



TLEF Project – Final Report

Report Completion Date: (2025/03/31)

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	Dental public health mixed pedagogies: bringing the community to the classroom		
Principal Investigator:	Mario Brondani		
Report Submitted By:	Mario Brondani		
Project Initiation Date:	March 1 2022	Project Completion Date:	March 31 2025
Project Type:	<input type="checkbox"/> Large Transformation <input checked="" type="checkbox"/> Small Innovation <input type="checkbox"/> UDL Fellows Program <input type="checkbox"/> Hybrid and Multi-access Course Redesign Project <input type="checkbox"/> Other: [please specify]		

1.2. Project Focus Areas – Please select all the areas that describe your project.

- Resource development (e.g., learning materials, media)
- Infrastructure development (e.g., management tools, repositories, learning spaces)
- Pedagogies for student learning and/or engagement (e.g., active learning)
- Innovative assessments (e.g., two-stage exams, student peer-assessment)
- Teaching roles and training (e.g., teaching practice development, TA roles)
- Curriculum (e.g., program development/implementation, learning communities)
- Student experience outside the classroom (e.g., wellbeing, social inclusion)
- Experiential and work-integrated learning (e.g., co-op, community service learning)
- Indigenous-focused curricula and ways of knowing
- Diversity and inclusion in teaching and learning contexts
- Open educational resources
- Other: [please specify]



1.3. Final Project Summary – *What did you do/change with this project? Explain how the project contributed toward the enhancement of teaching and learning for UBC students.*

This Small Innovation TLEF had a major impact. It enabled us to develop new and refine existing selected sessions for the new Dental Public Health (DPH) proposed curricula to both dental and dental hygiene students, using the community as a teacher and in-class collaborative activities as the main pedagogies. DPH focuses on the non-clinical aspects of dentistry, and on the prevention of oral disease and promotion of oral health at the community level. DPH assesses the dental health needs of society as a whole. Given that the majority of oral health problems are avoidable, prevention and health promotion are key. Yet, the Faculty of Dentistry did not formally teach DPH as a stand-alone subject until this TLEF grant was awarded. DPH has also been a strong component of our 2019/20 strategic plan, but there was no robust DPH content or a designated course/module other than scattered sessions in our undergraduate DMD and DHYG curricula. These current sessions could lose their meaning if not brought together. They are now part of a robust and ever changing curricula.

1.4. Team Members – *Please fill in the following table and include students, undergraduate and/or graduate, who participated in your project.*

Name	Title/Affiliation	Responsibilities/Roles
Mario Brondani	Professor, Faculty of Dentistry	Content developer, course coordinator, instructor
Shimae Soheilipour	Lecturer, Faculty of Dentistry	Content developer, course coordinator, instructor
Carrie Krekoski,	Clinical Assistant Professor, Faculty of Dentistry and UBC Health	Consultant
Leeann Donnelly	Associate Professor, Dental Hygiene, Faculty of Dentistry	Content developer, course coordinator, instructor
Nasim Noroozbahari	Undergraduate Dental Student, Faculty of Dentistry	Consultant
Shuwen Liu	Undergraduate dental Student, Faculty of Dentistry	Consultant
Kaylin Ho	Undergraduate Dental Hygiene Student, faculty of Dentistry	Consultant
Tala Maragha	PhD Student, Faculty of Dentistry	Consultant
Parisa Shokouhi	MSc student and GTA, Faculty of Dentistry	Content developer
Mahdi Salehi	MSc student and GTA, Faculty of Dentistry	Content developer, session instructor
Anahita Bakhsaei	MSc student and GTA, Faculty of Dentistry	Content developer, session instructor
Damini Chakraborty	MSc student and GTA, Faculty of Dentistry	Content developer, session instructor
Sadikchya Pokhrel	MSc student and GTA, Faculty of Dentistry	Content developer, session instructor
M Ali Noerazlighi	MSc student and GTA, Faculty of Dentistry	Content developer

1.5. Courses Reached – *Please fill in the following table with past and current courses (e.g., HIST 101, 2017/2018) that have been reached by your project, including courses not included in your original proposal (you may adapt this section to the context of your project as necessary).*

Course	Academic Year
DENT 410	2023/24, 2024/25 (ongoing)



DHYG 310	2023/24, 2024/25 (ongoing)
DENT 420	2025/26 (planned)
DENT 440	2022/23, 2023/24, 2024/25 (ongoing)

OUTPUTS AND/OR PRODUCTS

1.1. Please **list** project outputs and/or products (e.g., resources, infrastructure, new courses/programs). Indicate a URL, if applicable.

