



TLEF Project – Final Report

Report Completion Date: 2021/11/25

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	A Novel Instructional Media for Accessible Teaching and Education (ANIMATE)		
Principal Investigator:	Alex Tang		
Report Submitted By:	Alex Tang, Lucy Zhou		
Project Initiation Date:	2019/11/01	Project Completion Date:	2021/08/01
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. Final Project Summary

To prepare pharmacy students for their practicums, orientation materials were traditionally delivered through written documents and lectures. Based on feedback and direct observation, these lectures were unengaging, long-winded, and poorly timed. The ANIMATE project aimed to transform our current pedagogical approach to better fit the needs of our students by using stop motion animation videos to improve student engagement, accessibility, and practicum preparedness. A series of 11 educational videos, each less than 9 minutes long, were created and incorporated into the synchronous practicum orientation lectures and made available year-round for students to watch as needed online asynchronously. These videos feature an animated pedagogical agent (APA) called Dr. Tablet who takes the form of a round blue pill dressed in a whitecoat. Based on student surveys and focus groups, and instructor feedback, this project improved student preparedness for practicums and provides potential long-term value as these videos are publicly available as open educational resources on <https://blogs.ubc.ca/oeetoolbox/>

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
Alex Tang	Lecturer, Office of Experiential Education, Faculty of Pharmaceutical Sciences	Principal Investigator; Project lead
Janice Yeung	Director, Office of Experiential Education, Faculty of Pharmaceutical Sciences	Endorsed project; Expert Content Reviewer
Alyssa Low	Former UBC Pharmacy Student	Content development; Video production; Project evaluation
Lucy Zhou	Undergraduate Academic Assistant, Faculty of Pharmaceutical Sciences	Content development; Video production; Project evaluation
Garrett Tang	Former UBC Pharmacy Student	Illustrator; Content development; Video production
Tarique Benbow	PhD Candidate, Faculty of Pharmaceutical Sciences	Graduate research assistant, assisted with ethics submission and data analysis

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	Section	Academic Year	Term (Summer/Fall/Winter)
PHRM 171	All	2019, 2020, 2021	Summer
PHRM 271	All	2019, 2020, 2021	Summer



PHRM 272	All	2019, 2020, 2021	Summer
PHRM 371	All	2019, 2020, 2021	Summer
PHRM 471	All	2019, 2020, 2021	Fall, Winter
PHRM 472	All	2019, 2020, 2021	Fall, Winter
PHRM 473	All	2019, 2020, 2021	Fall, Winter



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:
Video 1: Intro to Experiential Education	https://blogs.ubc.ca/oetoolbox/2020/11/introduction-to-experiential-education/
Video 2: Placement Process	https://blogs.ubc.ca/oetoolbox/2020/04/placement-process/
Video 3: Academic Concession	https://blogs.ubc.ca/oetoolbox/2020/04/academic-concession/
Video 4: Professionalism (Part 1) Video 5: Professionalism (Part 2) Video 6: Professionalism (Part 3)	https://blogs.ubc.ca/oetoolbox/category/professionalism/
Video 7: Tips for Practicum	https://blogs.ubc.ca/oetoolbox/2021/02/tips-for-practicum/
Video 8: Working with Displeased Patients	https://blogs.ubc.ca/oetoolbox/2020/11/working-with-displeased-patients/
Video 9: Assessment Process	https://blogs.ubc.ca/oetoolbox/2021/03/assessment-process/
Video 10: Health and Wellness	https://blogs.ubc.ca/oetoolbox/2021/06/health-and-wellness/
Video 11: Health Promotion	https://blogs.ubc.ca/oetoolbox/2021/06/health-promotion/

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

Item(s) Not Met:	Reason:

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: [please specify]

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.

Intended benefits for students

- Increase student engagement with orientation lecture and practicum handbook information.
- Increase accessibility and autonomy by allowing students to decide when, where, and how often to view videos as it relates to them.
- Increase accessibility by accommodating to the diverse needs of students (i.e., through transcription of audio text, closed captions, and avoidance of certain colours for those with visual impairment).
- Increase student preparedness and performance on practicums (e.g., students will act professionally on practicum, create engaging health promotion activities for patients, and have the skills to work with displeased patients).

Intended benefits for Instructors and TAs

- Free up contact time to focus on participatory activities (i.e., in-class discussions)
- Promote activities through the use of interactive elements within select videos (i.e., quizzes and checkpoints).
- Assess student engagement of video content using video analytics

Intended benefits for community members

- When students are on practicum, they will behave in a professional manner that represents the Pharmacy profession in a positive light.
- When students are on practicum, they will have access to these videos to better educate, empathize with, and resolve problems for patients

3.3. Were these changes/impacts achieved? How do you know they occurred? – How did you measure changes/impacts? (e.g. collected survey data, conducted focus groups/interviews, learning analytics, etc.) Describe what was learned from this process. 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.



To evaluate the impact of our animated videos, data were collected via pre- and post- surveys and two focus groups. We performed quantitative analysis of Likert-style survey responses and qualitative thematic analysis of focus group transcripts.

