sociology.

In 2022-23, four faculty members engaged as co-researchers and formed two ILO Pods looking at both Communication and Critical Thinking and Investigation. Four disciplinary perspectives were represented: social work, education, tourism management, and natural resource science.

Student Artifacts and Participation

Considering that the study aims to assess student achievement of ILOs, the study participants are students enrolled in courses taught by participating faculty members.

Student Consent

During the first iteration of SAIL, we piloted an opt-in process. Students enrolled in participating courses were invited to voluntarily consent to have one of their course assignments assessed by two faculty members who were not their course instructor. Student consent was sought within an ethics and privacy reviewed protocol to collect, anonymize, and assess one assignment for the pilot project. In addition, students' instructors did not know who consented.

The overall student consent rate was 14.6 percent (46 out of 316 enrolled students). Response rates ranged from 2.4 to 50 percent across the participating courses. Given the low consent rate, we were not able to draw conclusions about the degree of student achievement of an institutional learning outcome. Instead, we focused our attention on the efficacy of the SAIL process, particularly the community of practice approach.

During the second iteration of SAIL, we piloted an opt-out process following an amendment to the REB proposal and consultation with the university's Privacy Officer, Ethics Officer, and Student Caucus. The opt-out process involved the inclusion of a collection notice in the course syllabus, as well as verbal notice from the course instructor and/or SAIL Coordinators, and an announcement in the learning management system. The overall student consent rate was 98.9 percent (196 out of 198 enrolled students).

The third iteration followed the same consent process as described in the second cycle.

More information about the student consent process is available under *Student Consent and Artifacts.*

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11.

Findings

Each *SAIL Planning Cycle* (Figure 1) incorporates opportunities for reflection, collaborative self-study, and debrief. The results of which inform improvements to subsequent *SAIL Planning Cycles.* Below is a description of the findings from the first two action research cycles, including strengths, challenges, and areas for improvement, as well as a description of how the findings informed subsequent iterations of SAIL.

Pilot #1: 2020-21

In 2020-21, faculty members teaching ILO-approved courses engaged as co-researchers. A total of twelve faculty members chose join the investigation and formed three ILO Pods: Social Responsibility, Lifelong Learning, and Critical Thinking and Investigation. Six disciplinary perspectives were represented in the first pilot: tourism management, sociology, education, cooperative education, social work, and communication and media. In addition, faculty from the disciplines of biology and nursing participated in the development of the rubric for Lifelong Learning to ensure a diversity of disciplines were reflected in the development of each rubric. Table 6.1 details a summary of the findings from Pilot #1.

Table 6.1 Summary of Pilot #1 Findings

	Findings
Strengths	• Faculty valued the community of practice ("ILO Pod") approach. • The peer-to-peer feedback was viewed as the greatest strength of SAIL. • Faculty enjoyed the collaborative, exploratory adventure with new colleagues. • SAIL fits well with the university's collegial, teaching-focused culture. • The assessment ratings were perceived to be valuable with actionable results. • Faculty valued the interdisciplinary conversations and insights into different approaches to teaching an institutional learning outcome.
Challenges and Areas for Improvement	• The pandemic and remote delivery of courses may have created barriers to trust-building between faculty and students resulting in a low student consent rate. • Too few students consented to draw conclusions about student achievement of an institutional learning outcome. • The MS Teams platform was cumbersome. • There was a need for earlier assignment selection and indication of which categories (rows) applied to the course assignment and which categories were not applicable. • Timelines for submitting assessor ratings impacted the assignment that was selected. • A standardized, institutional rubric may need to be more general, or require the ability to adapt to disciplinary needs.

Two overarching recommendations resulted from Pilot #1:

1. Postsecondary institutions could benefit from creating faculty development opportunities around interdisciplinary ILO Pods or communities of practice, for each institutional learning outcomes with support from educational developers. Faculty members who teach ILO-approved courses should be encouraged to participate in the ILO Pods to foster peer-to-peer learning and support student learning.

