



Large TLEF Project Completion Report

Report Completion Date: (2015 / 09 / 30)

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	Development of OLS for second-year Forestry courses (FRST 200, 201, 210, and 211)		
Principal Investigator:	S.L. Lavallee		
Project Initiation:	July 2014	Project Completion:	September 2015

1.2. Project Summary

Online learning systems were set up for four undergraduate courses in the Faculty of Forestry (FRST 200, 201, 210, and 211). These courses are required by several programs in the faculty and comprise a large amount of the teaching to second year undergraduates. A Teaching and Learning Fellow (Dr. Teresa Ryan) was hired to help design and implement the OLS, as well as design and implement studies on the OLS by undergraduates, teaching assistants, and course instructors. Focus groups, feedback sessions with faculty and teaching assistants, and questionnaires were provided to students at different stages in the study to assess the attitudes, uses, and importance of the OLS to all participants in these courses. Part-time assistance to faculty members has been provided by the IT position funded by this project, and two seminars on OLS and flipped classroom design were offered as a part of the initiative in the faculty.

1.3. Team Members

Name	Title/Affiliation	Responsibilities/Roles
Teresa Ryan	Post-doctoral Teaching and Learning Fellow	Building online resources and study, implementation of focus groups,
Suzie Lavallee	Project Manager, Primary Investigator	Project management
Amanda Johnson	Graduate Teaching Assistant, Research Assistant	Implementation of undergraduate focus groups, participant in study
Amanda Asay	Graduate Teaching Assistant, Research Assistant	Implementation of undergraduate focus groups, participant in study
Alexandra Pogue	Graduate Teaching Assistant, Research Assistant	Implementation of undergraduate focus groups, participant in study
Matthew Zustovic	Graduate Teaching Assistant, Research Assistant	Implementation of undergraduate focus groups, participant in study
Mina	Graduate Teaching Assistant, Research Assistant	Implementation of undergraduate focus groups, participant in study
Robert Guy	Professor, Department of Forest and Conservation Sciences	Instructor / interviewee
Suzanne Simard	Professor, Department of Forest and Conservation Sciences	Instructor / interviewee
Sally Aitken	Professor, Department of Forest and Conservation Sciences	Instructor / interviewee



Lori Daniels	Associate Professor, Department of Forest and Conservation Sciences	Instructor / interviewee
Bailey, Ian	Undergraduate student	Study participant
Bailey, Luke	Undergraduate student	Study participant
Benitz, Aphra	Undergraduate student	Study participant
Blaeser, Patrick	Undergraduate student	Study participant
Botz, Nolan	Undergraduate student	Study participant
Brown, Allison	Undergraduate student	Study participant
Brown, Rowan	Undergraduate student	Study participant
Budathoki, Rosha	Undergraduate student	Study participant
Carrothers, Hannah	Undergraduate student	Study participant
Cha, Steve	Undergraduate student	Study participant
Chan, Natalie	Undergraduate student	Study participant
Corrao, Kirsten	Undergraduate student	Study participant
Coutu, Jemina	Undergraduate student	Study participant
Crisp, Hannah	Undergraduate student	Study participant
Dang, Emily	Undergraduate student	Study participant
Doan, Emily	Undergraduate student	Study participant
Dorey, Emily	Undergraduate student	Study participant
Duan, Fapu	Undergraduate student	Study participant
Fan, Chen	Undergraduate student	Study participant
Ferance, Zach	Undergraduate student	Study participant
Finn, Riley	Undergraduate student	Study participant
Fitz, Erin	Undergraduate student	Study participant
Forster, John	Undergraduate student	Study participant
Freeman, Alessandro	Undergraduate student	Study participant
Fretz, Alyson	Undergraduate student	Study participant
Glanzmann, Stephanie	Undergraduate student	Study participant
Green, Josh	Undergraduate student	Study participant
Green, Rachel	Undergraduate student	Study participant
Greenberg, Jeremy	Undergraduate student	Study participant
Han, Natasha	Undergraduate student	Study participant
Hassan, Nur	Undergraduate student	Study participant
Herpin-Saunier, Naomie	Undergraduate student	Study participant
Ho, Jane	Undergraduate student	Study participant
Jobanputra, Rahul	Undergraduate student	Study participant
Joshi, Priya	Undergraduate student	Study participant
Kanigan, Adam	Undergraduate student	Study participant
Kaufman, Angelika	Undergraduate student	Study participant
Kaufman, William	Undergraduate student	Study participant
Kavlin, Marcos	Undergraduate student	Study participant
Kim, Jane	Undergraduate student	Study participant
Kussin-Bordo, Noah	Undergraduate student	Study participant
Kwok, Jacquie	Undergraduate student	Study participant



