Large TLEF Project Completion Report

Report Completion Date: (2015/12/11)

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	2013FL1_SCIE_STAT_Heckman *Cross-Faculty Curriculum Development for Introductory Statistics.*		
Principal Investigator:	*Professor Nancy Heckman*		
Project Initiation:	*October 2013*	**Project Completion:**	*March 2015*

1.2. Project Summary

We requested funding to support a cross-faculty curriculum development process that we anticipated would result in a comprehensive project plan and proposal to be submitted in a future FL/TLEF funding cycle. This was a collaborative initiative involving the Faculties of Science, Arts, and Applied Science.

The resulting FL project plan proposed the development, adaptation, and use of instructional resources that would address conceptually challenging topics in introductory statistics. The resources were to be open, adaptable, consistent in look and feel, and grounded in existing research on learning and statistics. The plan also proposed the development, testing and documentation of a model for cross-faculty partnership to support introductory statistics instruction, and a resulting increase in UBC's faculty-level capacity for identifying, evaluating, adapting and/or developing future statistics learning resources. The proposed learning resources were to encompass a collection of modular, on-line content including: animations, mini-lecture screen-capture videos or pencasts, online homework and quizzes, individualized online experiments, a repository of interesting data sets, and in-class active learning (clicker questions and activities).

1.3. Team Members - *(Please fill in the following table and include **students**, undergraduate or graduate, who participated in your project).*

Name	Title/Affiliation	Responsibilities/Roles
Leslie Burkholder	Senior Instructor, Philosophy	Resource co-Lead – Case Studies
Doug Bonn	Professor, Physics & Astronomy	Resource Lead - Evaluation
Fred Cutler	Associate Professor, Political Science	Resource co-Lead – Classroom Activities
Bruce Dunham	Senior Instructor, Statistics	Resource Lead - WebWorkiR
Paul Gustafson	Professor and Acting Head, Statistics Department	Acting Principal Investigator
Nancy Heckman	Professor and Head, Statistics Department	Principal Investigator
Joss Ives	Instructor, Physics & Astronomy	Resource Lead – Physics Integration

Melissa Lee	Lecturer, Statistics	Discipline-based education expert.
Mike Marin	Instructor, SPPH	Resource Lead – videos/pencasts
Andrew Owen	Assistant Professor, Political Science	Resource co-Lead – Classroom Activities
Eugenia Yu	Instructor, Statistics	Resource Lead – Clicker Questions
Diana Whistler	Research Associate/Sessional Lecturer, Economics	Resource co-Lead – Case Studies
Michael Whitlock	Professor, Zoology	Resource Lead – Simulations
Participants who were not co-applicants		
Noureddine Elouazizi	Strategist, Teaching & Learning Technologies, Science Centre for Learning & Teaching	LT needs analysis and solution design.
Erin Fields	Flexible Learning Liaison, UBC Library	Content curation library lead
Gillian Gerhard	Science Faculty Liaison, CTLT	Project manager and curriculum consultant
Eric Jandciu	Strategist, Learning & Teaching Initiatives, Science Centre for Learning and Teaching	Skylight Coordination.

1.4. Student Impact - *Please fill in the following table with **past**, **current** and **future** courses that have been or will be impacted by your project, including any courses not included in your original proposal. [Note: Adapt this section to the context of your project as necessary].*

This project was to develop a proposal. The proposal was developed and funded. The proposed project, in its first pilot year, is expected to impact the following students. The project's impact will grow.

Course	Section	Enrolment	Term
STAT 200	101 & 103 & 202	853 total	T1 & T2, 2015/16
STAT 251	101 & 201	361 total	T1 & T2, 2015/16
STAT 203	103	118	T1, 2015/16
STAT 302	201 & 202	200 total	T2, 2015/16
ECON 325	001 & 002	180 total	T1, 2015/16
STAT 241	101 & 201	175 total	T1 & T2, 2015/16
SPPH 400	001 & DL1	98 total	T1, 2015/16
POLI 380	001 & 002	262 total	T1 & T2, 2015/16
BIO 300	101 & 201	273 + 226 = 499	T1 & T2, 2015/16
TOTAL		**2746**	

2. PRODUCTS AND ACHIEVEMENTS

2.1. Products and Achievements - *Please **update** project products and achievements as necessary. Indicate the current location of such products and provide an URL if applicable.*

Product(s)/Achievement(s):	Location:

Cross-campus curriculum development process. Team of 12 faculty members plus CTLT and Skylight staff met monthly to develop project plan and proposal.	
A content needs analysis and curation process and partnership model between the Statistics project team, Statistics Department, Faculty of Science and the UBC Library.	http://wiki.ubc.ca/Library:STATS_Content_Curation_Project
Introductory Statistics Learning Object Evaluation Rubric	http://bit.ly/1O0Stg9
Identification of pedagogically grounded introductory statistics resource needs. This emerged from a resource curation process developed in partnership with the UBC Library.	
Identification of introductory statistics topics for exploration. Ranking of topics for resource development based on resource needs analysis. Identification of common learning objectives for top 2 identified topics.	
Successful proposal for Large TLEF grant, based on a cross-campus engagement among the Faculties of Arts, Science and Medicine. The proposal included a timeline, budget, evaluation plan and LT resource development plan for the collaborative development of modular, on-line materials suitable for adaptation and use in any UBC course or lab with an introductory statistics component.	Submitted to TLEF October 2014. Funded May 2015. Copy available if needed.

2.2. Item(s) not Met - *Please list intended project products and achievements that were not attained and the reason(s) for this.*

Item(s) Not Met:	Reason:
N/A	

3. PROJECT EVALUATION

3.1. Project Outcomes - *Please list the intended outcomes or benefits of the project for students, TAs and/or instructors.*

The intended outcome of this project (Phase 1) was a successful collaborative project proposal. Long term impacts will follow from the successfully funded project (Phase 2).

3.2. Findings – *Please describe the findings of your project evaluation effort: to what extent were intended project outcomes achieved or not achieved? You are encouraged to include both graphical representations of data as well as scenarios or quotes to represent key themes.*

The intended outcome was a successful project proposal. This was achieved.

3.3. Data Collection and Evaluation Methods - *Please describe the data collection strategies used, how the data was analyzed, and perceived limitations.* ***Note: Please attach copies of data collection tools (e.g., surveys and interview protocols), any additional data or other relevant items.***

N/A

3.4. Dissemination – *Please provide a list of* ***past*** *and* ***future*** *scholarly activities (e.g., publications, presentations, invited talks, etc.) in which you or anyone from your team have or intend to disseminate the outcomes of this project.*

A poster was shared during the June 2014 Flexible Learning Open house at UBC. A link to the poster can be found here: http://flexible.learning.ubc.ca/news-events/fl-open-house-poster-session/

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?*

N/A

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?*

N/A