2. Faculty participating in an ILO Pod can use an institution rubric, or adapted rubric, to measure student achievement of an ILO in an ILO-approved course. Using the institutional rubric, two faculty members will peer assess, compare ratings, and reflect on and act as appropriate regarding student learning.

Prior to implementing these recommendations, we determined that it was necessary to engage in additional action research cycles that addressed the challenges posed in previous cycles.

Pilot #2: 2021-2022

The second iteration of SAIL was piloted in 2021-22 and included two faculty-led ILO Pods aimed at assessing student achievement of Lifelong Learning and Social Responsibility during the Winter 2022

semester. Five disciplines were represented in the second study: social work, cooperative education, sociology, geography, and business. Several modifications were made during the second pilot as shown in Table 6.2.

Table 6.2 Adaptations to SAIL Planning Cycle

	Pilot #1	Pilot #2
Student Consent	Opt-in	Opt-out
Student Artifacts (assignments)	Anonymized	Presented as submitted
Platform	MS Teams	Moodle
Assignment Types	Predominantly essays and student reflections	A variety of assignment types including essays, presentations, video-recorded PowerPoint presentations, round table discussion notes, portfolios, and visual diagrams
Rubrics	Developed and tested	Refined and tested
Timelines	December 2020 – May 2021	December 2021 – July 2022 (2 month extension)
Course Delivery Mode	Remote (due to restrictions mandated by Public Health Officer)	Blended, Face-to-Face (due to return-to-campus mandated by Public Health Officer and enforced by the university during the global pandemic.

Pilot #2 affirmed the value of the recommendations that resulted from Pilot #1. However, Pilot #2 identified the need to delineate between tracking student *progression* and *achievement and* consider the use of capstone course-embedded assignments as an additional measure, among other key concepts. Table 6.3 details a summary of the findings from Pilot #2.

Table 6.3 Summary of Pilot #2 Findings

	Findings
Strengths	• The institutional rubric can be used to assess multiple types of course assignments (e.g., essays, presentations, round table discussions, portfolios). • Faculty were inspired by their peers' course assignments, which prompted them to consider alternative ways to assess student learning, as well as to challenge students to push their thinking further (e.g., how to move beyond strategy to action in relation to the Social Responsibility ILO). • Opt-opt consent process was easier and significantly increased the rate of student participation (i.e., from 14.6 to 98.9 percent). • The rubric and assessment ratings can be used as a pedagogical tool to demonstrate to students what they have collectively accomplished and areas for further growth. • The institutional rubrics can be adopted and adapted in any classroom, by any faculty member. • The protected time and space to think more deeply about an assignment design was invaluable. • Faculty found it an enjoyable learning experience and are eager to continue conversations with new colleagues. • The *Assessor Training* was a useful professional development opportunity and has positive implications beyond SAIL. • The change to Moodle with downloaded files was more user-friendly than MS Teams for the assessment stage. However, faculty experienced challenges downloading assignments where there were nested sub-folders. • Using course assignments is valuable because it is organic, even if it only captures part of a course.

Challenges and Areas for Improvement	• There was a time lag between the *Assessor Training* and the assessment of student artifacts. It may be valuable to combine these components into a full-day session, with opportunities to trouble-shoot with the SAIL Coordinators. • The assessment results showed inconsistencies in how faculty were applying the rubric (i.e., concerns with inter-rater reliability). • Faculty craved more structured opportunities to discuss their peers' assessment ratings, and the ability to discuss the patterns they saw when assessing students' assignments. • Some faculty noted overlap in the descriptions and between different categories in the rubric. Consider adding a step at the end of the *SAIL Planning Cycle* to refine the rubric. • The pacing of steps in the SAIL Planning Cycle, particularly the delay between the assessor training, assessor rating, and debrief was too long. • It is difficult to assess student achievement of an ILO using **one** course assignment. It may be valuable to assess **all** course assignments using the rubric. • The course report could be improved by including visuals (e.g., bar graphs or heat mapping to colour-coded tables). • Consider tracking and assessing the impact of SAIL on course redesign and resulting student overcomes. • Faculty noted overlap and similarities between some of the criteria (foci) which made it difficult to distinguish between foci. To improve assessing and interpretation of the ratings, clarity between foci is needed. • Faculty perceived rare alignment issues between the outcome rubrics (foci tools) and the student assignment rubrics. • Parts of assignments (discussion forums) were excluded because they could not be transferred. • Real opportunities to grow the SAIL project that were highlighted focus on intentional alignment of assignments and ILOs, and greater connection with faculty with in-person sessions and debriefs. In particular, faculty craved the opportunity to return to the student work and discuss it with the assessors. It would help with thinking through how they might improve the assignment.