Lapierre, Chany	Undergraduate student	Study participant
Larney, Anna	Undergraduate student	Study participant
Le Noble, Sophie	Undergraduate student	Study participant
Lee, Calvin	Undergraduate student	Study participant
Levesque, Simone	Undergraduate student	Study participant
Li, Angel	Undergraduate student	Study participant
Li, Yang	Undergraduate student	Study participant
Lumsden, Edmund	Undergraduate student	Study participant
Lundgren, Daniel	Undergraduate student	Study participant
Ly, Jordan	Undergraduate student	Study participant
Malvin, Daniel	Undergraduate student	Study participant
Man, Rachel	Undergraduate student	Study participant
Marsaglia, Luca	Undergraduate student	Study participant
McLaughlin, Kendall	Undergraduate student	Study participant
McLeod, Robert	Undergraduate student	Study participant
Melanidis, Marina	Undergraduate student	Study participant
Nguyen, Stephanie	Undergraduate student	Study participant
Nychka, (Grace) Rebekah	Undergraduate student	Study participant
Pang, Ruimeng	Undergraduate student	Study participant
Paranjape, Meghana	Undergraduate student	Study participant
Peng, Huiru	Undergraduate student	Study participant
Reid, Iain	Undergraduate student	Study participant
Rock, Curtis	Undergraduate student	Study participant
Ruan, David	Undergraduate student	Study participant
Sanelli, Marco	Undergraduate student	Study participant
Sang, Zihaoan	Undergraduate student	Study participant
Schwab, Amy	Undergraduate student	Study participant
Shah, Karishma	Undergraduate student	Study participant
Shin, Alexis	Undergraduate student	Study participant
Sidak, Taylor	Undergraduate student	Study participant
Soucy, Serena	Undergraduate student	Study participant
Stevens, Nicole	Undergraduate student	Study participant
Thalagala, Sumal	Undergraduate student	Study participant
Tran, Michelle	Undergraduate student	Study participant
Tunnski, Kurtis	Undergraduate student	Study participant
Vasquez, Winy	Undergraduate student	Study participant
Vause, Will	Undergraduate student	Study participant
Vohra, Sonam	Undergraduate student	Study participant
Vyssokikh, Diana	Undergraduate student	Study participant
Wang, Wilson	Undergraduate student	Study participant
Weixelman, Anna	Undergraduate student	Study participant
Woods, Ben	Undergraduate student	Study participant
Wort, Rebecca	Undergraduate student	Study participant
Wu, Ernest	Undergraduate student	Study participant



Zeller, Austin	Undergraduate student	Study participant
Zhan, Junjie	Undergraduate student	Study participant
Zhang, Peter	Undergraduate student	Study participant

- 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].

Course	Section	Enrolment	Term
FRST 200	001	175 (2015W)	1
FRST 201	001	176 (2015W)	1
FRST 210	001	181 (2015W)	2
FRST 211	001	172 (2015W)	2

Note: these four courses are required for all students in the forestry programs in second year, and are anticipated to have an enduring impact on the online offerings for the Faculty of Forestry.

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:
Online Connect platform developed for four, core UBC Forestry courses	Connect websites – online
Surveys conducted with instructors, graduate teaching assistants, and students	Database managed and kept by Dr. Ryan and Dr. Lavallee
Connect support staff provided in Forestry (in-house)	Forestry position (Robert Kwei)
Purchase of tablet for technical support use in these four courses.	Dr. Teresa Ryan has retained the tablet, as she is currently teaching Forestry 211 – it will be returned to Dr. Lavallee in April 2016
Pedagogy workshops on OLS and flipped classroom design	Dr. Teresa Ryan and Dr. Suzie Lavallee offered these to faculty members

- 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:
Publications based on data collected	Timelines and workloads for Dr. Ryan did not permit for adequate processing of the data from Connect, which was unexpectedly difficult to transform into useable information. This work is ongoing, given Dr. Ryan's current (though temporary) position in the faculty.

3. PROJECT EVALUATION

3.1. Project Outcomes

Pilot testing of the online learning materials was provided by undergraduates taking the course, providing feedback to instructors, TAs, and researchers through both formal (focus groups) and informal (casual discussion) feedback. Student use of the materials was assessed through analysis of the amount of time spent using and selecting online materials to view, as well as interacting with online materials (e.g.



participating in quizzes and discussion boards). Instructors demonstrated increased engagement in the OLS process and use over each semester and have continued to employ these systems for the 2015 / 2016 semesters.

3.2. Findings

Instructors, teaching assistants, and students had generally positive feedback on the use of OLS for the four courses involved. Anecdotal evidence suggests that where more interactive experiences (e.g. quizzes) were offered, students were more engaged with materials and spent more time reviewing materials online. Teaching assistants and instructors found that for bookkeeping (e.g. grades entry), there was much less time required to collate and check grades when they were managed through the OLS. Use of the OLS also allowed for greater freedom with where teaching assistants and instructors could work (e.g. at home versus on UBC computer) and where students could access their grades. The sentiment from most students regarding the OLS is that it is now expected for courses to provide information or materials online and that while small differences in the way they function may change how user-friendly the OLS is, any system or provision of materials is good.