Output(s)/Product(s):	URL (if applicable):
Course syllabus for DENT 410 DPH I with 21 2.5hrs sessions	
Course syllabus for DHYG 310 DPH I with 18 2.5hrs sessions	
Course syllabus for DENT 440 PM II with 9 1hr sessions	
Course outline proposal for DENT 420 DPH II	
Course outline proposal for DENT 430 DPH III	

1.2. Item(s) Not Met – Please list intended project outputs and/or products that were not completed and the reason(s) for this.

Item(s) Not Met:	Reason:
The full development of the 4 yrs of a spiral DPH curricula from years 1 to 4 of the undergraduate dental program;	Later in 2022 and during 2023, the Curriculum Review Committee Report and students' feedback judged that the amount of DPH topics originally planned as a 4 yr spiral curriculum ended being too much for an undergraduate level program, so the number of sessions and courses were adjusted accordingly.
The implementation of year 2 of the DPH curricula as DENT 420 DPH II, and year 3 as DPH III.	In 2023/24 Brondani took a 1 yr study leave, and the implementation of DENT 420 DPH II and DENT 430 III were placed on pause for re-evaluation given the Curriculum Review Committee Report and students' feedback; their course outlines were successfully developed however.

2. PROJECT IMPACT

2.1. Project Impact Areas – Please select all the areas where your project made an impact.

- Student learning and knowledge
- Student engagement and attitudes



- Instructional team-satisfaction
- Teaching practices
- Student wellbeing, social inclusion
- Awareness and capacity around strategic areas (Indigenous, equity and diversity)
- Unit operations and processes
- Other: [please specify]

2.2. Please provide details on each of the impact areas you selected in 3.1. – *For example, explain in which ways your teaching practices changed; how student wellbeing was impacted; how students wellbeing benefited from your project, etc.*

Student learning and knowledge: This project gave us a chance to coalesce the existing and suggest new teaching DPH content into the designated courses. It also gave legitimacy to the DPH content in itself, while highlighting its importance to the practice of dentistry and dental hygiene. Students were given a chance to better understand the importance of DPH issues (from the social determinants of health to community-driven perspectives) in the midst of a heavily focused clinical training, and foster a community-focused lens for the provision of oral health care.

Student engagement and attitudes: As the year 1 (DPH I) of this implemented curriculum brought together both the dental (DENT 410) and dental hygiene cohorts (DHYG 310), it gave a chance for the students to interact and learn from one another as much as possible. Their attitudes about the DPH content and about their own professions likely changed, and we are using their ongoing feedback to revise the courses/curricula for more meaningful interaction between the two cohorts. The in-class activities, where students have to actively participate instead of passively listening to a presenter, also made them more engaged, although we are also revising the courses to include more of these activities. We also gave graduate students the opportunity to get involved in content development and delivery by allowing them to co-develop and co-teach some of the sessions with us, the instructors.

