

K-16

Mind the Gap

Project Summaries
2019-2020



Photo by Kid Circus
on Unsplash



SCHOOL DISTRICT NO. 72
(Kamloops - Thompson)



MIND THE GAP PROGRAM YEAR END REPORT 2019 – 2020

Following up on the inaugural year of the Mind the Gap program, the 2019 – 2020 academic year provided more opportunities for K -12 students to extend their learning beyond secondary school, while working on projects with their teachers and TRU faculty and students. Additionally, these projects provided opportunities for secondary teachers and faculty members to share their knowledge of curricula and pedagogical practices.

Two Mind the Gap information meetings were held this school year, one in September, 2019 and one in January, 2020. These meetings were well-attended and participants received information about the goals of the Mind the Gap program, the application process, and expense reimbursement. These meetings also provided the opportunity for potential connections between TRU faculty members and school district teachers.

Grants to a maximum of \$2500 for approved projects were available this year. Throughout the year, twenty-two grant applications were approved totaling approximately \$45000. The grant funds were used to cover Teacher on Call, transportation, and project supply costs. Again, this year the project goals were varied across many curricular and educational service areas. The project participants included: 31 TRU faculty members, 29 SD73 teachers, and approximately 190 TRU students and 350 SD73 students.

The planned Mind the Gap showcase of projects was cancelled because of the COVID-19 pandemic. Participants were asked to submit a final project report including a description and the goals of their project along with pictures, if available. These reports will be put together in book form and shared with the Kamloops/Thompson School Board members, school district teachers and administrators, TRU administrators and faculty members, and project participants.

Dr. Catharine Dishke-Hondzel, the Director of the TRU Centre for Excellence in Learning and Teaching and Dr. Susan Lidster, Coordinator of the Mind the Gap Program were invited to give presentations about the Mind the Gap program at the International Society for the Scholarship of Teaching and Learning (ISSOTL) conference in Atlanta, Georgia and at the BCcampus 2019 Symposium: Learning Transitions in Terrace, BC. Their article abstract for Mind the gap: Fostering relationships between K – 16 instructors and students to enhance successful transition to higher education for diverse learners, has been accepted by Frontline Learning Research (Journal of Earli).

For now, the Mind the Gap grant program has been suspended. We are hopeful that the program will re-start and look forward to even greater participation.

We would like to thank the Office of the Provost for our Strategic Initiative Fund grant, and the faculty members, school teachers, TRU and SD73 students for their participation in the Mind the Gap program. It is an absolute pleasure to be involved with this program and to share in the success of the amazing projects that have been completed.

Please enjoy these 2019 -2020 project summaries.

Respectfully submitted,

Susan Lidster

projects

- Rhizomean Narratives **4**
- Cultivating Native Bee Literacy with Art and Science **7**
- Inquiry into Vaping **9**
- Bachelor of Education (Elementary) and Texw-téxtwt-ken re llequmélt (I will be a strong teacher) Cohorts Promotional Videos **11**
- Support the Transition of Grade 11/12 Students with Diverse Exceptionalities to TRU **12**
- Let's Connect: Bringing SD73 ELLs and TRU Together **14**
- Calls for Justice **16**
- Midsummer Night's Dream Matinee **17**
- TRU Ethics Bowl **18**
- Open Doors in STEAM 2019 & 2020 **20**
- Petersen Creek Ecological Monitoring Project **23**
- Zero Gravity **26**
- Field Chemistry **27**
- Inquire Together **28**
- ESTR Program: Food Sustainability Plan and Partnership with SD73 **30**
- One Health-Experiential Learning in University Medical Microbiology Course for SD73 English Language Learners **32**
- UN Convention on the Rights of the Child Art Project **34**
- Girls Exploring Trades & Technology **35**
- Stepping Up the 'Fun Lunch Friday' Program **36**
- ESTR Program: Sustainability Plan and Partnership with SD73 **37**

Rhizomean Narratives

Participants

TRU

Lyn Baldwin
Nancy Flood
Tom Dickinson
Matt Reudink
Elizabeth Templeman

*5 Faculty
5 Students*

SD73

Laura Richter
Alysia Francis

*2 Teachers/Employees
26 Students*

Other

Emersen Hansen
Kate Greffard
Madison Petonjic-Rogers

Summary of Project

Calls for increased sustainability and indigenizing our curriculum have asked secondary and post-secondary educators to facilitate increased connections between our students and the ecosystems that surround and support us. This Mind the Gap project built upon Canadian curriculum scholar Ted Aoki's interest in rhizomes as a metaphor for exploring identity construction. Rhizomes exist as unique individuals each a part of an intergenerational, interconnected network grounded in the humus, the organic layer of soil that sustains life. Humans, too, are unique individuals, part of an intergenerational, interconnected network dependent on our connection to the ecology that sustains us.

The primary goal of this project was to deepen student connections to place and to make visible the role of place in the construction of our stories that generate individual and cultural identities. Through modeling how one place—an iconic, yet strange, peatland called Placid Lake—can make meaning, students explored their own connection to place as a precursor for writing their own stories. Beginning with field trips to the TRU Campus and an overnight residency at the TRU Wells Gray Education and Research Centre, students used writing and drawing exercises in place to deepen their understanding of place. Work in the field was supported with texts in their French and English classes. Based on this work, students produced draft creative non-fiction pieces that were workshopped in small groups consisting of their peers, their faculty and TRU biology faculty and students. Students articulated pride in having written compositions that were “very raw and real,” in having “accepted and built on critiques,” in finding words to communicate sentiments they “often struggle to decipher internally” and in identifying “ways the natural setting influences their emotions.” Following revisions, students constructed and illustrated hand-bound books to hold their words. An oral reading allowed for all of us to honour the diversity of their compositions and the common threads that wove through their shared experiences. Students demonstrated a deep respect for their work and for the work of their peers.



Oct 4, 2019

TRU Field Trip: SKSS English/French 12 students visited TRU with L. Richter and A. Francis; L. Baldwin provided an introductory lecture on the use of story connecting people and place, including the basics of peatland ecology. Students explored the role of museums and herbaria in shaping how we see now iconic species within a landscape with L. Baldwin and N. Flood. Students and faculty also explored the role of drawing as a way of knowing. T. Dickinson meets with students during a picnic lunch.



Oct 26-27, 2019

Wells Gray Field Trip: SKSS English/French 12 students, L. Richter, A. Francis and L. Baldwin spent two days in residence at TRU's Wells Gray Education and Research Centre. Enroute to Placid Lake, students engaged with English and French writing prompts and field journaling exercises to make focused observations of the ecosystem. At Placid Lake, L. Baldwin read her essay, The Collecting Basket, as a model for how personal meaning can be found in place. In the evening, students and faculty visited with lichenologist Trevor Goward who explained how his long rootedness in the Upper Clearwater Valley has influenced his life.



Nov 5, 2019

SKSS English/French 12 Writing Workshop at TRU. SKSS students and faculty traveled to TRU for a collaborative writing workshop with Biology faculty and students from BIOL 3400 (Reading and Writing Great Biology) and faculty.

Nov 28, 2019

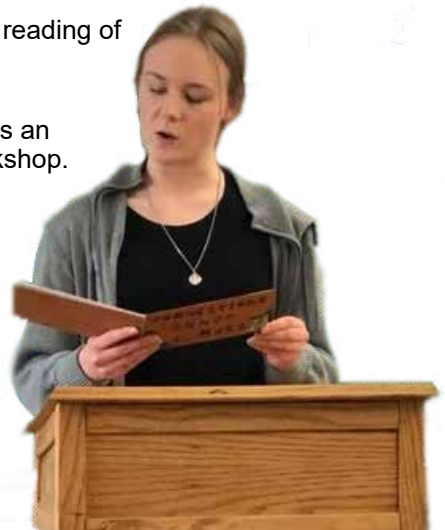
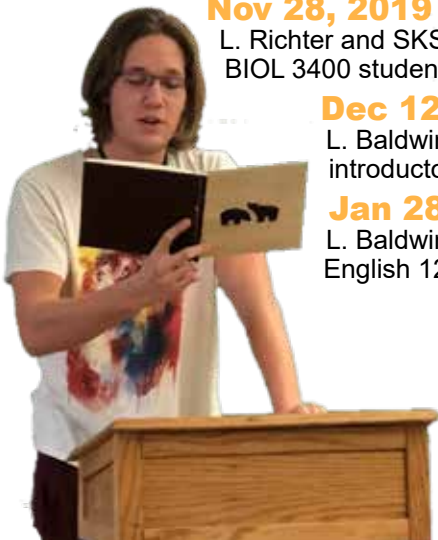
L. Richter and SKSS students attended reading of BIOL 3400 student essays at TRU.

