



TLEF Project – Final Report

Report Completion Date: **2020/11/06**

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	Interprofessional Lactation Module for the Health Sciences - IP Lactation		
Principal Investigator:	Suzanne Campbell		
Report Submitted By:	Suzanne Campbell		
Project Initiation Date:	01-April-2019	Project Completion Date:	11-November-2020
Project Type:	<input type="checkbox"/> Large Transformation <input checked="" type="checkbox"/> Small Innovation <input type="checkbox"/> Flexible Learning <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. Project Summary

Health professional students do not receive adequate lactation education or practice, and, consequently, are not confident in their ability to counsel families on infant feeding. Our proposal outlines an innovative combined online and hands-on, interdisciplinary lactation open educational resource. Comprehensive high-fidelity lactation simulation models did not previously exist, and hands-on lactation education opportunities were not available. The online module (*IP-Lactation*) and skills lab component will fit the needs of diverse health professional students. Through simulation, improved innovative and effective learning environments for breastfeeding is possible. Since lack of support from healthcare providers is cited by parents as a key reason for early breastfeeding cessation, this new approach will ensure that when students graduate, they are better able to support families. This proposal also has an impact on the interprofessional integration of roles included in the UBC strategic plan and allows support to families with evidence-based practice.

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
Alison Greig	Senior Instructor, Faculty of Medicine, Physiotherapy	Consultant
Carrie Miller	Seattle University, School of Nursing	External consultant/Community Partner
Cheryl Segaric	Instructor, Faculty of Applied Science, School of Nursing	Team support
Claudia Krebs	Professor of Teaching, Faculty of Medicine, Dept of Cellular & Physiological Sciences	Team support
Flaviana Vieira	UBC-Nursing, Faculty of Applied Science	Team support
Janet Currie	MSW, PhD(c), UBC-Interdisciplinary Doctoral Student	Team support
Kim Campbell	Instructor, Faculty of Medicine, Midwifery	Team support
Lea Geiger	BC Baby Friendly Network	External consultant/Community Partner
Marianne Brophy	Adjunct Professor, Faculty of Medicine, Family Practice	Team support
Melanie Willson	Lecturer, UBC-Okanagan, Faculty of Human and Social Development, School of Nursing	Team support
Morgan Straza	UBC-Okanagan Nursing graduate student	Student
Nicole Bernardes	UBC-Nursing/PT Visiting Associate Professor, Faculty of Applied Science, Faculty of Medicine, Physiotherapy	Team support
Saraswathi Vedam	Associate Professor, Faculty of Medicine, Midwifery	Consultant
Thayanthini Tharmaratnam	UBC-Nursing graduate student	Student
Tina Revai	BC Lactation Consultants Association	External consultant/Community Partner



1.5. Courses Reached – Please fill in the following table with ***past, current, and future*** courses and sections (e.g. HIST 101, 002, 2017/2018, Sep) that have been/will be 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 Code	Section	Academic Year	Term (Sep/Jan/May)
MIDW 104	Lactation Consultation for Maternity Care Providers	Midwifery 2020	Jan 2020/ Jan 2021
MIDW 107	Physical Assessment	Midwifery 2020	Jan 2020/ Jan 2021
MIDW 108	Introduction to Primary Midwifery Care	Midwifery 2020	Jan 2020/ Jan 2021
MIDW 200	First clinical course in second year	Midwifery 2020	Jan 2020/ Jan 2021
NRSNG 228	Community Health	UBC-O Nursing UG	Jan 2020/ Jan 2021
NRSNG 238	Nursing Practice in the Community	UBC-O Nursing UG	Jan 2020/ Jan 2021
NRSNG 328	Health of the Childbearing Family	UBC-O Nursing UG	Jan 2020/ Jan 2021
NRSNG 329	Child Health	UBC-O Nursing UG	Jan 2020/ Jan 2021
NRSNG 338	Nursing Practice with Childbearing Families	UBC-O Nursing UG	Jan 2020/ Jan 2021
NRSNG 339	Nursing Practice in Child Health	UBC-O Nursing UG	Jan 2020/ Jan 2021
NURS 322	FSCP-Foundational Skills and Competencies of Nursing Practice	Nursing Undergraduate 2020	Jan 2020/ Jan 2021
NURS 345	Theoretical Perspectives in Nursing: Childbearing Individuals and their families	Nursing Undergraduate 2020	Jan 2020/ Jan 2021
NURS 365	Nursing Practice with Childbearing Individuals and families	Nursing Undergraduate 2020	Jan 2020/ Jan 2021
NURS 506	Health Promotion in Practice	Nursing Graduate 2020	Jan 2020/ Sept 2020/ Sept 2021
NURS 510	Advanced Health Assessment Across the Life Span	Nursing Graduate 2020	Jan 2020/ Jan 2021
NURS 571	Primary Care II	Nursing Graduate 2020	Jan 2020/ Jan 2021
PHTH 301	Physical Therapy Foundations	Physical Therapy 2020	Jan 2020/ Jan 2021
PHTH 564	Clinical Practice IV	Physical Therapy 2020	May 2020/ May 2021