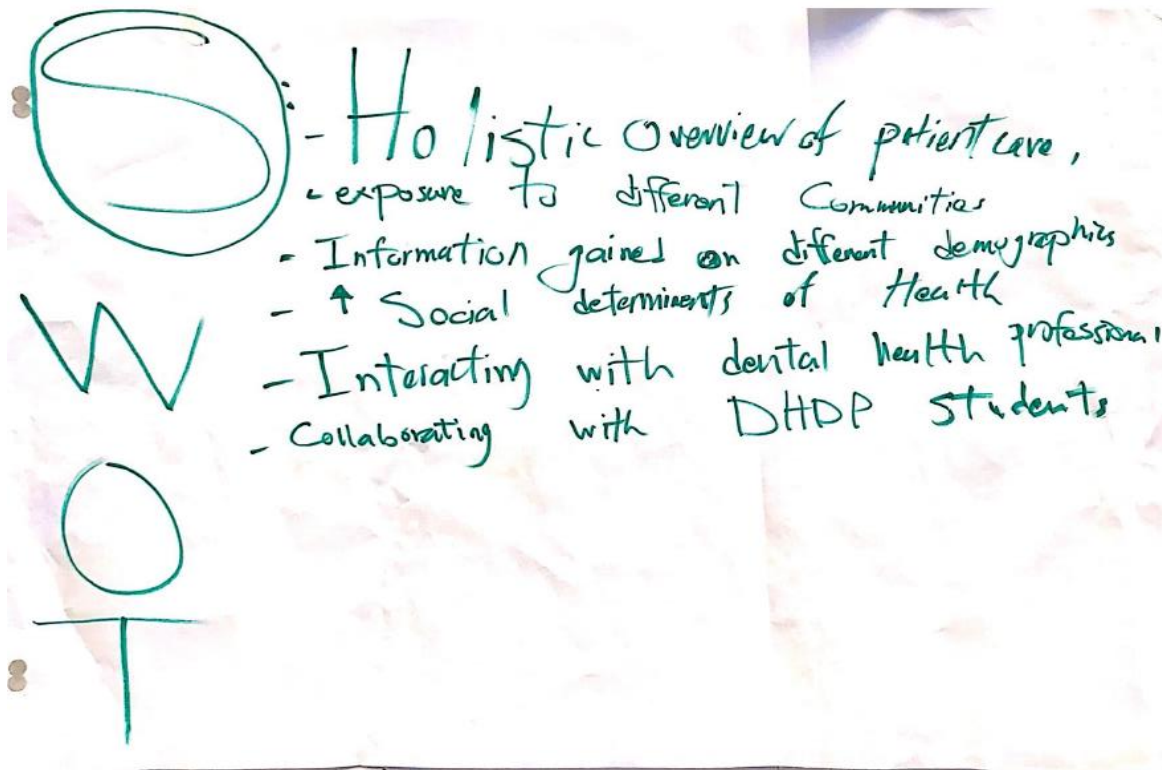
Teaching practices: We were able to introduce a series of different and innovative teaching pedagogies including the combined teaching of both dental and dental hygiene students in a more interprofessional environment, the use of flipped classroom (where students access/read material before the class), the implementation of community site visits where students get a chance to better understand the struggles of a number of different communities/neighborhoods/organizations across Vancouver and the lower mainland, and the utilization of the community as the teacher in which community members shared their stories and lived experiences in the classroom while delivering pedagogical content.

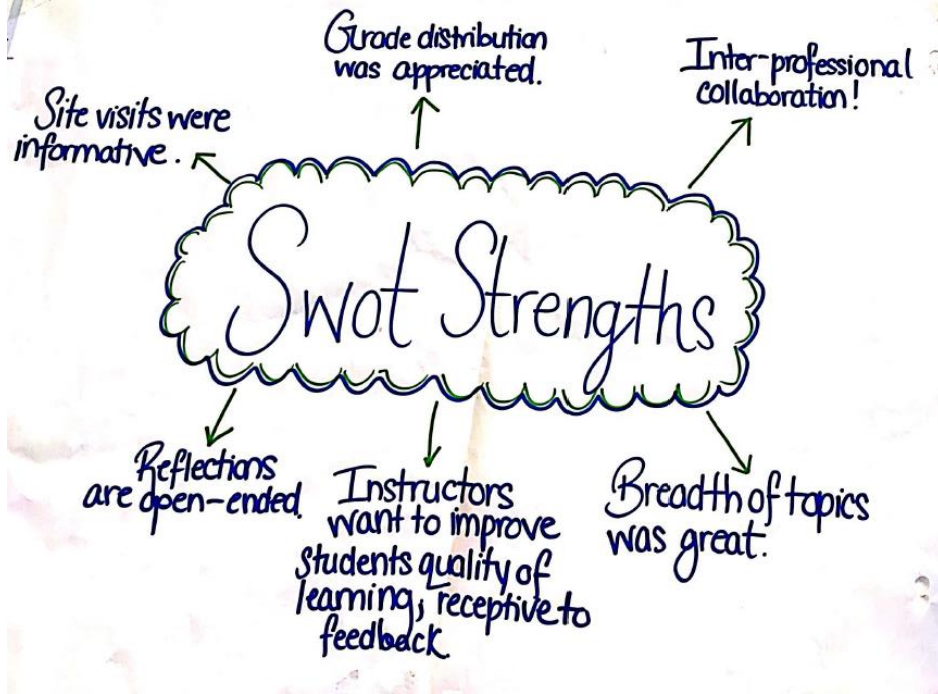
2.3. How do you know that the impacts listed in 3.1/3.2 occurred? – *Describe how you evaluated changes/impacts (e.g., collected survey data, conducted focus groups/interviews, learning analytics, etc.) and what was learned about your project from the evaluation. You are encouraged to include graphical representations of data and/or scenarios or quotes to represent and illustrate key themes.*