Dec 12, 2019

L. Baldwin gave SKSS students an introductory book-binding workshop.

Jan 28, 2020

L. Baldwin attended SKSS English 12 Essay Readings.



Expenses/Budget

Bus Driver/Lodging	997.46
Wells Gray Field Trip Food (Costco and Buy-Low Foods)	413.39
	69.95
TRU Lunch (Pizza and Juice for TRU Visit)	154.24
	7.34
TOC Funds	433.00
Total	2,075.38



Cultivating Native Bee Literacy with Art and Science

Participants

TRU

Lyn Baldwin

1 Faculty
5 Students

SD73

Chante Reddeman
Morgan Whitehouse

(collaborated with E. Sedgman on filming pollinator introduction and workshop development)

1 Teacher/Employee
26 Students

Other

Thompson Shuswap Master Gardeners:
Elaine Sedgman, Estelle Berube, Brenda Olynyk, Nancy Burkholder, Cheryle Goodfellow

TRU Students

Hailey Stevens, Cameron Dalinghaus, Mae Frank

Summary of Project

Say the word “bee” and most of us, regardless of age, picture a honey bee. In contrast, say “native bee” and few can picture, let alone name any of the 500 native bee species found in our province. Yet our native bees—whether bumble bee, mason bee, miner bee or leaf-cutter bees—provide critical ecosystem services throughout the Thompson-Nicola region. In the 2018-2019 school year, we began to address this knowledge gap by cultivating bee literacy in Chante Reddeman’s Food Sustainability class. The purpose of our 2019-2020 project was to continue to develop this literacy in C. Reddeman’s and to develop the teaching resources to allow students within Chante’s class, as well as interested teachers across SD 73, to implement a bee-monitoring citizen science program. A key resource in a cultivating bee literacy is a teaching pollinator collection (pinned individual specimens of common pollinators found in Kamloops) that can be used to learn how to identify common bee guilds (honey bee, bumble bee, “pollen pants” bee, “hairy belly” bee) from wasps and flies. To this end, we (Thompson-Shuswap Master Gardeners and Dr. Lyn Baldwin) collected native bees throughout the summer 2019 and used the funds from our 2020 Mind the Gap grant to produce five complete teaching collections to be distributed among the educational institutions involved in bee literacy in Kamloops (TRU, SD73, Thompson-Shuswap Master Gardeners, Big Little Science Center, Sk’elep school at Tk’emlúps te Secwépmc Band).



Thus, we continued to cultivate bee literacy by addressing the following questions:

Why are pollinators so important to food sustainability? The answers to this question were provided in a guest lecture by a master gardener (Elaine Sedgman) to students in C. Reddeman’s Food Sustainability class. Students followed up on this lecture with their own research using garden guides and bee guides. Elaine’s presentation was recorded as a future reference for SD73 teachers.



How can the art and science help us plan for field journals help us learn about the interaction of garden plants and their pollinator visitors? Dr. Lyn Baldwin introduced Brocklehurst students to scientific record-keeping and field journals to help students incorporate field journal observations of bees and gardens.

How can we use teaching collections to increase bee literacy across the district? Bee taxonomist, Lincoln Best, and TRU student, Mae Frank, sorted trapped bees into bee guilds that could be used to explain the functional

differences of bees. Thompson-Shuswap Master Gardeners and TRU Students gathered for multiple work bees transforming collected bees into teaching collections (each collection contains 15 pinned specimens for each functional group and 15 specimens preserved in cuvettes) for use in classrooms. In addition, Elaine Sedgman developed a training workshop for school teachers within SD 73 that was to take place in April 2020.

Activities

Sept 2019

L. Best and M. Frank sort and preserve trapped bees for teaching collections.

Jan 14, 2020

L. Baldwin, E. Sedgman and Chante Reddeman hold planning meeting.

Jan 28, 2020

E. Sedgman visits C. Reddeman's classes; introduces students to importance of bees as pollinators; starts planning for bee-friendly gardens; presentation is video-recorded by SD73.

Feb 3, 2020

L. Baldwin visit C. Reddeman's class; introduces students to scientific record-keeping and field journals as way of monitoring efficacy of bee gardens.

Feb 8, 2020

L. Baldwin, E. Sedgman, four TSMG and four TRU students create first ½ of the teaching collections.

Feb 29, 2020

Second 'bee workshop'; four TSMG and four TRU students create second ½ of teaching collections.

Apr 27, 2020

E. Sedgman coordinates with M. Whitehouse (SD 73 Science co-ordinator) to provide workshop during SD73 Inservice Day on using teaching collections in classrooms. *Cancelled due to COVID 19.*



Expenses/Budget

Consultant fees for ID/sorting trapped Bees	1,500.00
Flowers for Scientific Record-keeping Workshop	27.94
Total	1,527.94

Inquiry into Vaping

Participants

TRU

Allison Innes-Wiens

RT Program Lecturer, Project Coordinator
Core Participant

Kathryn Banks

Nursing Program Lecturer
Supporting Participant

2 Faculty

9 Students (5 RT, 4 RN)

SD73

Sherry Stade

Health Promotion Coordinator, Project
Coordinator

Angela Lawrence

Substance Misuse Counsellor, Content
Advisor and Panel Member

2 Teachers/Employees+

4000 Students (Grades 5-12)

Other

Content Creators

RN Students:

Angela Clarke, Brittany Piva

RT Students:

Cory Kroft, Dilraj Nat, Ray Lyle

Presenters

RN Students:

Lorilee Consalvo, Cody McGinnis

RT Students:

Cory Kroft, Minisha Sekhon &
Nick Chuter

Summary of Project

This project was a partnership between SD 73 faculty, TRU Respiratory Therapy students and faculty, and TRU Nursing students to provide effective vaping education in SD 73 schools. Our team of educators and students created an evidence-based presentation including the most relevant information to SD 73 students. The interactive presentation was delivered by various combinations of TRU students, SD73 faculty, and TRU faculty to students from Grades 5 to 12 throughout the district. Our strategy was to use facts rather than fear and create a judgement-free atmosphere for the audience, since many SD 73 students have vaped or know someone that vapes. In addition to these smaller classroom presentations, our team organized Art Steinman, an addiction specialist, to speak to larger assemblies of high school students and guide a panel discussion. These panel discussions occurred over 2 days in several large high schools throughout Kamloops, with many students from smaller schools also in attendance. The panel consisted of an RCMP member, the SD73 Substance Misuse Counsellor, and a student or faculty representative from Respiratory Therapy.

~Outcomes~

Our project had the desired outcome of creating awareness and education about vaping to students throughout SD73. Feedback from students, teachers, and parents was overwhelmingly positive, with many people shocked by the information in the presentation. This project also garnered attention from other school districts in the province, along with local media in Kamloops and Vancouver. Due to the unique partnership and delivery of the education by a team of different stakeholders, many people were interested in our team's approach and experiences. Often people were surprised to hear that TRU students and faculty were assisting with education in high schools. Many felt this to be an incredibly useful strategy to gain trust and connect with younger students over this critical topic.

~Next Steps~

Our team had planned to continue this work for the rest of the school year into May 2020, with plans to re-convene in the fall and discuss ways to keep the project sustainable and manageable. Our team recognized that the many hours put in during the 2019/2020 year were not feasible for all parties to continue, so it would be wise to pass this presentation on to SD 73 educators to complete some of this education for future years. After each presentation,

the PowerPoint was shared with the SD 73 teacher so they could use it again. Each class was also given a survey to complete after each presentation, so we can continually improve the content and delivery. Future plans include giving this presentation and training to certain educators within SD 73, while continuing to provide support from TRU faculty and students whenever possible. Execution and timing of these plans remains uncertain due to COVID-19 and the major disruptions to our education system and daily life.