Considering the resource-intensive nature of SAIL, we advise that the ILO Pods occur as staggered offerings with two ILOs assessed per action research cycle. Additional findings from the pilots suggest that the use of a standardized institutional rubric for measuring achievement of an ILO within an ILO-approved course shows promise. However, limitations exist with a standardized approach; therefore, we emphasize the importance of providing SAIL as an immersive, voluntary professional development opportunity for faculty amongst a suite of educational development programs offered, and strongly caution against implementing SAIL as a required process.

12.

Strengths and Limitations

In seeking to develop a model for institutional learning outcomes assessment, we aspired to reflect the dual goals of:

1. faculty engagement in ongoing reflection and curriculum enhancement; and,
2. measurement of student achievement of learning outcomes via a broadly scalable and generalizable process, regardless of program discipline.

The first two iterations of SAIL presented in this Handbook successfully achieved the first goal of engaging faculty in ongoing reflection that led to curriculum enhancement. However, we identified several challenges with our chosen approach and advise that SAIL (in its current form) is not broadly scalable across a diversity of disciplines due to its resource-intensive design and use of a standardized rubric.

We discovered that SAIL is an ideal method for immersive faculty learning and development. We saw evidence that the ILO Pods persist as peer support networks, even after the pilots ended.

Below is a summary of the strengths and limitations of the SAIL pilots, as well as a brief discussion on future pilot possibilities.

Strengths

SAIL methodology has several strengths, including opportunities for immersive professional development, collective learning, and meaningful dialogue about student success. Specifically, SAIL:

- is aligned with the principles for learning outcomes and assessment;
- provided deep faculty engagement in structured review through educational development;
- led to actionable outcomes with implications for course and assignment redesign;
- the ILO Pods persisted as peer support networks even after the pilot ended;
- the measurement of student achievement of institutional learning outcomes are based on multiple courses and representative of multiple disciplines; and,
- resulted in faculty knowledge mobilization related to the Scholarship of Teaching and Learning; including, a presentation at the *2021 IUPUI Assessment Institute* and multiple publications thus contributing to the field of educational research.

Evidence gathered from the faculty debrief affirms that the SAIL process is aligned with the principles

for learning outcomes and assessment. Research suggests that anchoring the process with principles rather than regulatory requirements can reinforce institutional values and lead to a stronger culture of continuous quality improvement (Wall et al., 2021).

Kinzie et al. (2019) called to attention the central role that faculty professional development has played in advancing learning outcomes assessment, and emphasized "the power of constructive, evidence-informed exchange among faculty… to align and improve student learning in general education and the disciplines" (p. 53). The structured and facilitated approach that comprises SAIL provides for this kind of deep faculty engagement that fosters evidence-based discussions about how to improve student learning.

Limitations

SAIL methodology has several limitations that stem from its resource-intensive and immersive design, as well as contextual factors such as the disciplinary diversity and range of course levels included in the pilot. Specifically, SAIL:

- is resource and time intensive in part due to the current manual-approach to gathering artifacts, distributing artifacts, and compiling reports – additional tools for collection and distribution should be explored;
- assessment can be challenging when assessing assignments outside one's discipline, particularly when the assignment is not completed in English (e.g., in a Japanese language course) or is highly technical (e.g., in a computing science course), or where the epistemology and is not captured in the assignment description;
- assumes that one course assignment can sufficiently provide opportunities for students to demonstrate achievement of an ILO; and,
- posed challenges for drawing conclusions at the course, program, and institutional level due to the variability in assessor ratings and range of course levels included without additional training and focus on inter-rater reliability.