The annual course evaluations (via Blue) are important, but very few students participate. We received no responses from students for the course eval for DENT 440 PM II in 2022/23, 7 responses from students for the course eval for DENT 410 DPH I in 2023/24 (from 68 students) and 1 response from a student for the course eval for the DENT 440 PM II in 2023/24 (from 59 students). The current academic year course eval 2024/25 for both DENT 410 DPH I and DENT 440 PM II have to still be implemented.

As none of the evaluations reached the suggested response rate of 35%, we decided to at least conduct one SWOT (strength, weakness, opportunities, threats) analysis of the new DPH I course that was introduced in the 2023/24 academic year; another one is planned for the end of 2024/35 academic year if the course eval does not reach the suggested response rate. Students were placed into small groups in class to conduct such evaluation without the course instructor being present to make students more at ease; two hired and trained graduate students conduct the SWOT exercise as the instructors left the room to avoid biases and eliminate power imbalance. We are currently working in adapting some of the suggestions made by the students while revising the course and the entire DPH curricula as suggested in the Curriculum Review Committee Report.

Below are some images of the SWOT developed by the students, 2 per strategy.





Weaknesses:

- site visit disorganization
 - scheduling conflicts b/w DMD : DHyg.
 - lack of coordination b/w instructors
 - little to no instruction initially
- scheduling
 - very long lectures per slide deck
 - inconvenient lecture times (ie. 4 hour breaks)
- hard to participate & be engaged
 - did not always feel like safe space
- lecture room didn't promote participation
 - consider online delivery for some classes
 - location sometimes inconvenient
- important topics but felt surface level
- all of the student presentations in one day

WEAKNESSES

Delay between classes

Applying content in clinical setting

work to Grade ratio

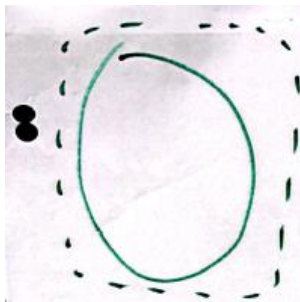
Split up Final presentation to various groups

No BREAKS
:(

Not enough interactive activities
~~classes~~
classes

Not enough site visits/communication

Not enough guest speakers



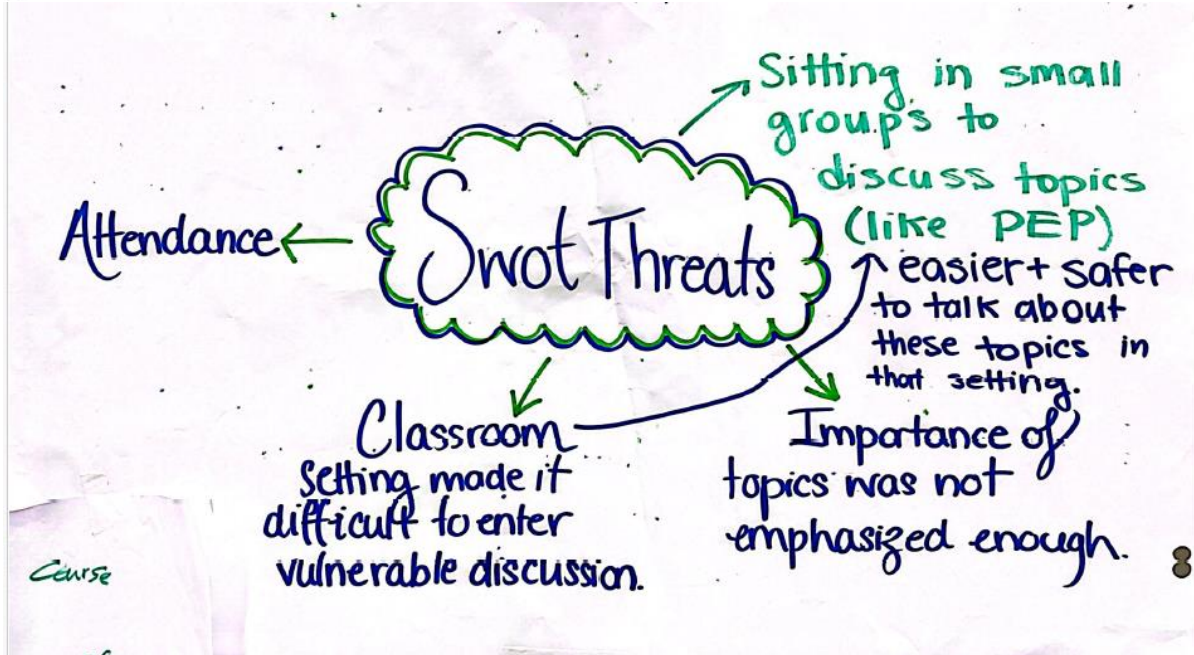
- Move online modules than in-person lectures
- More time Allocations to group projects in class
- Hybrid learning to increase engagement
- Ending the course when DHPD ends.