~Additional Information~

This project was an incredibly rewarding venture for all those involved. We are so thankful for the support and opportunity that the Mind the Gap program provided our group. This topic of vaping is something that TRU faculty would also like to explore on our TRU campus in the future, however, plans for a vaping panel discussion at TRU unfortunately had to be postponed indefinitely due to the pandemic.



From left: Angela Clarke, Allison Innes-Wiens, Cory Kroft, Ray Lyle, Sherry Stade
Front row: Dilraj Nat (left), Brittany Piva



Media Links and Interviews

- SD 73 [press release](#) on our project

(<https://www.sd73.bc.ca/Modules/News/index.aspx?newsId=089c59c8-d334-4e01-98fc-1b57fcee0f13>)

- Radio NL [story](#) on the project

(<https://www.radionl.com/2019/11/20/tru-interior-health-and-sd73-team-up-to-teach-youth-about-the-dangers-of-vaping/>)

- Radio [excerpt](#) from CKNW Morning Show Vancouver (December 20, 2019)

(<https://omny.fm/shows/the-jon-mccomb-show/cknw-mornings?t=14m35s>)

Promotional Videos

Bachelor of Education (Elementary) and Texw-téxtwt-ken re llequmélt (I will be a strong teacher) Cohorts

Participants

TRU

Dr. Nan Stevens
Robline Davey
Roxane Letterlough

3 Faculty
9 Students

SD73

Kirk MacFarlane

1 Teacher/Employee
3 Students

Other

Sydney Ramage
Harry Lamb
Kiara Lampreau

Summary of Project

I began the role of Coordinator of the Bachelor of Education Program for the academic year 2019 -2020 in September 2019. At that time, a new teacher education program started up within the TRU School of Education. The new program is called Texw-téxtwt-ken re llequmélt (translated in Secwepemc “I will be a Strong Teacher”) The new cohort is made up of Teacher Candidates who identify with Indigenous Ancestry and is a pilot project for TRU. The first cohort (graduation 2021) is funded by the Ministry of Education in response to the Truth and Reconciliation Commission, specifically, to fill a gap of much needed teachers who identify as Indigenous.

The recruitment of the 12 Teacher Candidates (space for 16) in this cohort took place over the Spring and Summer in 2019. I became aware of the B.Ed. Academic Advisor’s and Coordinator of the Texw-téxtwt-ken re llequmélt’s cohort lack of resources to promote the new program. It became obvious to me that a promotional video would be a valuable tool for recruitment moving forward. At the same time, I recalled that the promotional video created for the TRU Bachelor of Education (Elementary Program) was 17 years old, and a new one was desperately needed.

I approached the Kamloops School of the Arts (KSA) Media Arts teacher Mr. Kirk MacFarlane to ask if he would like to partner in the creation of two promotional videos designed and created with grade 11 and 12 Media Arts students. He was super excited to work on this project. Three grade 11/12 media arts students were integral in assisting with design and execution of the two videos. This included: collecting still images and B-roll footage on TRU campus, interviewing Teacher Candidates and faculty members (non-Indigenous and Indigenous), and video editing. The secondary school students spent two half days on campus and spent a great deal of their time talking with Teacher Candidate in the two B.Ed. cohorts and learning about TRU programs and services.

Due to the closure of public schools during the Covid-19 pandemic, the three Media Arts students and their teacher were not able to complete the video editing component of the project. They have informed me that they wish to complete the two videos as soon as school resumes.

Dr. Airini, Dean of the School of Education and Social Work, is supportive of these two videos being completed at a professional level. She has targeted funding to hire Joy Factory (<https://www.joyfactoryfilms.com/>), a film production company in Kamloops, BC. Joy Factory will utilize the Mind the Gap footage and data collected through interviews to create two high quality promotional videos. Mr. MacFarlane and his students agree to share the footage and data that they have gathered. We look forward to continuing the work on this project once the schools are up and running.

Support the Transition of Grade 11/12 Students with Diverse Exceptionalities to TRU

Campus Tour

Participants

TRU

Sarah Walz

2 Faculty

4 Students

SD73

Pamela Gurney

Gregory Pearce

8-10 Teachers/Employees+

55 Students

Other

n/a

Summary of Project

The purpose of our Mind the Gap project was to help students from SD73 who have diverse exceptionalities (diagnosed and undiagnosed), realize that there are many opportunities for them to continue their education and that there are a variety of services to support them at TRU. The project involved coordinating the pick-up and delivery of grade 11 and 12 students from all of the high schools in Kamloops and the outlying schools in Clearwater, Chase, Barriere and Logan Lake. Once invitations were sent out and parent permissions were received, we had a total of 55 student participants who were accompanied by Counsellors and Certified Educational Assistants from their schools.

The students were bused to TRU and brought to gather at the House of Learning where they were introduced to TRU student ambassadors who took them on a tour of the university. At the end of the tour, the students again congregated at the House of Learning for lunch and a Q&A session before they were bused back to their schools. Before leaving, all participants (SD73 staff and students) were provided with resources about the supports and services available at TRU and asked to complete a feedback survey. Below is a summary of survey responses:

- Students would like a longer and more in-depth tour
- Students would like to look inside the classrooms/labs (i.e. What do the classrooms look like?)
- Students wanted to see specific programs and buildings such as Trades - this was a big area for a number of students and not included on this tour
- Students wanted smaller tour groups
- Some of the students felt it was difficult to hear the tour guides so suggested that the tour guide uses a mic
- Students would have liked a map of the campus
- Students felt it was cold so they would have liked a tour at a different time of the year

~Additional Activities~

With the funding available through this program, we were also able to provide some collaborative/educational opportunities for SD73 and TRU Accessibility Services Staff. In early October, we presented our Mind the Gap project at a SD73 event for Counsellors and LARTs, and also provided them with a handout that summarized the difference between accessing accommodations/adaptations in high school compared to university.

In late October, we also hosted a presentation and lunch about TRU Accessibility Services for SD73 counsellors and had a discussion with SD73 and TRU staff about ways that we could better support students with diverse exceptionalities as they transitioned to TRU.

~Next Steps~

Our team had planned to coBased on information gathered, Sarah, Pamela and Gregory met to discuss how to proceed for the 2020/2021 school year. There was some discussion around a possible tour toward the end of this school year but with the current COVID - 19 scenario, that cannot occur. However, we have reviewed the student and staff feedback and wish to continue with this project next year employing slight variations in our approach.



Let's Connect: Bringing SD73 ELLs and TRU Together

Participants

TRU

Joe Dobson
Karen Densky
Janis Goad
Cliff Robinson

Stephen Hsiao
Research Assistant

4 Faculty
40 Students

SD73

Lori Nelson
Rebecca Webb

5 Teachers/Employees+
45 Students

Other

Amy Paran
Kamloops Immigrant Services

Summary of Project

We thank the Mind the Gap Project for the support of this project. This is the second year we have received this grant, and we built on the knowledge and experience gained in the first year of this project. ELLs (English Language Learners) in SD73 benefited from meaningful and varied exposure to university learning on campus and the opportunity to interact with and learn from current TRU students. Further, intercultural communication is a vital component in the success of students who are new to Canada and who are immersed in a multicultural settings at school and in the community and that was the thematic focus of the project. The SD73 students were introduced to strategies and ideas on how to face the challenges of living in two cultures and how to accommodate those challenges as well as sharing the richness of living in two cultures. This project built on the Mind the Gap project for SD73 ELLs in the 2018-2019.

One goal of this project was to encourage both SD73 and TRU students to embrace the diversity of Canadian culture while preserving and celebrating their own culture. The second goal of the project is to continue to make connections and bridges with TRU so that they will continue their post-secondary studies at TRU.

We are pleased to report that this project included a class exchange in September 2019 at the Henry Grube Education Centre between TRU students in the Teaching English as a Second Language (TESL) program in the TESL 3030 class doing a class exchange with SD73 English Language Learners (ELLs). The TRU students taught mini lessons to 6 different groups of ELLs.