Each SAIL pilot demands approximately 35 hours of participating faculty members' time, and the support of an educational developers and quality assurance practitioners. Several factors contribute to the resource-intensive nature of SAIL. First, we provide structured opportunities for faculty to collaboratively engage in learning outcomes assessment and we embed educational development into the process. Second, rubric-based assessment can be labour intensive, particularly when assessors must interpret assignments outside their discipline.

The pilots included a range of course levels from first through fourth year, as such we would expect to see a range of skills across course assignments within an ILO Pod. To adequately capture this range when evaluating across years we must look for appropriate ***progression***, not solely student ***achievement***.

> Should a third *Research Question* be introduced to investigate student progression as students develop competency in the ILOs during their degree?

If we seek to investigate student ***achievement*** alone then considerations should be given to modifying SAIL to include capstone courses or final year courses as the defining student artifact (as was piloted in the third iteration). Banta et al. (2009) suggest that capstone courses that include a portfolio are a better reflection of student learning over time as opposed to the snapshot provided in a single course assignment; however, this approach is also a resource intensive endeavour.

Read our commentary on "Cautionary Considerations for producing Aggregate Reports" to see suggestions for improving inter-rater reliability and the utility of the course-specific reports.

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13.

Future Considerations

Writing the SAIL Practitioner Handbook provided an additional chance for us to reflect on SAIL. Numerous and sometimes unexpected opportunities for improving SAIL emerged during the writing process. We now find ourselves with an abundance of options for additional action research cycles, and welcome suggestions and collaborations from the broader SoTL community of scholars in Canada and globally.

Below, we briefly reflect on the ideal conditions for implementing a SAIL pilot project, how it might be used and for what purpose. We also describe notable opportunities for improvement, including further building community, consistency, and reliability among ILO Pod members; adapting assessment of institutional learning outcomes based on the intended purpose of the research; and engaging students as co-investigators.

Optimal Conditions for Implementing a SAIL Pilot

As described under *Strengths and Limitations*, we questioned the scalability of this model for learning outcomes assessment due to its resource-intensive design and use of a standardized rubric. Instead, we suggest that SAIL is optimally used under the following conditions:

- Voluntary engagement: Faculty are encouraged, but not required, to participate as this prioritizes the educational value of SAIL over a compliance-driven initiative.
- Immersive professional development: Faculty can commit a minimum of 35 hours during one semester to participate.
- Teaching-focused, collegial culture: To be successful, faculty must trust the process, their peers, and the SAIL Coordinators.
- Restricted to certain types of course-embedded assignments: Due to the use of a standardized rubric, SAIL is ideal for written and oral assignments, and poses challenges for some types of assignments, such as those that are primarily numerically-based (i.e., mathematics and statistics courses) and multiple choice exams.

SAIL is an ideal model for immersive faculty learning and development. Under the right conditions, SAIL is a high impact practice, engaging faculty in scholarly teaching and the scholarship of teaching and learning.

Build Community and Reliability

Communities of practice emerge as living, dynamic entities. We agree with scholars who view communities of practice as a process as opposed to an entity that can simply be put into place. In other words, communities of practice come into being over time and through learning, rather than existing at the initial onset. This "learning process view" (Pyrko et al., 2016, p. 390) is one of *thinking together* to explore a common interest.

The idea of ILO Pods as evolving facets of the *SAIL Planning Cycle* that ebb and flow as knowledge is shared, created, and reconsidered through a collaborative learning process is foundational to the SAIL methodology. Each ILO Pod takes on a life of its own: has different needs, strengths, tensions, questions, and solutions. It is the role and responsibility of the SAIL Coordinators to facilitate dialogue within the ILO Pods, gather resources to support their individualized learning needs, and to create the time and space for action research.

Across the first two SAIL pilots, faculty consistently craved more opportunities to collaboratively assess assignments, discuss assessor results and the patterns that emerged, and collectively generate solutions. Specifically, faculty noted a lag between the *Assessor Training* and the assessment of student artifacts, and a desire for a structured session to review the assessor ratings with their peers to discuss course redesign options.