Opportunities -SDOH as a framework for course presentation

- Attendance / collaboration based exercises
- SDOH → more goals / more info on slides / would give more structure
- Smaller rooms
 - ↳ Cases / case based / discussion based
 - ↳ ie injections discussion in class / ethics
- better scheduling
 - huge gap b/w classes
 -
- allow people to choose / rank choices of site visits ie location wise
- ~~site visits locations~~
 - ↳ rooms
- more guest speakers / lectures
- incorporate volunteer opportunities
 - ↳ ie @ site visits
- Role play w/ real life scenarios
- debate 2 perspectives
 - ie safe injections for vs against
 - allow participants to see 2 perspectives

Threats

- attendance
 - low incentive b/c graded assignments were outside class
- bias → ability to freely share opinion
- reputation of class course being passed to incoming class



3. TEACHING PRACTICES – Please indicate if your teaching practices or those of others have changed as a result of your project. If so, in what ways. Do you see these changes as sustainable over time? Why or why not?

Brondani and Donnelly were already using some of the teaching practices discussed herein (e.g., flipped classroom, community as the teacher, etc) in other modules, and that will be sustainable over time as these practices are part of their teaching and will continue.

The other instructors, including Soheilipour, benefited from the new teaching practices introduced herein such as the site visits and SWOT analysis exercise, and she will employ these in her own teaching endeavors.

4. PROJECT SUSTAINMENT – Please describe the sustainment strategy for the project components. How will this be sustained and potentially expanded (e.g., over the next five years). What challenges do you foresee for project sustainment?

The DPH curricula will remain as permanent on the current and upcoming teaching of both undergraduate dental (years 1 and 4), and dental hygiene students (year 1) as shown below with a summary of the sessions’ content (Table 1). The academic team is currently revising DPH I content for 2025/26 academic year. They are also revising DPH content that happens in year 4 under Practice Management II course, that will be part of a motion put forward to re-name it as DPH II (for now, as there are no DPH II and III in years 2 and 3, respectively) for the next 2025/26 academic year, while the entire DMD curriculum is being reviewed this Summer 2025. For the other DPH courses, we have already outlined the content for DPH in years 2 and 3, but will follow the faculty decision in how to move forward with the DPH content as a whole in light of the Curriculum Review Report. Altogether, this TLEF grant enabled us to develop a new and modify an existing DPH course, to conduct a more in-depth analysis with students about the relevance of DPH content as a whole, and to outline two other DPH courses that will be ready for implementation pending the Faculty’s decision on how to move forward.



Also, the initial results from this TLEF enabled Brondani and the team to apply for a Health Canada access to care fund focused on the teaching of non-financial determinants of health (most of which are within the DPH realm) given the new universal Canadian dental care plan, which was unfortunately not awarded. But it has also enabled the team to support a number of graduate students’ work via upcoming publications (see further details ahead), which will further coalesce the argument for graduating an oral health care provider who is grounded in general practice aided by a DPH curricula outline below via the two courses currently offered to dental (DENT 410 and DENT 440) and dental hygiene (DENT 410) students.