Following this, SD73 ELLs participated in exchanges in October and November respectively with Janis Goad's intermediate level oral skills class in the ESAL program at TRU. SD73 students were divided for those exchanges into two groups: grades 9-10 and grades 11-12. These student exchanges focused on learning and sharing on aspects including Intercultural communication and understanding.

Thirdly, Cliff Robinson, a faculty member from the Counselling Department delivered a very enlightening and informative workshop/presentation on transitioning from high school to university. In total approximately 80 students between SD73 and TRU participated in these. Additionally, other SD73 teachers were also involved in various ways in supporting this project as was Kamloops Immigrant Services and their staff.

We are also pleased to inform you that we will be sharing this project in at least two ways, and perhaps more in the future.

1 An article in the BC TEAL Newsletter in the winter 2019 issue (anticipated publication in April 2020)

2 A proposal was accepted for presentation at the BC Teachers of English as an Additional Language annual conference (the conference has been postponed from the original April 2020 date)

Additional dissemination of the project may also occur in future. The work of the research assistant we hired, Chieh-Tai (Stephen) Hsiao, who graduated from the TRU Masters of Education program in December 2019, has also been helpful in this regard in aspects such as documenting the project (photos, etc.), helping with the research questions, and preparing the article and conference proposal submission.

Student feedback on this project both at TRU and in SD73 was very positive and SD73 students included ones from: Barriere and all the secondary schools in Kamloops as well as Brocklehurst Middle school. SD73 students were also incredibly diverse including, but not limited to: South Korea, Nigeria, Nepal, India, the Philippines, Syria, and Romania, to name just a few of the countries of origin. For many, it was their first visit to a university campus and helped break down barriers and make future transitions to post-secondary positive and welcoming experiences. They realized that as ELLs, they have the same opportunities to succeed in post-secondary studies. The TRU students were excellent role models.

We thank the Mind the Gap committee and Project Coordinator for their support of this project and the valuable opportunities it has provided both SD73 and TRU students.

As for next steps, we anticipate that the TRU ESL Department will continue on this in future taking lessons learned from the past two years to further improve the experience of students.



Calls for Justice

The Final Report of the National Inquiry into Murdered and Missing Indigenous Women, Girls and 2SLGBTQQIA peoples

Participants

TRU

Lorry-Ann Austin

1 Faculty
25 Students

SD73

Nichelle Penney

1 Teacher/Employee
24 Students

Other

n/a

Summary of Project

A grant from TRU's Centre for Excellence in Learning and Teaching was awarded to develop and deliver a co-learning experience for Kamloops' high school students and TRU students enrolled in HUMS 2120 – Introduction to Social Welfare in Canada in Winter 2020. Curriculum was developed linking Human Service Program learning outcomes with secondary school learning goals, including an Indigenous focus on the recently released Calls for Justice from the Final Report of the National Inquiry into Murdered and Missing Indigenous Women and Girls. The curriculum was delivered over three weeks in March 2020. It involved HUMS 2120 students mentoring grade 10/11 social studies students to learn about Indigenous rights, the National Inquiry's Calls for Justice, and ways to become allies in the promotion of the Calls at a community level within Secwepemc regions.

The co-learning experience resulted in some exciting outcomes and projects and many TRU students reported that participating in this project was the highlight of their 2-year diploma program. Students shared their project together on the final day. The projects were to give voice to one of the Calls to Justice and were to raise awareness around the need for ongoing education and advocacy in the promotion of Indigenous rights.

There were 8 final projects, among them were the following:

Dioramas

A diorama comparing modern health care to Indigenous well-being was related to

Calls to Justice 3.2

We call upon all governments to provide adequate, stable, equitable, and ongoing funding for Indigenous-centred and community-based health and wellness services that are accessible and culturally appropriate, and meet the health and wellness needs of Indigenous women, girls, and 2SLGBTQQIA people. The lack of health and wellness services within Indigenous communities continues to force Indigenous women, girls, and 2SLGBTQQIA people to relocate in order to access care. Governments must ensure that health and wellness services are available and accessible within Indigenous communities and wherever Indigenous women, girls, and 2SLGBTQQIA people reside

(Calls for Justice, 2019).



Performance

Another group used performance art to deliver a poem they wrote about intergenerational trauma and the silencing of Indigenous women, girls, and 2sLGBTQQIA peoples to highlight

Calls to Justice 7.2

We call upon all governments and health service providers to ensure that health and wellness services for Indigenous Peoples include supports for healing from all forms of unresolved trauma, including intergenerational, multigenerational, and complex trauma. Health and wellness programs addressing trauma should be Indigenous-led, or in partnership with Indigenous communities, and should not be limited in time or approaches (Calls for Justice, 2019).



Posters & Storyboards

Other groups engaged in other projects, such as making posters and story boards.

Overall, the project was a resounding success offering TRU students the chance to apply the knowledge learned over the course of their program to encourage advocacy and mentor others. The high school students had many questions about what life is like at TRU with many reporting that they plan to enroll. The experience brought together student and faculty alike and we hope to have similar opportunities in future.



Midsummer Night's Dream Matinee

Participants

TRU

Robin Nichol

3 Faculty
17 Students

SD73

Jeremy Avery

1 Teacher/Employee
50 Students

Other

n/a

Summary of Project

50 students came from Sahali Secondary to see the Theatre Program's matinee of A Midsummer Night's Dream. The director of the show and TRU Theatre faculty member Catriona Leger gave a talk on directing Shakespeare and Leon Schwesinger gave a talk on set construction. After the performance they had a pizza lunch and talk back with the cast.

The MtG program allows great opportunities for interaction between TRU Actors Workshop Theatre and regional high schools, for high school students to learn more about our program, and to give our TRU Theatre students an opportunity to showcase their work and share it with the next generation.

TRU Ethics Bowl

Participants

TRU

Dr. Jenna Woodrow
Savanah Cockrell
Research Assistant

1 Faculty
13+ Students

SD73

Brandi Lee Rusk
Donald Wilson
Jamie Topp
Mike Koppes
Nicky Macfarlane
Trevor K. Pendergast

6 Teachers/Employees
32 Students

Other

Nic Fillion
Assistant Professor of Philosophy, SFU

Nick Tanchuck
Chair, Canadian Philosophical Association
Philosophy in Schools Project

Summary of Project

The Canadian High School Ethics Bowl: like the Superbowl, but for the mind.

The Ethics Bowl is both a collaborative and competitive event where teams of high school students, grades 9-12, teach and learn from one another as they compare bold strategies and take part in courageous conversations about ethical dilemmas such as ethical topics as automated moral decision-making, sexting, and climate change refugees. Participants imagine, criticize, compare bold strategies, and amend their original positions when faced with convincing arguments. The unique collegial dynamic of the ethics bowl, where students pose and respond to probing questions emphasizes the skills of communication and collaboration: critical thinking, active listening, articulation and expression, open-mindedness, and respectful dialogue and disagreement. The ethics bowl meets all six core competencies of the BC Curriculum, and helps foster an engaged, dynamic, and resilient intellectual community among students, teachers, and professors.



The first TRU Regional Ethics Bowl

I am very proud to have organized the first TRU Regional Ethics Bowl. Five high school teams competed to demonstrate their ability to critically engage with each other about current ethical issues—social, political, economic, scientific, cultural, and beyond. An Ethics Bowl is both a collaborative and competitive team event, in which grade 9-12 students study, imagine, criticize, and compare bold strategies. They may even amend their original positions when faced with convincing arguments. Students have opportunities to pose and respond to probing questions, resulting in a deepening awareness of the stakes and principles that animate the discussion. For this event, teams participated in a round-robin style tournament, following by semi-finals and finals; the tournament was held at TRU Kamloops campus on Saturday February 29, 2020.



Gratitude

I owe deep gratitude to all the people who helped make the Ethics Bowl possible. Their generous involvement made this a distinguished event, exemplifying the personal and intellectual virtues that high school student participants will model and develop!