In the future, we suggest modifying the *SAIL Planning Cycle* by designing more robust *Assessor Training* that incorporates the assessment of student learning and review of assessor ratings. Setting aside a full day for this session, and adding mid-assessment check-ins, and discussion of ratings could further collegiality and improve inter-rater interpretation.

Additionally, we suggest that future iterations of the *SAIL Planning Cycle* include a review of the shared rubrics both pre- and post- cycle, as ILO Pod members might contribute new insights with the experience they gained during the assessment of student learning.

Finally, there may be benefit in lengthening the duration of a pilot based on a three-semester *SAIL Planning Cycle*.

Figure 3 graphically depicts potential future considerations for revising the cycle.

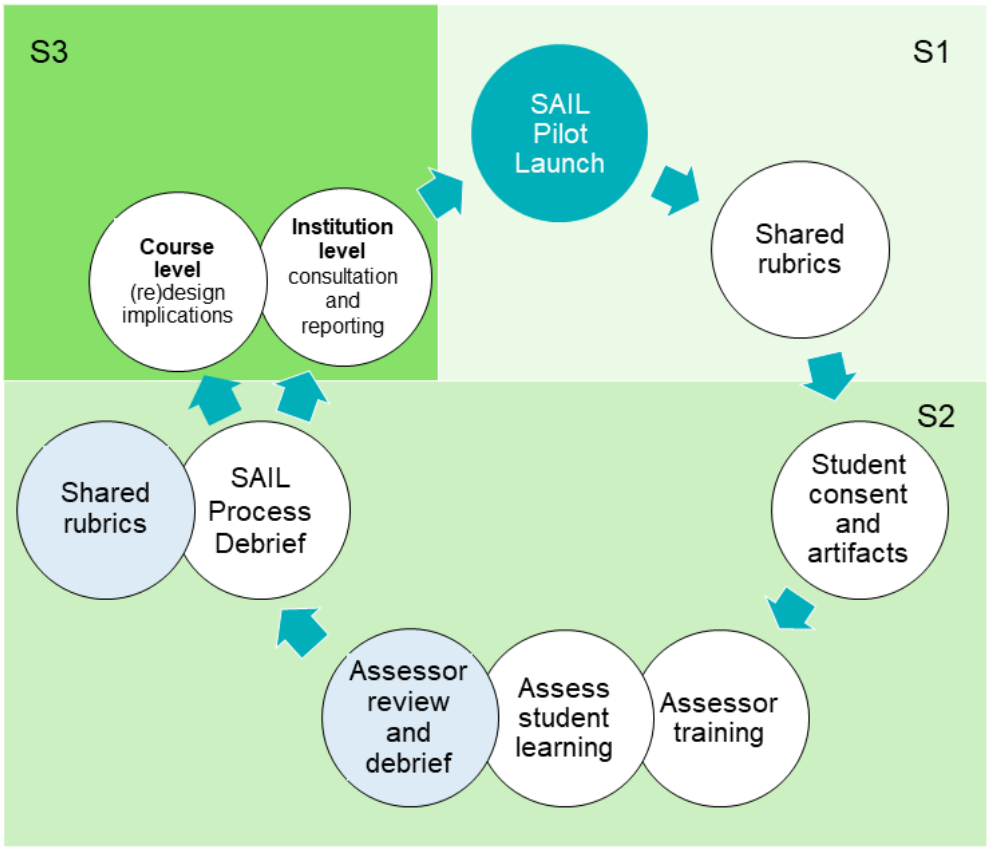

Figure 3. Future Considerations: SAIL Planning Cycle (Hoessler & Hoare, 2022)

During semester one (S1), faculty within an ILO Pod review their course and develop or refine a shared ILO rubric. During semester two (S2), faculty deliver their course, select an assignment to include in the pilot, and participate in a more robust *Assessor Training* session as noted above. During semester three (S3), SAIL Coordinators assist faculty in reviewing the assessor feedback and explore ways to apply what was learned to improve their practice.

