TLEF Project – Final Report

Report Completion Date: (2023/05/26)

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	Student Speaking Simulator
Principal Investigator:	David (DJ) Miller
Report Submitted By:	Matthew Zimmerman
Project Initiation Date:	01 May 2022 **Project Completion Date:** 30 April 2023
Project Type:	☐ Large Transformation ☒ Small Innovation ☐ UDL Fellows Program ☐ Hybrid and Multi-access Course Redesign Project ☐ 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.*

Our project built a minimum viable product simulator, used as an immersive learning space and research lab. We provided select UBC students with a realistic environment for public speaking practice, and iterated efficiently based on these early tests.

Students from COMM 395 – Business Communications used the Simulator for two sessions ahead of their final public speaking presentation. Not only did they have a positive reaction to the novel experience, but these students also reported improved confidence and performance in their actual presentation. Following these tests, we explored development in different use cases - such as interview simulation – to expand the reach and impact of the Simulator.

This project provided the groundwork for innovative explorations in place-based experiential learning, and the potential for future course and curriculum development.

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
David (DJ) Miller	Lecturer, Marketing and Behavioural Science Division, UBC Sauder	Principal Applicant
Rob Peregoodoff	Director, Learning Services, UBC Sauder	Co-Applicant
Matthew Zimmerman	Undergraduate student, Finance, UBC Sauder	Project management and development
Nandita Zaveri	Undergraduate student, Integrated, UBC Engineering	Project development
Anushree Bannadabhavi	Graduate student, Computer Engineering, UBC Engineering	Software development
Guillaume Richards	Graduate student, Educational Technology, Concordia University	Project development, Instructional design, Integrated systems development

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
COMM 395 – 101, 102, 207, 208	2022/2023W

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):
Simulated Henry Angus 491 video environment	
Continued development of voice analytics python software	
150-degree projection wall	
Spatial audio framework	

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:

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 & Knowledge:

During March of this year, students from COMM 395 – Business Communcations were brought in for two sessions in the Simulator ahead of their final presentation. They were asked a series of questions that required them to reflect on their past public speaking performance, as well as their current performance in the Simulator. They further reflected through watching the video recording of their performance and receiving their voice analytics results. Following their actual presentation in the course, students reported improved confidence and performance.

Student Engagement & Attitudes:

Through this experience, COMM 395 students engaged in a unique learning environment that required them to practice their eye contact, hand/body movement, and answering questions from the audience – all of which they do not experience practicing at home. The realistic, AI generated audience listened attentively, encouraging students to present from beginning to end without interruption or restarting. In the safe environment of the Simulator, students felt free to try new speaking methods and techniques.

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.*

In March, one-on-one interviews with the COMM 395 students were conducted pre-session 1 in the Simulator; post-session 1; pre-session 2; and post-session 2. This was to gain a better understanding of student's current method of practice, and how using the Simulator aides and integrates into - or modifies - their practice routine.

Finally, following their actual presentation, an email survey was sent to students to gauge the impact of the Simulator on their performance. Results are as follows:

Field	Using the Simulator made me feel more prepared and confident for today's personal commitment presentation.		Using the Simulator improved my public speaking performance today.	
Strongly disagree	0.00%	0	0.00%	0
Somewhat disagree	25.00%	1	0.00%	0
Neither agree nor disagree	0.00%	0	25.00%	2
Somewhat agree	28.57%	6	33.33%	7
Strongly agree	35.71%	5	28.57%	4

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?*

When preparing for an upcoming presentation, students typically rely on instructors, friends, and family for feedback on their practice. With further development of the Simulator, in the near future, students will have the opportunity to make unlimited revisions and engage in continuous practice. The Simulator can significantly reduce the cost and need for constant instructor feedback, and empower students to take control of their own learning beyond the classroom.

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?*

Following positive results from early COMM 395 students, we anticipate a pilot project to be conducted in the 2023/24W session with COMM 196/220/395 – Business Communications, and COMM 202 – Career Fundamentals. The purpose of this pilot is to gain a larger understanding of the long-term benefit the Simulator has to students, as well as exploring new use cases (I.e. simulating interviews, negotiations, or thesis defences) and further iterative development.

The challenge with this endeavor involves the ongoing operational costs as well as need for continued research and development. To alleviate these challenges, we are actively seeking additional funding that will (hopefully) be covered by UBC Sauder.

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.*

Departmental Open House

On 24 April 2023, staff and faculty from UBC Sauder were invited for an open house demonstration of the Simulator. Presenters included Matthew Zimmerman and Guillaume Richards. This was held in the basement of UBC Sauder in room 043A.

TLEF Showcase

On 04 May 2023, we presented during the TLEF Showcase with our research results. Presenters included Matthew Zimmerman and Guillaume Richards. https://tlef2.sites.olt.ubc.ca/files/2023/04/2023-COMM-David-DJ-Miller.pdf