Activities

Program Saturday, February 29, 2020		
11:30-12:00	IB Lobby	Programs with Topics distributed to Teachers, Moderators, and Judges
12:00-12:15	IB Lobby	Opening by Elder Mike Amosue
12:20-1:00	IB 1007	Round 1: Topic 1: AUTOMATION, and Topic 2: ANIMAL RIGHTS. Moderator: Joe Flanagan. Judges: Tina, Ginny, Tim. Sahali Secondary School 1 & South Kamloops Secondary School 1
	IB 1008	Round 1: Topic 1: AUTOMATION, Topic 2: ANIMAL RIGHTS. Moderator: Jenna Churchill. Judges: Monica, Jenny, Wes Sahali Secondary School 2 & NorKam Senior Secondary School
1:00-1:15	break	
1:20-2:00	IB 1007	Round 2: Topic 6: VACCINATION AUTONOMY and Topic 7: SEXTING RULES. Moderator: Archisman Mitra. Judges: Tina, Monica, Wes Sahali Secondary School 1 & Sahali Secondary School 2
	IB 1008	Round 2: Topic 6: VACCINATION AUTONOMY and Topic 7: SEXTING RULES. Moderator: Jacob Harder. Judges: Ginny, Jenny, Tim NorKam Senior Secondary School & South Kamloops Secondary School 2
2:00-3:00	IB Lobby	Light Refreshments
3:00-4:00	IB 1008	Final Round: Topic 8: CLIMATE CHANGE REFUGEES and Topic Generational Theft. Moderator: Tim Burris. Judges: Tina, Ginny, Monica <u>Winningest Teams & Winningest Team</u>
4:15	IB 1008	Champion Declared and Trophies Awarded

Animal Rights
Automation
Sexting Rules
Vaccination Autonomy

Next Steps

My teaching Partners and I are eager to grow the Ethics Bowl in the Greater Kamloops region and beyond. We are very much looking forward to the Pandemic being over, and gearing up for TRU Regional Participants to attend the National Final in Winnipeg, when next this occurs. I have also been in contact with high school teachers and their students from Williams Lake, Logan Lake, and Kelowna. Each of these has expressed a deep interest in getting involved in any future ethics bowl. Another plan is to develop contacts with all high school teachers teaching Philosophy classes, and look to using the Ethics Bowl format as a mode of assessment for their classes. Not coincidentally, I will be having my Introduction to Ethics Students participate in In-Class Ethics Bowls as part of their assessment when I am next able to instruct the class in a face-to-face delivery mode.



{This is an excerpt from a more detailed report, available upon request.}

Open Doors in STEAM 2019 & 2020

Participants 2019

TRU

Matthew Stranach

1 Faculty

SD73

Elizabeth deVries

1 Teacher/Employee
65 Students

Other

n/a

Project Description

Initial Goals:

- To provide SD73 students the opportunity to engage with TRU faculty, staff, students, and others within the community on career opportunities in Science Technology Engineering Arts and Math (STEAM).
- Over the duration of the project this became focused on secondary level girls—specifically girls in grade ten.

Process:

- Meeting in September 2018 to plan K-12 STEM / STEAM collaboration
- Met throughout fall 2018 to refine concept, plan further.
- Logistics planning: rooms, food orders, student enrollment, parent permissions, transportation, teacher release for supervision, speaker participation, event promotion all took place in late 2018 and early 2019.
- Funding through Mind the Gap 2019-2020 was confirmed in April, 2019.
- Additional sponsors for the event included: SD 73; TRU Open Learning.

Open Doors in STEAM

- The event took place on May 3, 2019.
- 65 students registered from throughout SD 73. This was close to the maximum number that could be accommodated by TRU in a single room in AE Building.
- A full day of interactive discussions and learning activities facilitated by TRU faculty, staff, and students; also including professionals, entrepreneurs, executives, and leaders from a wide range of private and public sector organizations.



Lessons Learned

- The interest in this event— students and the wider community— was surprising.
- With more resources, this event could easily be “scaled up”; i.e., to include larger numbers of students
- Application for funds from Mind the Gap 2019 had to wait until SIF approval through TRU which put some elements of the event into question until shortly before the event. Lesson: apply for MTG and/or other funding well in advance.
- Transportation issues prevented the full number of registrants from arriving; led to delay of morning sessions. Most students and teachers managed to arrive by mid-morning. Lesson learned: confirm all elements of student involvement, particularly with permissions and transportation, well in advance.

Looking Ahead

- Given the success of the first initiative, Matt & Elizabeth plan to offer a second year of Open Doors to STEAM. Initial planning meetings will take place in the fall. Specific dates are still to be determined.

Participants 2020

TRU

Matthew Stranach

6 Faculty
5 Students

SD73

Elizabeth deVries

6 Teacher/Employee
150 Students

Other

Elder Sandi Hendry

Project Description

- On February 21, 2020 secondary students from across SD 73 met at TRU to learn about careers in Science Technology Engineering Arts and Mathematics (STEAM).
- This event focused on accomplishments of— and possibilities for— women in STEAM fields.
- Students had the opportunity to interact with professionals including TRU faculty, staff, students, and alumni working in STEAM fields. Speakers from these fields also attended from the wider community including Kamloops, BC, and Canada.
- This event builds on a successful event held at TRU in May, 2019.
- This event was made possible by sponsorships through the Mind the Gap initiative; SD 73; TRUFA; and the Advancing Women in Engineering and Technology initiative.

Project Outcomes

- **Increasing** the total number of student participants nearly 3 times from the 2019 event.
- **Connecting** SD 73 students with more than 30 presenters through keynote sessions; parallel presentations; movement breaks; and a student panel.

- **Providing** students with meaningful, experiential learning opportunities through a wide range of educational programming across STEAM disciplines.
- **Highlighting** TRU capacity to create and share knowledge across disciplines and communities.
- **Providing** meaningful professional development and service opportunities for TRU faculty, students, and staff.

Next Steps

- Review and reflect on feedback from student forms (paper forms).
- Present on lessons learned from this event at regional and possibly national & international education conferences (once there is the opportunity to do so).
- Seek publication on this project in journals focusing on K-16 education and/or the Scholarship of Teaching and Learning (SoTL).
- Consider possibilities and potential for a 2021 offering.

Links and Resources

Event agenda and itinerary can be found on a TRU website: <https://learningtech.trubox.ca/>

[Featured story on CFJC Kamloops](#)



Petersen Creek Ecological Monitoring Project

Participants

TRU

Christine Petersen - Biology
Jacqueline Sorensen - NRS
Susan Purdy - Biology

3 Faculty

SD73

Mikala Cameron - SKSS

1 Teacher/Employee
40 Students

Other

n/a

Project Report

The aim of this project is a long-term biological study of the lower section of Peterson Creek as it flows through the Peterson Creek Park to answer the question 'what is the ecological health of Peterson Creek?'

This collaborative project between TRU Biology and Natural Resource Science departments and South Kamloops High School set out to achieve several goals for the students:

Learning Objectives:

- Exposure to a real-world issue, in this case the ecological health of a local stream and an understanding of the various anthropocentric and natural factors that can affect the stream's health.
- Learn field monitoring techniques, such as water sampling, aquatic invertebrate sampling techniques, and identification of aquatic invertebrates.
- Work together as a team to collect and analyze biological data in the field, through cooperation and collaboration.
- Analyze quantitative and qualitative data and write a report by making thoughtful and logical interpretations of the data and coming to sound conclusions.

Activities

Two field sessions were conducted, the first on May 16th 2019 with the Grade 11 Honours Biology class and the second on October 22nd 2019 with the Grade 11 Life Sciences class.

Mrs. Cameron and the students walked from the school, approximately 10 minutes, and met us at Petersen Creek.

Before we began our sampling analysis we had a general discussion with the students about the creek, and its importance to the ecosystem.



Figure 1. Petersen Creek (left) and stoneflies netted from the creek (right).

Next we divided up the students into three teams and used three sampling sites along the creek that had been pre-identified and tagged with ribbons. We chose these sites due to their accessibility as well as to minimize impact to the creek.