Adapt Assessment of ILOs to Intended Purpose

Assessment of student learning can be conducted in a variety of ways, across multiple levels, and for different purposes. A common way to categorize types of assessment is *indirect* versus *direct*. Examples of indirect assessment at the program and institutional level include national surveys that document student perceptions of self-reported learning; GPA and student retention, persistence, and graduation rates; or employer perceptions of graduates' career-preparedness. Examples of direct assessment include student performance on standardized tests that assess writing, numeracy, and critical thinking; rubric ratings for course-embedded assignments in general education courses; or pass rates on licensure or certification tests. A relatively comprehensive listing of examples of direct and indirect evidence of student learning at the course, program, and institutional level is available in Suskie's (2009) *Assessing Student Learning: A Common Sense Guide.* A handout is also available here: Direct and Indirect Assessment (Suskie, 2009) (PDF)

Through SAIL's systematic process of enquiry, we expanded our understanding of assessment of student learning outcomes. We questioned the purpose and value of different assessment practices. We investigated how different practices contribute to educational development, teaching and learning, and institutional knowledge.

SAIL's learning process approach of thinking together, helped us to develop an *Institutional Learning Outcomes and Assessment Ecosystem* (Figure 5) that compares the scope of student learning and the degree of faculty engagement in structured review of student learning. The *LOA Ecosystem* explores examples of **direct assessment** at the **institutional level**. Note that the *LOA Ecosystem* is not intended to provide a comprehensive listing of all types of assessment (instead see Suskie, 2009), but rather to explore the scalability, generalizability, and resource requirements for implementing different types of assessment methods.

