



TLEF Project – Final Report

Report Completion Date: (2024/04/05)

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	How Do We Move? Striving for Consensus in Lower Extremity Physical Examination and the Assessment of Gait.		
Principal Investigator:	Alec Black		
Report Submitted By:	Tim Bhatnagar and Karen Davies		
Project Initiation Date:	2022/04/01	Project Completion Date:	2024/03/28
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.*

We have developed a co-constructed approach of all lower extremity physical assessments performed at BC Children's Hospital by therapists and physicians of children with neuromotor deficits. We have made this course available to all physical therapists in the province that provide services for children with neuromotor challenges, as well as students training to assess and treat children. By extending this course to students in both Medicine and Physiotherapy, we are preparing the professionals of the future with a co-constructed, evidence based, inter-professional approach to measuring the physical characteristics of children with neuromotor challenges.

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
Karen Davies	Clinical Instructor, Physiotherapy, Faculty of Medicine	Lead for Project
Diane Wickenheiser	Physiotherapist	Content contributor
Terry Ho	Clinical Instructor, Physiotherapy, Faculty of Medicine; Professional Practice Lead BCCH	Advisor
Mona Behrouzian	WorkLearn (UBC) Student	AV material creation
Tim Bhatnagar	Clinical Assistant Prof, Medicine, Orthopaedics	Advisor

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
PHTH 544	22/23/24
MECH 4/535	22/23
Medical Residents	22/23/24



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):
Online interactive gait analysis course	An Introduction to 3-Dimensional Computerized Gait Analysis - LearningHub (phsa.ca)
Online standardized lower extremity exam course (LearningHub)	Standardizing the Lower Extremity Physical Assessment – LearningHub (phsa.ca)

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:
none	

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.*

The created courses serve as a multi-media reference for students in school, as well as a resource reference for post-education career activities. The courses utilize media to visualize and capture the important aspects of clinical gait analysis and lower extremity physical exam. The material taught by these courses has been previously available, but difficulty in interpreting and understanding other versions of the content may have led to a lack of consensus among practitioners about how the info is used, clinically. Our hope is that having these effective resources easily accessible will also provide a common language for assessments to students and therapists.

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.*

We have received feedback from a multidisciplinary cohort regarding the gait analysis content, and we have also solicited feedback from a small number of therapists (to date) regarding the lower extremity course. Feedback consistently mentioned the ease of understanding, the multimedia material, and an appreciation that it will be an available resource whenever a ‘check-in’ is felt to be needed. We intend on conducting a QI study that looks at the change in perception of gait analysis and lower extremity physical exam performance due to the created educational content as an intervention. We hope this will demonstrate the utility of the course for any therapists/students in BC and will generate feedback to improve the course even further.

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?*

We intend to make use of these courses extensively, and we will make students/therapists aware that they can serve as an ongoing resource in their courses and careers. We hope that course-takers will also utilize these courses as a tool for educational purposes in their practice and with colleagues, as well. We intend to maintain and improve the course, when possible, with the aim of ensuring this content is continually available as a resource.



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 developed courses will remain under the stewardship of The Motion Lab, in perpetuity. We intend to identify further educational resource needs from therapy students and therapists, and endeavour to include more content that is identified as needed (for example – an upper extremity physical exam). We anticipate that any new physiotherapists in The Motion Lab will take on the management of educational resources as part of their role; this should ensure continuity of stewardship of these educational courses.

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.*

We provided an oral presentation at the Pediatric Update Symposium in June 2023¹ in which we shared the information regarding An Introduction to 3-Dimensional Computerized Gait Analysis, as well as the QR link to the course. Our goal is to perform a QI project that could be presented at relevant conferences, to share the effectiveness and utility of the educational resources that were designed in this project.

Reference:

1. **Davies K**, Wickenheiser D. “Visual Gait Analysis: Case Studies.” Pediatric Update Symposium June 2023, Vancouver, BC