



# TLEF Project – Final Report

Report Completion Date: (YYYY/MM/DD)

## 1. PROJECT OVERVIEW

### 1.1. General Information

<b>Project Title:</b>	Pharmacy Students as Educators (PHASE) Program		
<b>Principal Investigator:</b>	Fong Chan		
<b>Report Submitted By:</b>	Fong Chan		
<b>Project Initiation Date:</b>	April 2017	<b>Project Completion Date:</b>	August 2020
<b>Project Type:</b>	<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.*

The PHASE program was the systematic implementation of an educator’s curriculum within UBC’s Faculty of Pharmaceutical Sciences Entry-to-Practice Doctorate of Pharmacy (E2P PharmD) curriculum. The PHASE Program incorporates learning experiences designed to support students’ ability to identify themselves as pharmacist educators, learn about the principles of effective education, and create links between educational concepts and their practical applications. As such, it is composed of a three-year program that begins in Program Year 2 (PY2) of the E2P PharmD Program. The first and second years of PHASE (PY2 and PY3) consists of one mandatory didactic session and one mandatory academic-half day (AHD). The third and final year of PHASE (PY4) consists of mandatory online practice educator training modules and an optional 4-week academic teaching practicum.

**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
Fong Chan	Assistant Professor of Teaching	Coordinator
Tony Seet	Associate Professor of Teaching	Coordinator
Sandra Jarvis-Selinger	Professor and Associated Dean	Member of Advisory Committee
Justine Saran	Pharmacist (Former Pharmacy Student during implementation of the PHASE Program)	Member of Advisory Committee
Arun Verma	Associate Professor of Teaching	Member of Advisory Committee
Janice Yeung	Director of Office of Experiential Education	Member of Advisory Committee
Robert Pammett	Assistant Professor of Teaching	Member of Advisory Committee
Mona Kwong	Community Pharmacist	Member of Advisory Committee
Sharon Leung	Hospital Pharmacist	No longer a part of the Advisory Committee
Leanne Ri	Pharmacist (Former Pharmacy Student during implementation of the PHASE Program)	No longer at the Faculty
Nichol Bruchet	Hospital Pharmacist	No longer a part of the Advisory Committee
Tila Pelletier	Hospital Pharmacist	No longer a part of the Advisory Committee



**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
PHRM 211	2017, 2018, 2019
PHRM 212	2017-2018, 2018-2019, 2019-2020
PHRM 311	2018-2019, 2019-2020
PHRM 312	2018-2019, 2019-2020
PHRM 441	2019-2020
PHRM 473	2019-2020



## 2. OUTPUTS AND/OR PRODUCTS

2.1. 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):
PHASE Program Year 1 (part of curriculum embedded within Program Enrichment Activity Days [PEADs])	PHASE Canvas site (updated yearly): <a href="https://canvas.ubc.ca/courses/98626">https://canvas.ubc.ca/courses/98626</a>
PHASE Program Year 2 (part of curriculum embedded within Program Enrichment Activity Days [PEADs])	PHASE Canvas site (updated yearly): <a href="https://canvas.ubc.ca/courses/98626">https://canvas.ubc.ca/courses/98626</a>
PHASE Program Year 3 (part of PHRM 441 and 473 – non-direct patient care)	<a href="https://courses.students.ubc.ca/cs/courseschedule?pname=subjarea&amp;tname=subj-course&amp;dept=PHRM&amp;course=441">https://courses.students.ubc.ca/cs/courseschedule?pname=subjarea&amp;tname=subj-course&amp;dept=PHRM&amp;course=441</a> <a href="https://pharmsci.ubc.ca/experiential-partners/programs/e2p-pharmd">https://pharmsci.ubc.ca/experiential-partners/programs/e2p-pharmd</a>

2.2. **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:
Evaluation of program for PHASE final year 2019-2020	COVID pandemic – we were unable to continue with the evaluation of the final year of PHASE due to manpower and logistics being redirected to pivot our program to online learning

## 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-satisfaction
- Teaching practices
- Student wellbeing, social inclusion



- Awareness and capacity around strategic areas (Indigenous, equity and diversity)
- Unit operations and processes
- Other: [please specify]

**3.2. 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: pharmacy students are provided with a basic foundation of adult education principles that they would not have been exposed to elsewhere in the program. As well, they have more awareness how pharmacists are educators by watching vignettes of pharmacists sharing their role as pharmacist-educators.

Student engagement and attitudes: pharmacy students started with an awareness about the educative aspects of the pharmacy profession, but that this awareness was strengthened after participating in the PHASE sessions.

Teaching practices: The PHRM 473 UBC Teaching Practicum that stemmed from the PHASE Program offers a 4-week teaching practicum at UBC with a pharmacy practice skills faculty member as the practice educator. This practicum allows senior students the opportunity to teach and application of the knowledge and skills they have been exposed to in previous years of the PHASE Program.