Each team was assigned a study site where the students stayed put, and we rotated through the sites, so the students had a chance to learn and perform all three types of sampling techniques. Christine showed the students how to quantify and identify riparian plants using a transect, Jacquie taught the students how to do in-stream abiotic evaluations, and Susan showed the students invertebrate sampling techniques and helped with the identification of biota. Once the invertebrates had been identified and counted, they were returned to the same location in the stream that they had been captured from. Mrs. Cameron was invaluable as she was able to help out where needed, and also provide background information and context from what the students had already learnt in class.

After the field sampling session, back in their classroom, Mrs. Cameron worked with the students to enter all the data into an Excel spreadsheet and then the students wrote a report addressing all the results and then they were able to make deductions to determine the overall ecological health of the stream.

The following is the data collected by the students from the first field session.

Stream Analysis

Table 1. Stream physical and chemical variables for Peterson Creek, May 16, 2019. For cover estimates, first estimate total amount of stream that consists of cover, then break that down into components that sum to 100%.

	Chemical/Physical					Estimated Cover types (nearest 5%)							
	DO (mg/L)	Temp (C)	pH	Turbidity (NTU's)	Channel width / wetted width (m)	Average velocity (m/s)	Total cover (%)	Deep pool (%)	LOD (%)	Boulder (%)	InVeig (%)	Cutveg (%)	Cutbanks (%)
Group A Site 2	9.5	11.4	8.6	6.76	3.43 / 2.55	3.53	40	10	10	5	5	40	30
Group B Site 1	9.5	11.3	8.6	4.77	2.40 / 2.23	1.53	20	15	5	20	0	20	40
Group C Site 3	8.2	13.8	8.5	2.94	3.96 / 2.88	2.17	10	20	0	50	10	10	10

Conductivity also taken at site 2: 1023 uS/cm

Table 2. Stream Invertebrate Community for Peterson Creek, May 16, 2019. Benthic grab sample taken with D-frame net. % EPT is an indicator of stream health (a type of community composition index); values greater than 75% are considered excellent water quality.

	Invertebrates							Totals	%EPT
	Mayflies (E)	Stonflies (P)	Caddisflies (T)	True flies (D)	Beetles	Worms	Other	Total invertebrates	E+P+T Total
Group A Site 3	55	23	4	45	0	12	0	139	59%
Group B Site 2	38	26	5	3	0	4	1	77	89%
Group C Site 1	45	21	3	26	0	2	0	97	71%
AVERAGE	46	23	4	26	0	6	0	104	73%

The following is an excellent example of a student's report by Alia Sanderman, Grade 11 Honours Biology

Conclusion:

The goal of this study was to determine the ecological health of the Peterson Creek ecosystem. From the data taken, it shows that Peterson Creek is a healthy ecosystem. The data taken from the Riparian sites shows that a diverse selection of plant life grows on the banks of the creek. The only plant type that was not present in the sections was coniferous trees. However, there was a large amount of deciduous cover, which makes up for the lack of conifers. In the stream, there was a good EPT percentage. Over the three sites, it averaged at 73%, which does not reach the excellent threshold, however it is still very high quality, and indicative of a good community composition. The cover estimates show that less than half of the stream is disturbed by physical debris. This leaves a good amount of habitat for invertebrates, while still leaving lots of flow. There was also a good amount of cover recorded, reaching 23.3%, which is enough to keep the stream cool while still allowing sunlight to pass through. This is supported by the temperature of the stream that was recorded. The final aspect of stream health that we studied was the chemical and physical data of the creek. Within the chemical data, the temperature aforementioned averaged at 12.1 celsius, which is a suitable temperature for invertebrate species. The dissolved oxygen levels are directly affected by the temperature of the water, but as the water temperature is healthy, the DO is also at a good level. The DO reached 9.1mg/L, which is actually healthier than most streams. The pH of the stream was slightly more basic than the ideal pH, however at 8.6, it was still below harmful levels. The channel turbidity was 4.8 NTU, which is excellent quality and good for fish habitat. It is likely even lower normally, because the stream bed was disturbed during data collection at different sites. The width and wetted width of the channel was averaged at 3.3/7.5m are also in healthy parameters, showing that the creek isn't overflowing. The average velocity of the creek water was 2.4m/s, which is faster than ideal, but does not largely affect important invertebrate species. Overall, the data strongly supports the conclusion that Peterson Creek is a healthy stream, with lots of biodiversity.

Project Summary to Date

This Mind-the-Gap collaborative project between TRU and SKSS has been a wonderful experience for all of us involved. The SKSS students really take enjoyment from the experience of working in the field, and participating in this ecological monitoring project of Petersen creek.

So much of what we do with our students is in the classroom, so being able to take students outside, especially when teaching about the natural world, is a great opportunity. The fact that Petersen Creek is within walking distance of SKSS has opened up the ability to bring students there within the constraints of their tight schedules, as well as without having to rely on transport and its associated costs. We hope to continue with this project in the year to come.



Figure 2. SKSS Students collecting aquatic invertebrates in Petersen Creek

Zero Gravity

Participants

TRU

Mark Paetkau

1 Faculty
3 Students

SD73

Michael Abraham

1 Teacher/Employee
2 Students

Other

n/a

Summary of Project

Experiment Wrap Up

This project brought two SKSS Gr. 12 students to campus to work with 3 TRU students on a proposal to fly an experiment on Canada's zero gravity platform the Falcon 20. The group met six times from the middle of October to the middle of December. The project continued past the November 11, 2019 deadline for the simple fact the TRU zero gravity team was awarded an experiment on this year's flight! This means four team members will travel to Ottawa to install the experiment on the Falcon 20 and run the experiment over 5 days in July.

Knowledge Mobilization

The team is currently working on press releases through TRU and CBC. We hope to have the team on Midday show later in the winter. One of the main outcomes of the proposal was outreach. We will be working with the team to travel to elementary schools and talk about space physics, their experiment and provide some demonstrations for students in SD 73.

Expenses/Budget (\$350)

Meeting Supplies (food)	224.48
Purchases (t-shirts)	74.43
Total	298.91



Field Chemistry

Participants

TRU

Dr. Sharon Brewer
Dr. Bruno Cinel

2 Faculty

SD73

Jason McMMain - Sa-Hali

*1 Teacher/Employee
155 Students*

Other

n/a

Summary of Project

Simply put, the goal was to teach applied Chemistry; to develop field chemistry projects and specifically field chemistry projects, inside of Petersen Creek Park. The goal was to have students complete their own projects that engage them and that make Chemistry more accessible, more practical, more understandable, and yes, more fun. Chemistry should not just be about the lab experience; it should also be about the field and what we observe in nature in real time.

Outcomes:

The purchase and use of five wireless meters with MTG grant monies allowed for the addition of two completely new field or applied Chemistry laboratory experiments to the Chemistry 11 course; the development of Field Chemistry at Sa-Hali Secondary School; the use of the BC-ILN and collaboration with TRU for a new Science 9 lab experiment; and finally, a number of Grade 12 students completed their Career and Life Connections Projects in conjunction with Mr. McMMain and the use of the wireless meters to chemically characterize Petersen Creek.

Next Steps:

- To continue the collaboration between TRU and Sa-Hali Secondary School specifically using the BC-ILN;
- To continue developing Field Chemistry and aboriginal teaching practices in Chemistry; and
- To expand the use of the wireless meters by allowing other schools to use the kit that has been developed.

Other Information:

The COVID-19 pandemic significantly interrupted the work that was being done with this grant. The projects that were affected included a BC Integrated Laboratory Network (BC-ILN) lab developed and modified for Science 9 and a significant Field Chemistry project for Chemistry 11. The BC-ILN lab would have been performed using 'real' water samples collected by the Sa-Hali students and analyzed remotely using Thompson Rivers University instrumentation over the internet. A Teacher Assistant (TA) at Sa-Hali Secondary had just completed a trial run of the proposed BC-ILN lab (Laboratory Experiment: Determination of Total Nitrogen in Surface Water Samples as an Indicator of Water Quality) and was

prepared to teach the process to a Science 9 class after spring break. Finally, a week-long FieldChemistry Lab was set to be completed from April 13-17, 2020.