Table 1 – Session content for the current DPH I and II.

DENT 410 - Dental Public Health I	
Session 1	Introduction to Dental Public Health, its competencies, and the social contract
Session 2	The Canadian Health Care Act, and oral health care delivery
Session 3	Equity, equality, social justice and the determinants of (Oral) health
Session 4	Community-engaged learning I – First site visits
Session 5	Social responsibility, justice, structural vulnerability, cultural competency and anti-racism
Session 6	Insurance, dental plans, and access to care
Session 7	TVIC online module DMD
Session 8	Poverty, homelessness and the inverse care law
Session 9	Gender diversity, sexual orientation: equitable dental practice
Session 10	Oral health interventions – Needs assessment and situation analysis
Session 11	Community-engaged learning II – Second site visits
	TVIC online module DHYG
Session 12	Community-engaged learning III– Third site visits
Session 13	Substance Use, Harm reduction, and stigma reduction
Session 14	Oral health interventions II – Case presentation on needs assessment and situation analysis of a community: oral health promotion
Session 15	Oral health behavior, oral health literacy, oral health education and oral health promotion
Session 16	Oral health behavior, oral health literacy, oral health education and oral health promotion/ risk assessment/ Epidemiology
Session 17	Epidemiology and oral health indexes: measurements, concepts and validity – Part I
Session 18	Epidemiology and oral health indexes: measurements, concepts and validity – Part II
Session 19	The Canadian Oral Health Measures Survey, the Inuit and First Nations Oral Health Measures Surveys
Session 20	Bringing things together: Wrap-up
Session 21	Course eval
DENT 440 - Dental Public Health II (to replace Practice Management II)	
Session 1	Recap of Dental Public Health, its competencies, and the social contract
Session 2	Site orientation to the community placements
Session 3	TVIC - recap
Session 4	Poverty and its impact
Session 5	Special Care Dentistry - Universal access to oral health care
Session 6	Health policy and the practice of DPH
Session 7	Community Water Fluoridition
Session 8	Sugar tax and
Session 9	Wrap-up
Session 10-25	Community placements/rotations

5. DISSEMINATION – Please provide a list of scholarly activities (e.g., publications, presentations, invited talks, etc.) in which you or anyone from your team have shared information regarding this project. Be sure to include author names, presentation title, date, and presentation forum (e.g., journal, conference name, event). These will be included on the TLEF scholarly output page.



The involvement of the graduate students (in yellow) in co-developing and co-teaching DPH was possible given the focuses of their current studies on specific areas related to DPH. That is, their research work were key to produce content that is now incorporated into the proposed curriculum using an evidence-based approach.

For example, on the topic of inequity in accessing oral health care, D Chakraborty's work was utilized to develop one of the DPH sessions and this TLEF was acknowledged on two of her work recently submitted for peer review publication:

Chakraborty D, Grazziotin-Soares R, Tong N, Brondani M. How oral health equity is being conceptualized and measured? A scoping review. Submitted to the Journal of Dental Public Health on March 12, 2025.

Chakraborty D, Grazziotin-Soares R, Tong N, Brondani M. Investigating Oral Health Equity in middle and older adults in Canada. Submitted to the Community Dentistry and oral Epidemiology Journal on March 28, 2025.

And on the topic of Indigenous health, P Shokouhi's work was utilized is one of the sessions and this TLEF was also acknowledged on her work recently submitted for peer review publication:

Shokouhi P, Donnelly L, Ardenghi D, Lessard A, Goulet T, Brondani M. The extent of Dentistry and Dental hygiene curriculum Indigenization across Canada. Currently under consideration for publication at the Journal of Dental Education after changes suggested by the reviewers were submitted.

And at our recent FoD's Research Day on January 28, 2025, Chakraborty presented part of her above work entitled:

Chakraborty D, Grazziotin-Soares R, Tong N, Brondani M. Investigating Oral Health Equity: Scoping Review and CLSA Data Analysis.

The work of other graduate students, including **Noeerazlighi** (on the use of AI tool in teaching DPH content) and **Pokhrel** (on cultural health and beliefs practices in DPH), will be also incorporated into this DPH curriculum and their upcoming publications will also acknowledge this TLEF grant.