2. OUTPUTS AND/OR PRODUCTS

2.1. Please **list** project outputs and/or products (e.g. resources, infrastructure, new courses/programs). Indicate the current location of such products and provide a URL if applicable.

Product(s)/Achievement(s):	Location:
Anatomy/Physiology Open Educational Resource	http://www.clinicalanatomy.ca/thorax/Lactation/story.html
Lactation 1: Prenatal Anticipatory Guidance	http://clinicalanatomy.ca/embryology/Lactation1/story_flash.html
Lactation 2: Cesarean Section in Hospital	https://www.clinicalanatomy.ca/Lactation2/story_html5.html
Lactation 3 (in process, final touches)	https://www.clinicalanatomy.ca/Lactation3/story_html5.html
Lactation 4 (in process)	
UBC Website with lactation links	https://nursing-sim.sites.olt.ubc.ca/home/lactation/telehealth-simulations/

Item(s) Met – Please list intended project outputs and/or products that were completed.

Summary:

- Review present curricula: Consistent education related to breastfeeding (baseline, foundational knowledge and practice components for all health care professionals);
- Examine present curriculum and do capacity building in knowledge development and translation around lactation and infant feeding;
- Identify current knowledge, skills and attitudes across the UBC health disciplines about lactation;
- Include faculty from multiple disciplines, practice partners, community members (patients);
- Increase opportunity for interprofessional education by including nursing students at multiple levels, midwifery, and physiotherapy students and partnering with UBC-Okanagan to reach their nursing students as well;
- Develop online learning options in an open-educational resource format that will be interactive, and relevant for all health professional students, practitioners, and even parents;
- Create interactive innovative learning with Lactation Simulation Models that incorporate best practice standards in simulation design, facilitation, and debriefing and evidence-based practice for interdisciplinary lactation care.
- Outcomes based criteria will be used to evaluate the project success as outlined in the evaluation plan below – it will include surveys measuring students’ knowledge and self-efficacy as well as measures of student experiences, during classroom, lab sessions and reflective exercises.

Item(s) Not Met – Please list intended project outputs and/or products that were not attained and the reason(s) for this. (Modules 3 & 4 are complete, just waiting for HIVE release of final versions w/ photos & videos)

3. PROJECT IMPACT

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

Student learning and knowledge

Student engagement and attitudes

Instructional team-teaching practice and satisfaction

Student wellbeing, social inclusion

Awareness and capacity around strategic areas (indigenous, equity and diversity)

Unit operations and processes

Other: [accessible resources, open access web, for pre-licensure students globally and practitioners and parents]



3.2 What were you hoping to change or where were you hoping to see an impact with this project? – Please describe the intended benefits of the project for students, TAs, instructors and/or community members.

Our hope is that the OER will be used as foundational learning for all health professional students and practitioners. They would be best integrated into the health professional curriculums as pre-briefing followed up with opportunities for hands-on learning, case study discussion, clinical application, and recording of outcome changes in attitudes, beliefs, and confidence providing breastfeeding support for families at all stages. The benefit of the project for students is its easy accessibility, their ability to repeat sections for mastery of content. For TA’s and instructors, the easy access resources can be integrated into their courses, clinical practice (lab or live), and are based on evidence-based practice best practice standards globally, nationally, and provincially. For community members, the resources could be used for integration into pre-natal and post-natal classes, workshops, and family support. In addition, health care providers who may not have been exposed to breastfeeding education could have access as part of continued professional learning. A future vision is to incorporate these OERs into a provincial Baby Friendly Initiative to support provincial goals around increasing provider education to better support families along the continuum from pregnancy to delivery and postpartum.