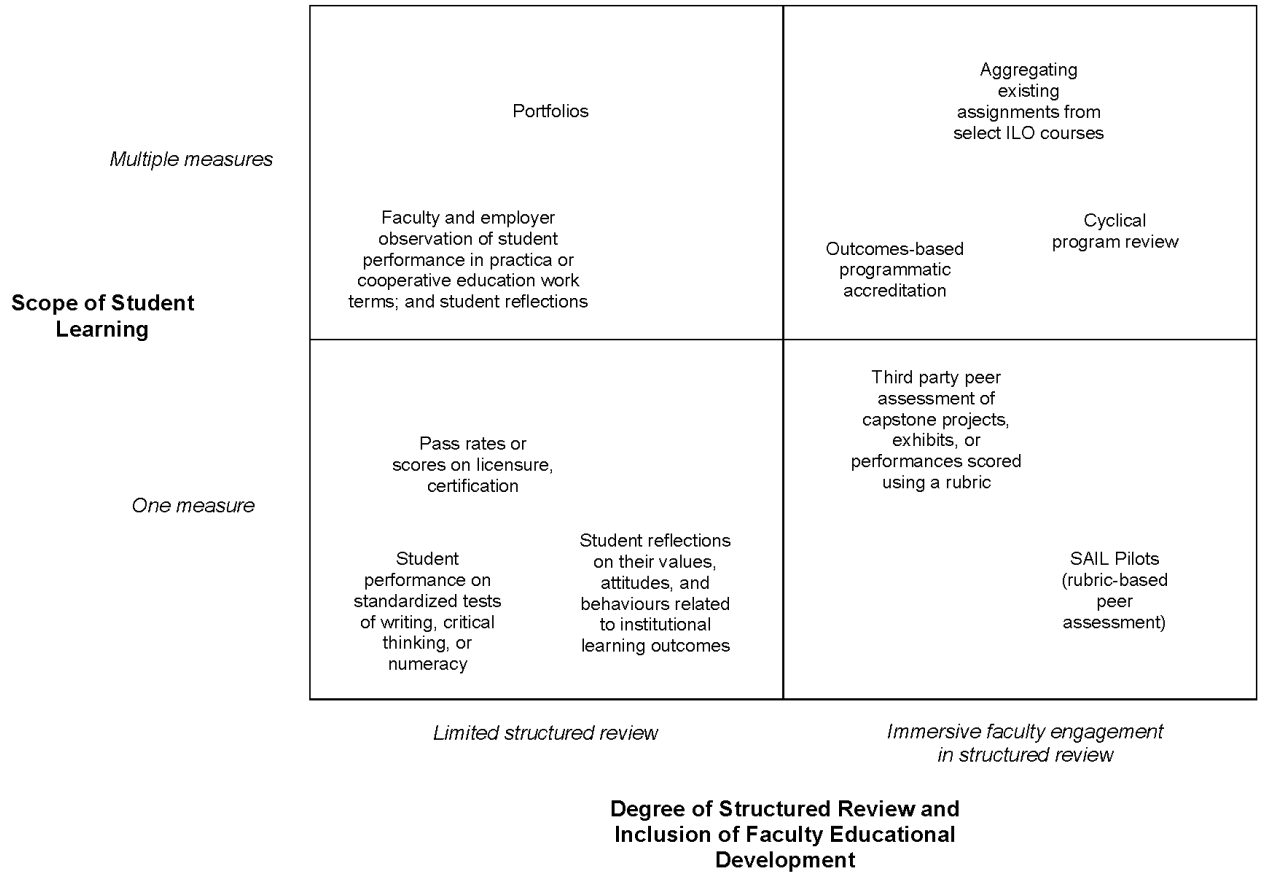

Figure 5. Institutional Learning Outcomes Assessment Ecosystem (Hoessler & Hoare, 2022)

When planning assessment of institutional learning outcomes (ILO), programs or institutions could consider employing a combination of approaches with different approaches combined to assess specific outcomes. For example, a program or institution might leverage a SAIL approach for emergent development of courses with a shared understanding of an ILO like Lifelong Learning, while utilizing aggregated grading from select required courses' exam questions to assess knowledge, and capstone projects to evidence skills acquired from a range of experiences.

Please note that, based on our experience, we do not recommend the use of standardized testing for

assessing institutional learning outcomes. Standardized tests are believed to be incongruent with the university's structure and culture, namely the incredibly diverse educational programming, collegial and teaching-focused culture, and the principles that guide learning outcomes and assessment. When not embedded in the curriculum, standardized tests offer limited educational value to students and faculty. Research has shown that students are much more motivated to do well when assessments are linked to the curriculum, when their efforts count for marks, and when their instructors can articulate the relevance of the assessment method to the course content and beyond the classroom (Deller et al., 2018).

Engage Students as Co-Investigators

The capacity to engage student as co-investigators in a SAIL pilot exists and merits future exploration. As places of teaching and learning, universities benefit from structures that promote co-curricular activities that enhance student learning, such as undergraduate research. Scholars suggest that this strength can be utilized to support the implementation of qualitative research methodologies (Fine, 2017; van Note Chism & Banta, 2007).

Emerging research on pedagogical partnerships further suggests that engaging students as partners in quality assurance and educational development can position students as experts in their own learning and development. Ryan (2015) argued that "the student has the ability to see the situation from the learner's perspective" (p. 8). By complementing the faculty and institutional perspective of quality assurance with a student perspective, we may learn valuable insights into the lived experiences of students (Tinto, 1994).

Limited student engagement in quality assurance processes is common in Canada. A recent report published by the Curriculum Working Group Meeting of the Council of Ontario Educational Developers (Heath et al., 2021) showed that current practices "fall short of recognizing the centrality of [student] perspective[s] and experience[s] of the working program" (p. 14). Students invest a significant amount of time and money in their education and have a special interest in the quality of their educational experience (Alaniska et al., 2006).

In Ontario there is growing recognition that engaging students as meaningful partners in quality assurance processes can further enhance the effectiveness of those processes. For example, in 2019 Humber and Centennial Colleges hosted the first *Student Voices in Higher Education: Quality Assurance Perspectives and Practices Symposium* (Burdi, 2019).