Part I: Results of surveys

Students were asked to rate their agreement with the following questions on a 6-point Likert scale. Overall, students (N = 41) rated the videos very positively. The mean score for each question was above 5, indicating student agree/strongly agree that the information was (1) easy to understand, (2) engaging, (3) of an appropriate length, (4) able to improve their understanding of the expectations of experiential education, (5) able to increase their awareness of the resources to support their learning, and (6) able to prepare them for practicums.

Table 1: Survey before implementation of animated videos (N = 90)

Survey Question	Survey Answer N (%)
The information was presented in a way that was clear and easy to understand	SA/A 32 (35.6%)
The information was presented in a way that was engaging	SA/A 10 (11.1%)
The length of the orientation lecture was appropriate	SA/A 10 (11.1%)
The practicum orientation lectures appropriately prepared me for my practicums	SA/A 22 (24.4%)

SA = Strongly agree, A = Agree

Table 2: Survey after implementation of animated videos (N = 41)

Survey Question	Survey Answer N (%)
The information was presented in a way that was clear and easy to understand	SA/A 40 (97.5%)
The information was presented in a way that was engaging	SA/A 40 (97.5%)
The length of the video was appropriate	SA/A 41 (100%)
I have an improved understanding of the expectations of experiential education	SA/A 36 (87.8%)
I have an increased awareness of the resources to support my experiential learning	SA/A 33 (80.5%)
I feel more prepared for practicum(s)	SA/A 32 (78.0%)

SA = Strongly agree, A = Agree

Part II: Results of focus groups

Based on the focus groups (N = 5), our thematic analysis identified five themes:

1) Animated pedagogical agent

The use of an animated pedagogical agent enhanced student engagement. As explained by a student, *“I actually can learn much much easier with animations... [it] stimulates multiple senses like visually, auditory, whereas when you’re just listening to someone do a basic presentation, I feel like it’s not as visually engaging.”* In particular, the conversational language and positive tone of Dr. Tablet made a notable impact on students. *“I think that the level of enthusiasm in the voice really helped me grasp the concepts and grasp the knowledge in the video.”* A student elaborated that Dr. Tablet made the videos *“humorous too so it kind of lightens the mood”*.

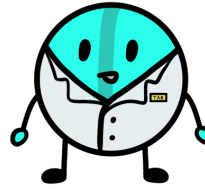


Figure 1: The animated pedagogical agent, Dr. Tablet.

2) Engagement using multiple learning modalities

Students preferred a combination of lecture and video delivery style for orientation materials. As elaborated, *“I think being in the lecture hall sometimes it can be a bit boring, you just hear one person talk so the videos intermittently would be helpful.”*

3) Relatability of the content

Students felt that the videos addressed relevant questions and that all the topics were useful. Two quotations illustrate this theme: *“I think all of them [the video topics] were useful... there was value to all of them”* and *“it’s good to review like oh if this happens to me then I can rewatch”*.

4) Video length

Students responded favourably to the length of videos which were between 3 to 9 minutes, were deemed appropriate by students. One student said, *“It wasn’t too short or too long; it was a good length.”*

5) Accessibility

Students appreciated the option of rewatching the videos to clarify understanding. As one student remarked, *“I guess I didn’t understand it fully doing the orientation like to go back and get a proper understanding.”* Students also found it helpful that the videos were timestamped.

In summary, students found the video content to be concise, relevant, and accessible. Using stop-motion animation combined with a relatable character can be an effective and engaging method for preparing students for practicum.

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. Be sure to include author names, presentation title, date, and presentation forum (e.g., journal, conference name, event).

Our upcoming dissemination plan includes:

- 1) **CTLT Pulses Blog Post.** Pulses is a scholarly blog supported by *Currents in Pharmacy Teaching & Learning*. We hope to share our approach, results, and offer feasible tips to other educators in promoting student engagement through animated videos featuring an animated pedagogical agent.
- 2) **Poster Presentation** at Association of Faculties of Pharmacy of Canada’s annual Canadian Pharmacy Education and Research Conference (CPERC) in 2022.

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?



This project has changed the way the Office of Experiential Education (OEE) deliver practicum orientations. The orientation sessions are now shorter (i.e., decreased from on average three hours to one hour) and they are supplemented with these videos, which are available online asynchronously via Canvas and the *OEE Student Toolbox for Practicums* website. Students are expected to watch selected video ahead of the orientation. The orientations are now more focused around discussions (i.e., Q&A period) and there is more dialogue between student and instructors during these sessions.

We anticipate that these changes will be sustainable over time as described in the next section.

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?*

The videos will be shown during orientation lectures and hosted on Canvas specific to each practicum course. They will be maintained yearly to ensure that the most up-to-date information is being present to students. Alex Tang, an experiential education course coordinator and the principal investigator of this TLEF project will be providing oversight to the maintenance of videos. Minimal maintenance is anticipated as the videos were designed to accommodate changes in the curriculum. For example, the text is easily editable and the script avoids mentioning specific policy names (e.g., Policy ABC vs policy on academic concession) as re-recording an audio file is time consuming. Annual funding will be required for maintaining a Vyond subscription, the software used to create and edit videos.