3.3. Were these changes/impacts achieved? How do you know they occurred? – What evaluation strategies were used? How was data collected and analyzed? You are encouraged to include copies of data collection tools (e.g. surveys and interview protocols) as well as graphical representations of data and/or scenarios or quotes to represent and illustrate key themes. [- LSM data surveys; - survey OER; - pilot telehealth and others]

Yes, did scoping review w/manuscript for publication that guided development of scenarios.

3.4. Dissemination – Please provide a list of past and upcoming scholarly activities (e.g. publications, presentations, invited talks, etc.) in which you or anyone from your team have shared information regarding this project.

List scholarly activities

Submitted Scoping Review Manuscript: Campbell, S.H., Bernardes, N., Vieira, F., & Tharmaratnam, T. Educational resources and curriculum on lactation for health undergraduate students: A scoping review.	Journal of Human Lactation (Submitted 10/24/2019, revisions submitted 10/2020)
Lactation: Foundational Strategy for Health Promotion (2021)	PI edited text advocating for integrated, inclusive text for health professionals – January 21, 2021 release date, Interview about text https://www.youtube.com/watch?v=M6wIHnVuPGw&feature=youtu.be https://www.jblearning.com/catalog/productdetails/9781284197167
Live simulations w/ 120 nursing students, didactic and hands on education with varied LSM models (Feb. 2019-2020)	UBC-Vancouver
Created virtual telehealth interprofessional simulation to be used concurrently with OER. Students invited from: Nursing, Medicine, Midwifery, and Physiotherapy (June 2020)	UBC-Vancouver, UBC-Okanagan students for Pilot testing June 2020.
Oral Presentation. Campbell, S. H., Bernardes, N. O., Vieira, F., Tharmaratnam, T. A Scoping Review of Educational Resources and Curriculum on Lactation for Health Professional Undergraduate Students.	Healthy Mothers and Healthy Babies Conference 2020, Vancouver, BC, 2020.



<p>Oral Presentation. Campbell, S. H., Bernardes, N.O., Tharmaratnam, T., Segaric, C. Creating a curriculum to improve clinical management of breastfeeding – pilot results. (Accepted-Postponed to June 2021, COVID-19)</p>	<p>CASN Biennial Canadian Nursing Education Conference 2020, Calgary, AB, Canada, 2020.</p>
<p>Oral Presentation. Campbell, S. H., Bernardes, N. O., Tharmaratnam, T., Segaric, C, Vieira, F. The use of simulation to improve clinical management of breastfeeding for undergraduate nursing students.</p>	<p>9th CAPWHN National Conference, Vancouver, BC, Canada, 2019.</p>
<p>Oral presentation. Campbell, S. H., Tharmaratnam, T., Bernardes, N. O., Wilson, M., Brophy, M. Moving interprofessional simulation online: A lactation telehealth virtual simulation Pilot.</p>	<p>INACSL Conference, Denver, CO, US, 2021.</p>
<p>Requests and sharing of links w/ health professional faculty internationally.</p>	<p>Database created to track requests and sharing [Tweeted for Canada’s World Breastfeeding Week, Oct. 1-7th, 2020]</p>
<p>Blumer, P.*, Chen, S., Krebs, C., Lindokken, E., Alpen, G., Lo, B., Ushick, L., Holuszko, O., Fejtek, M., Brophy, M., Campbell, K., Willson, M., Vieira, F., Bernardes, N., Tharmaratnam, T., Revai, T., Campbell, S. H.* Got Milk? An inter-professional approach to lactation care.</p>	<p>2020 CHES Celebration of Scholarship. Virtual, British Columbia, BC, Canada. [Demoed first Prenatal Assessment Lactation]</p>

4. 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?

Yes, incorporating pre-briefing, synergy of global best practices, role-modeling of patient-provider interactions to best support lactation. Many faculty across British Columbia (e.g. UBC-Okanagan) are incorporating into health professional foundational education in courses, requests are coming in across Canada and internationally for use of OERs.

5. 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 achieving the expected long-term impacts listed above?

Continue to work with faculty from multiple disciplines. Disseminate links and work with faculty to integrate into curriculum. Seek funding to support virtual and live simulations. Possibly create a Virtual Gaming Simulation (VGS) that would incorporate these OER’s as the ‘pre-brief’ foundational knowledge and the VGS could provide opportunities to reinforce and evaluate students’ mastery of content and confidence in ability to translate knowledge to change in clinical practice and ultimately patient outcomes of enhanced exclusive BF rates and satisfaction w/ respectful care from providers related to infant feeding decision-making and meeting goals.