**3.3. 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.**

Formal evaluation of the PHASE Program was conducted in 2017-2018 and 2018-2019. Both quantitative and qualitative evaluations were conducted. Students submitted responses through online surveys that incorporated both Likert-style and open-ended questions. Overall, our findings show that pharmacy students started with an awareness about the educative aspects of the pharmacy profession, but that this awareness was strengthened after participating in the PHASE sessions. Baseline data showed that students had an awareness of the role of pharmacists as educators given that the majority of students agreed or strongly agreed with the statement “A role of a pharmacist includes being an educator”. After the PHASE Program either more students agreed with this statement or that within the aggregate of strongly agree and agree combination, there was an increase in the number of students who strongly agreed with this statement. In addition, students’ feelings of confidence and self-efficacy increased after both PHASE sessions. Across all five survey questions, the largest changes in students’ positive responses were observed in the following three statements: “I am confident that I can educate a group/audience”, “I am able to develop an educational session”, and “I am able to conduct an educational session” where there is an absolute increase of 46.8 %, 40.2 %, and 43.4 % seen respectively.



For the qualitative data, when asked about what they learned from the PHASE program, students reported the following themes as novel: the value of utilizing effective teaching strategies to motivate the learner, the need to keep feedback future-focused and constructive, the role of pharmacists and pharmacy students as educators, the need to recognize and be sensitive to cognitive overload, and the gap in understanding between teacher and learner. For example, one student stated that through PHASE, they had gained insight into the quantity of information being taught: “Learners being overwhelmed with information. I have experienced this as a learner, but it has not occurred to me to pay attention to this as a teacher.” Through applying their learning in AHD sessions, students described gaining an appreciation for the level of complexity required to prepare and tailor their teaching sessions for a specific audience or individual learner. Further, through teaching and observing peers, they learned helpful strategies to improve their teaching and presentation skills and recognized the importance of considering the learner’s perspective and learning style when constructing a lesson. For example, one student stated that “Teachers need to put themselves in the position of the learner to determine what and how to teach the material effectively.”

**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?*

My teaching practice has changed in that I consider and value the student perspective more when I teach and when I am creating learning activities/lessons. Also, the addition of teaching opportunities offered by the PHASE Program (i.e. PHASE facilitators and practice educators for the practicums) provided me ways in which I can improve and expand upon my teaching practices by allowing more exposure to these areas of teaching. The more I facilitate and precept, the more comfortable I get in these areas of teaching practice.

The PHASE Program also provides these opportunities to facilitate and precept to other faculty members within our Faculty. As well, opportunities to facilitate are offered to senior pharmacy students who have already completed the first 2 years of the PHASE program.

**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 project sustainment?*

The PHASE Program has been incorporated as a part of our Faculty’s curriculum and has been sustained within our program’s budget, infrastructure, and personnel. The challenge for us currently is whether we are able to maintain the level of quality and facilitators for the academic half days moving forward.



6. **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.
1. **Chan, F.H.** (2021, June). *Entering into a New PHASE (Pharmacy Students as Educators)*. Presented to pharmacy educators at Canadian Pharmacy Education and Research Conference (CPERC) 2021, Toronto, ON. (Virtual Conference) National)
  2. **Chan F**, Seet T, Yeung J, Leung S, MacNeil K, Li R, Saran J, Jarvis-Selinger S. *The Impact of PHarmacy Students as Educators (PHASE) and a Simulated Teaching Environment in an Entry-to-Practice PharmD Program at UBC*. The Canadian Conference on Medical Education (CCME), Vancouver, BC April 18-21, 2020. (conference cancelled but abstract published in Canadian Conference on Medical Education 2020 Abstracts; Vol 11 No 2 (2020): DOI: <https://doi.org/10.36834/cmej.v11i2>)
  3. **Chan F**, Yeung J, MacNeil K, Seet T, Saran J, Verma A, Jarvis-Selinger S. *Pharmacy Students as Educators (PHASE) Program: Implementing and Educator’s Curriculum for Pharmacy Students*. Presented at the AFPC Canadian Pharmacy Education and Research Conference (CPERC). Ottawa, ON June 12-15, 2018.
  4. **Chan F**, Seet T, MacNeil K, Long J, Yeung J, Saran J, Verma A, Jarvis-Selinger S. *The Impact of Pharmacy Students as Educators (PHASE) and a Simulated Teaching Environment on Program Year 2 Students in an Entry-to-Practice PharmD Program at UBC*. Presented at the AFPC Canadian Pharmacy Education and Research Conference (CPERC). Ottawa, ON June 12-15, 2018.
  5. Saran J, MacNeil K, Verma A, Seet T, Jarvis-Selinger S, Yeung J, **Chan F**. *PHarmacy Students as Educators (PHASE) Program: Implementing an Educator’s Curriculum for Pharmacy Students*. Presented at the Teaching and Learning Enhancement Fund Showcase. Vancouver, BC May 3, 2018.