The Field Chemistry was comprised of students choosing a local medicinal plant to study and collecting samples of that local plant to make a tea; the 5 wireless instruments in conjunction with I-pads, which were procured in conjunction with two other grants to investigate the chemistry of that plant.

Classes for the second Semester included Chemistry 12, Chemistry 11 and Science 9 with 25, 24, and 29 students, respectively. These students benefitted from the addition of technology to the classroom experience. An approximate total of 155 students benefitted from this Mind the Gap Grant in the 2019-2020 year, and even more students will benefit in the years to come as the technology becomes more widely available.



Inquire Together

Participants

TRU

Carol Rees
Rupinder Deol Kaur
Beverly Ruberg
Magdalena Maslowski

*3 Faculty
1 Student*

SD73

Grady Sjkovist
Danielle Livingstone

*2 Teacher/Employee
25 Students*

Other

n/a

Summary of Project

This Mind the Gap project is part of a larger research project called Inquire Together that began last August. Ultimately the objective of the big project is to figure out how best to support faculty, teacher candidates' and classrooms teachers' co-teaching for professional learning about how best to support high school students learning collaboratively through science and math inquiry-based projects.

For the Mind the Gap component, we completed two half-day planning meetings with the group (faculty, teachers and teacher candidates) in January, for the purpose of planning the coteaching and curriculum for the practicum that was to occur from Feb. 24th to April 24th at NorKam secondary school. This was interrupted due to Covid-19 but will continue online after Easter. From Feb 24th



Carol Coteaching with Grady

to March 13th the two coteaching teams worked together, planning, teaching and reflecting on how classes went. The two teaching teams were: Carol Rees (faculty) with Grady Sjkovist (SD 73 teacher); and Magdalena Maslowski (teacher candidate) with Danielle Livingstone (SD 73 teacher); Beverly Ruberg (faculty mentor) contributed to planning sessions and observed one of the classes. We all had a group Zoom reflection meeting to look at outcomes on April 6th. Carol Rees and Grady Sjkovist described the inquiry project that they had worked on together over nine classes, and their planning and reflections. Students built working model electric cars, conducted student-centered inquiry projects, and innovated to create their own car designs (see photos). Magdalena and Danielle had only a little time actually teaching together but they did extensive planning on what they had hoped to do.



Some of the electric cars designed by the Grade 11 Physics students

In the Zoom reflection meeting on April 6th both teams reflected on how the coteaching went with respect to themes from the larger research project. These themes were Time together outside the classroom; Developing mutual understanding; Making equity visible; Engagement and active contribution and Communicating. Finding time for day-to-day planning and reflection was difficult, as teams had predicted it would be, they described having planning meetings while doing other things such as supervision during break. Team members' reported their understanding of each other's perspective was improving with time. One team explained that the 'new' teacher didn't initially understand the total focus of the experienced teacher on their students. The 'new' teacher was initially totally focused on the prep. of the upcoming lesson. Both teams worked to make equity between teachers visible to students and reported that the 'new' teacher, needed to take a lead early on in coteaching to help the students 'see' her as a teacher. Both teams report engagement from their team member in the lesson at all times. Both teams reported that when one teacher was leading the class, the other teacher would do helpful things such as work the technology or support a group of students having difficulty understanding. Communication was tricky as the days were so busy and teams talked about what worked for them, for example, using e-mail to follow-up worked for one team and short meetings after school worked for the other.

Outcomes:

This project contributed to our developing understanding of the benefits and difficulties with coteaching. We are currently working on a paper that brings together the findings from the Mind the Gap component and the larger project. Also, we are adding the inquiry project that Carol and Grady did to an Open Learning Resource that Carol is working on.

Future Work:

Following March break there was a break because of Covid-19 but after Easter weekend the project will continue with coteaching online. Our research group is interested to see what can be learned about coteaching online through the continuing project.

ESTR Program: Food Sustainability Plan and Partnership with SD73

Participants

TRU

Saskia Stinson
Leanne Mihalicz

*2 Instructors
12 Students*

SD73

Chante Reddeman

*1 Teacher/Employee
25 Students*

Other

Alana Mason, TRU Instructor
Greg Under, Kamloops Food Policy Council

Summary of Project

Work collaboratively with Chante Reddeman and two of her Food Sustainability classes to partner and develop opportunities for students to experience participating in a regenerative food system that has been established by the Kamloops Food Policy Council. Students will use fruits that are locally grown to produce products such as pies, preserves and juice from apples as well as other fruits. <http://kamloopsfoodpolicycouncil.com/>

Outcomes:

Food Sustainability Project Days - Apple Project:

Brock Middle School students in grades 7, 8, and 9 work with Career Exploration students to create apples pies, preserves from apples and apple juice that will be made from apples collected through gleaning prior to the project days. The students will have an opportunity to create products from start to finish while applying math skills such as weighing/counting as well as money skills to calculate the costs of making and packaging the products for sale at ESTR's Market.

Gleaning through Kamloops Food Policy Council:

Career Exploration students and Brock Middle School students went and harvested community apples. Career Exploration students worked with Alana Mason to harvest and create apples pies for ESTR's Market. They practiced their math skills in weighing, measuring and counting. They then shared their new skills in creating pies as part of an "Apple Project Workshop" set up at TRU with our students in a leadership role.



Popcycle Project Workshop with Greg Unger for Career Exploration Students:

Career Exploration students participated in a workshop with Greg where they learned how to make popsicles using all-natural ingredients such as fruit, honey and yogurt. They used these new skills as part of the “Apple Project” workshop held with SD73 as well.

Product Development:

Brock Middle School students will grow, package and market the microgreens and fruit products (fruit leather, dehydrated fruits, pies) that will be sold at ESTR’s Market as part of product development between SD73 and TRU. We were not able to sell microgreens and fruit products developed at Brock Middle School. However, we were able to sell apples pies created by students from SD73 and ESTR.

Apple Project Workshop:

Brock Middle School students came to TRU and participated in a workshop lead and organized by Career Exploration students who created a variety of products made from apples. These included: apple juice, apple sauce, apple popsicles and apples pies. Apples pies were sampled by many students and many were sold at the market.

Fieldtrip:

Brock Middle School sustainability classes and Career Exploration students will travel by bus to Vernon to see the Davison Orchard Farm Country Village to explore a local, commercial farm where fruits and vegetables are grown. On October 21st students from SD73 and TRU traveled to Vernon to explore and learn more about food sustainability in a commercial setting. It was a lot of fun. Students got to sample homemade pies, sandwiches, drinks and other products. They also had a tour of the farm where they got to pick out a pumpkin to take home.

Next Steps:

Chante and I will be meeting to wrap up this year’s project and explore options for next year.



One Health-Experiential Learning in University Medical Microbiology Course for SD73 English Language Learners

Participants

TRU

Dr. Naowarat Cheeptham (Ann)
Dr. Joanna Urban

Research Assistants:
Isaac Stephens
Johara Ahmed

*2 Faculty
11 Students*

SD73

Lorena Nelson

*1 Teacher/Employee
10 Students*

Other

Dr. David Sedgman
Dr. Bruce McNeely
Sue Whitehead
Dr. Jacquelin Pena

Summary of Project

To encourage SD73 English Language Learners (ELLs) to explore future post-secondary education and career paths in science in particular in health science, we believe that it is beneficial for the ELL students to be exposed to and experience university learning on campus. The main goal of this project is to introduce SD73 ELLs in grades 10 to 12 who wish to pursue studies in medicine or health to participate in a university science course through working with third- and fourth-year students in a TRU Biology's course called BIOL 4490 Medical Microbiology.



The activity includes class visits; the ELLs will attend 4 classes between January and March 2020, where they will have an opportunity to be introduced, through the course content, to the One Health Concept: the interconnectedness of Human Health, Animal Health and Environmental Health as a holistic approach to understanding ecosystem/Earth health. Additionally, they will listen to guest speakers from the community (see attached tentative course outline) and participate in student centered case studies with the TRU biology students. It is important for them to realize that their post-secondary pursuits in health and medicine can be fulfilled at TRU.