To engage students as co-creators of institutional knowledge as part of a SAIL pilot, students can be hired as research assistants, join an ILO Pod, participate in all steps of the *SAIL Planning Cycle*, contribute, and gain invaluable learning. The added support of research assistants could alleviate time constraints placed on faculty, increase the sample size selected for assessment, and provide feedback to faculty for review and contextualization.

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Conclusion

We offer the SAIL Practitioner Handbook as a tool for post-secondary institutions that are exploring ways to meaningfully assess student learning outcomes through participatory, faculty-led communities of practice. Where people who "share a passion for something they know how to do and who interact regularly to learn how to do it better" (Wenger, 2015) come together to engage in dialogue about student learning.

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Are research focused on quality enhancement with an emphasis on scholarly practice and the scholarship of teaching and learning.

This focus means we can centre our attention on co-creating quality assurance initiatives that have educational value for faculty members*, first and foremost.*

This focus was ever present as we reflected upon the outcomes of SAIL and planned future iterations.

If you choose to use any of the resources in this Handbook, either adopting or adapting them to fit your particular institutional culture, we would appreciate receiving your feedback and contribution to our ongoing action research.

SAIL has allowed us to create opportunities for interdisciplinary conversations and networks of peer support for faculty. We strongly believe that it is not simply student grades but rather critical, semi-structured conversations that can influence how we engage in scholarly teaching. Few studies show the impact of improvements made based on assessment findings (Banta & Blaich, 2010). SAIL responds to the call to "close the loop."

Thank you for taking the time to look at our SAIL Practitioner Handbook.

Carolyn & Alana

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Resources and Templates

The SAIL Practitioner Handbook includes resources, activities, and templates for facilitating the SAIL pilot projects. We have listed them below for quick reference (Table 7.1).

Table 7.1 Resources and Templates

	Resource
1. Preparation, Recruitment, Launch	• SAIL Info Session Launch Presentation (PDF)
2. Shared Rubrics	• Rubric – Critical Thinking and Investigation (PDF) • Rubric – Social Responsibility (PDF) • Rubric – Lifelong Learning (PDF) • Communication Rubric • Rubric Workshop (Table 2.3)
3. Student Artifacts and Consent	• Data Collection Notice (PDF)
4. Assessor Training	• Lifelong Learning Assessor Rating Sheet (PDF) • Assessor Training (Table 3.1)
5. Assessment of Student Learning	• Lifelong Learning Assessor Rating Sheet (PDF) • Assessor Instructions (Table 4.1)
6. Debrief	• Faculty Questionnaire (PDF)
7. Institutional Consultation and Reporting	• Sample Course Report – Lifelong Learning (PDF)
8. Course (Re)Design	• N/A
Additional Resources	• SAIL Coordinator Check List (PDF)

Share and Adapt!

We hope that you find these materials useful in your own practice! You are welcome to share and adapt the materials (CC BY-NC-SA 4.0); however, we ask that you include the following attribution:

> Hoessler, C. & Hoare, A. (2022). *Strategic assessment of institutional learning: Practitioner handbook.* TRU Pressbooks. https://sail.pressbooks.tru.ca/

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We are always looking to connect with other quality assurance practitioners and educational developers. If you would like to learn more about our work or collaborate on a SoTL project, please reach out to us!

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Acknowledgements for Peer Review

We are incredibly grateful for the following people who peer-reviewed this Handbook:

- Dr. Jovan Groen, Director, Academic Quality, Western University
- Wendy Hall, Vice President Effectiveness and College Relations (Accreditation Liaison Officer / Public Relations Officer), Lower Columbia College
- Dr. Catharine Dishke Hondzel, Dean, Academic Excellence and Teaching Innovation, Lambton College
- Dr. Shannon Wagner, Vice President Research, Thompson Rivers University

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Versioning History

The table below reflects a record of changes made to the SAIL Practitioner Handbook since its original publication in July 2022.

Table 7.1 Versioning History

Version	Date	Description of Change
1.2	24.03.15	Generalized description of methodology across educational systems; anonymized institution under study; updated references and author bios
1.1	24.01.11	Added Communication Rubric under “Resources and Templates”; added information regarding the third action research cycle; updated references.