Outcome:

SD73 ELLs have learned more about academic programs and courses at TRU that are relevant to health science. Through our activities, they have explored the facility and experienced the atmosphere of a university level class setting. They have met and interacted



with the professor, the guest speakers, the research assistants, and the university students in class who have been great role models, mentors and resources for their future education.

Many of the ELLs became quite passionate about microbiology. One grade 12 student would like to pursue the same studies as Dr. Cheeptham. In fact, to quote her: "I want to be just like the 'bat woman.'" She was very interested in Dr. Cheeptham's research with the bats. Another grade 10 student was so impressed with Dr. McNeely's presentation, that he asked his own science teacher if he could lead his

group in a project on viruses and bacterial infections that they would eventually present to their class. The students were most impressed by the natural connection between animal health, environmental health and human health. They were also given the perfect opportunity to learn about the COVID -19 and ask many questions. The presentation by Ms. Whitehead was very informative. At the end of each session we all debriefed and although some of the students at times found the content challenging, they were still committed to pursuing post-secondary studies in nursing, pharmacy, medicine, and research. I watched as the students listened to the presentations. The older students who had taken biology and other related sciences would nod their heads when they understood a concept presented by the speaker. By the end of the project, all the students felt very comfortable being up at TRU and knew their way around the campus. They fit right in!

The last and most impressive observation was that the professors and one of the presenters are also immigrants with English is either second or third tongue. It reinforced for the ELLs from SD 73, that language is not a barrier to achieve success professionally as was demonstrated by these awesome and passionate teachers.

Next Steps

We will be analyzing our questionnaires (pre- and post- questions) and interpret the outcome of student's aptitude using stat.



UN Convention on the Rights of the Child Art Project

Participants

TRU

Tanya Pawliuk

1 Faculty
25 Students

SD73

Britt Boulter
Jenny Binns

4 Teachers/Employees
41 Students

Other

n/a

Description of Project

CYCA 2000: Introduction to Professional Foundations of Child and Youth Care students were joined by Westsyde Elementary students to focus on the UN Convention on the Rights of the Child. This project aligned with multiple learning outcomes of CYCA 2000 and the BC Social Studies 2 curriculum goal "individuals have rights and responsibilities as global citizens". In this process children were encouraged to think about their individual rights and responsibilities as global citizens as well as how those rights/responsibilities are realized as citizens in the classroom and school community. As this is a CYCA course, TRU students developed their communication skills with children as well as learning about the Convention and how it informs CYCA practice. Our project was very successful with both TRU students and Westsyde students reporting that they collectively learned from one another and valued and enjoyed their learning time together. We look forward to offering the UN Convention on the Rights of the Child Art Project again next year.

Knowledge Mobilization and Project Outcomes:

In small groups, TRU students introduced and reinforced the Convention of the Rights of the Child. Each group was assigned one pre-determined right on which to support understanding of the right within a personal, local and global context. This understanding was articulated and enhanced through group-based art projects. These art projects were shared within our respective community of learners.



Right #19: Protection From Violence



Right #27: Food, Clothing, a Safe Home

Girls Exploring Trades & Technology

Participants

TRU

Dwayne Geiger

6 Faculty
39 Students

SD73

Kerry Gairdner

2 Teachers/Employees
52 Students

Other

n/a

Summary of Project

Date of event: December 16, 2019 - 8:30 a.m. - 2:30 p.m.

We invited 52 female students from Grade 6 through 9 to TRU for the day to sample 3 different Trades under the guidance of Red Seal certified instructors. Students were placed with foundation (level one) trades students to receive one-on-one guided practice in the trade. At this event, the females received hands-on experience in Heavy Duty Mechanics, Carpentry and Welding. The females also went on a tour of the newly expanded Trades Building and learned about all of the different Trades that TRU has to offer.



**Visit SD73's News Site for
Video Coverage of the Day**
["Girls Who Like Trades"](#)



Stepping Up the 'Fun Lunch Friday' Program

Participants

TRU

Adam Florence

1 Faculty
7 Students

SD73

Paul Denby

1 Teacher/Employee
28 Students

Other

Addie de Candole

Summary of Project

TRU Culinary Arts program and the grade 5/6 class at Arthur Hatton worked together to support the Fun Lunch Friday program that is currently running at Arthur Hatton. This partnership was an amazing opportunity to strengthen the relationships made last year with the Mind the Gap funding, and continue the learning from the TRU Culinary Arts students supporting the elementary students.

Arthur Hatton has been running a Fun Lunch Friday healthy lunch program monthly over the last year, and it has been quite a popular program, and a great alternative to the less healthy school lunches provided by the school district. While the program has been fairly smooth, there are a lot of ways in which it could be made more efficient using work-stations, incorporating more locally available food, and integrating creativity from the students in the menu. This is where the TRU Culinary Arts students were very supportive in this program, teaching younger students about flavor, texture, knife skills, organization and deepening the learning for everyone involved.

The two field trips allowed the elementary students to work in a well equipped kitchen at TRU, closely engage with the Culinary students, and acquire and practice new skills. The learning from the first field trip was showcased in the preparation and serving of an appreciation meal for Arthur Hatton staff in February.



ESTR Program: Sustainability Plan and Partnership with SD73

Participants

TRU

Saskia Stinson
Leanne Mihalicz

4 Faculty
32 Students

SD73

Principal: Vessy Mochikas

1+ Teacher/Employee
39+ Students

Other

n/a

Summary of Project

Work Collaboratively with Vessy Mochikas and professionals of SD73 to partner and further develop relationships with SD73 to create transitioning opportunities for high school students from SD73 to ESTR program.

Activities

SD73 Inclusive Education Days:

ESTR faculty present at the secondary Professional development day October 9, 2019. Instructors from ESTR program were unable to attend, however, Vessy Mochikas presented information on behalf of TRU for that event.

Mind the Gap Promotional Poster

Marketing handout highlighting opportunities for SD73 students to explore and learn about the ESTR Program (target: teachers, family supports) was completed and emailed out to schools throughout the district.

Mentorship Days

Expand the high school student's mentorship project to all included all graduating students from the SD73, as well as, extend to high schools from the surrounding Kamloops area. Invite teachers and support workers to attend the mentorship days. Students and their teachers and support staff were invited to attend a day of classes in the ESTR program on January 29th and 30th as well as February 5th and 6th of 2020. Nine SD73 students attended classes in the Career Exploration, Kitchen and Retail streams. ESTR's Market was open during the event and students were provided with free food created by students at the market. Students in the ESTR program took a leadership role hosting and mentoring SD73 students during this event.

Open House March 5th

The open house was hosted at TRU and invites were extended to



students, caregivers and professionals from SD73 and TRU as well as community agencies. It provided guests with an opportunity to network as well as learn more about TRU and the ESTR program. ESTR student work and experiences were showcased to include: portfolios, practicums, service-learning projects, activities such as soup jar assembly and beading. ESTR faculty provided information about the program, the food served was prepared and presented by all students in the ESTR program. A tour of the campus was organized and delivered by TRU student ambassadors from TRU Recruitment Services. Sixty people signed the guest book and we estimate that there was another fifteen to twenty who did not sign in for a total of seventy-five to eighty people who attended this event.



Outcomes for ESTR Program and SD73

- **promote** information about the ESTR program, mentorship days and an open house to increase the number of applicants for the program
- **expand** networks and contacts throughout the school district to include outlying areas such as Chase and Logan Lake
- **provide** experiences in the ESTR program for students, caregivers and SD73 staff to learn more about the ESTR program through events hosted at TRU

What's Next?

We hope to have a meeting in May or June to review events that took place in the winter semester for this Mind the Gap project and to explore the future of this initiative. However, COVID-19 has taken priority in keeping our communities safe and healthy during this pandemic at this time.

Possible Opportunity

Explore adding a third semester or TRU Start program as part of high school work experience has been an idea discussed at meetings with SD73 staff and TRU/ESTR faculty during the 2020-2021 school year as well as 2019-2020 school year.



Mind the Gap 2019-2020



SCHOOL DISTRICT NO. 72
(Kamloops-Thompson)