3.3. Data Collection and Evaluation Methods

Data for this study were collected using a combination of interviews, focus groups, questionnaires, and online surveys. Questions used in the forms, interviews, and online are provided in Appendix B (attached). Analysis for these data is still pending. Online information will include the evaluation of amount of time spent engaged in OLS materials, use of quizzes, and grades in the course. Interview and questionnaire information will examine for negative and positive attitudes towards OLS and their use, as well as summarizing the perceptions of students for the values of OLS in their courses. Interview and focus group information will be cross-referenced for common experiences or reflections among the different 'actors' in the study (instructors, teaching assistants, and undergraduate students), as well as drawing out where persistent negative and positive experiences are reported.

3.4. Dissemination

Two workshops were held as a part of the faculty training component of this project: one on the use of OLS and the evaluation techniques (quizzes) that are available through Connect, and one on flipped classroom design and the current outcomes of the study. Although data is no longer being collected as a part of the study, full analysis and summary is not yet available, though it remains a goal for this study.

4. TEACHING PRACTICES

Instructors in the second year courses involved in this study have continued to use the Connect OLS for their courses this year, and have received basic training on the use of these systems. These changes are anticipated to continue their influence on the teaching and learning in the second year program at UBC Forestry – helping to train students for more advanced uses of OLS in their course work, as well as help instructors enhance their offering of online materials to undergraduate students. Other instructors in the faculty have seen the OLS set up provided to the second year courses and have been offered the use of the template that was employed. It is anticipated that these changes will continue to have influence on teaching and learning in the faculty, as instructors and students gradually become used to OLS and their applications.

5. PROJECT SUSTAINMENT

The anticipated long-term benefits to the faculty are the continued and enhanced use of OLS to provide course materials and interactive opportunities to students. The culture of OLS in the faculty has begun to shift, with more instructors employing OLS for their courses, even at a rudimentary level. Expanded use of the template



that was developed for the Connect system is anticipated in courses for which there are no current frameworks, although it will require them to receive significant redevelopment to meet specific course needs.



Appendix B – Interview and questionnaire questions for Undergraduates and Teaching Assistants

Online Questionnaire (Undergraduate)

Project title: Evaluation of learning objectives achieved through use of OLS developed for second-year Forestry courses (FRST 200, 201, 210, and 211) FL-TLEF #2014FL2_FRST_CONS_Lavallee

Project nickname: Pedagogy in second-year Forestry OLS

Dr. Suzie Lavallee and Dr. Teresa Ryan

Jan. 21, 2015

Questionnaire 1 – Online Connect poll of students to be posted in February and April 2015

1. Do you have access to a laptop/desktop computer at home?
(Y/N)
2. Do you have any other course this term that has content on Connect?
(Y/N)
3. Did you use the Connect site for FRST 200/201?
(Y/N)
4. Rank the following priorities for learning, according to how important they are to you:
 - Better organizational skills
 - Knowing all the course materials
 - Reducing time spent studying
 - Access to course materials
 - Understanding the course concepts
 - Relating information to my career goals or interests
 - Applying concepts to new situations
5. Rank the following learning activities, according to your preferences:
 - Multiple choice quizzes
 - Practice exam questions
 - Online discussions with other students
 - Online discussions with students and instructors
 - Reviewing lecture material after class
 - Reading lecture material before class
6. Would you prefer to have online quizzes posted before or after relevant lectures?
(before/after)
7. When would you like to work on quiz questions online? (Check all that apply)
 - During class
 - After class (review)
 - Before class (pre-test)
 - Before the final exam or midterm
8. How much time per week do you spend reviewing course content on Connect?
(less than one hour, one hour, between one and four hours, more than four hours)



Questionnaire form (Undergraduate)

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Questionnaire to assess learning objectives and motivations of students (non-anonymous)

These questions will be posed to students in FRST 211 in a form that they fill out at a focus group meeting. These answers are NOT anonymized because they must be correlated with grades achieved in the course and the use of online learning tools.

Questions (each given approximately ¼ page blank space for responses):

1. How would you describe yourself as a learner?
2. What are you hoping to achieve in Forestry 211?
3. How do you think you will use this information in the future?
4. On the Connect site, what do you use the most?
5. What do you feel are the most valuable things provided on the Connect site? Why are they valuable to you?
6. Give three action words for your activities in this course.

On the same form, students will be asked to respond to the following questions (same format and response space):

1. What degree program are you enrolled in? Please identify your intended major, if possible.
2. Are you planning on continuing your education after your undergraduate degree? Please indicate what post-graduate education you are interested in.
3. Are you planning on working in the resource industry (e.g. forestry, mining, agriculture) in your career path? Please indicate where your interests lie.
4. What other career pathways do you think your undergraduate degree could be applied to?



Interview questions (Undergraduate focus groups)

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Interview questions 1

Undergraduate student focus groups, to be conducted a minimum of three times between February and April

- How has the use of the online learning system allowed you to understand the overall course learning objectives?
- How has the use of OLS help you understand the instructor's view of the subject material?
- What would you add to the online resources available in this course?
- What resources are you using the most? Why?
- Are you able to apply new skills as a result of access to materials on Connect?
 - o Can you compare your ability to apply new skills in this course compared to other courses in the past that did not use OLS?
 - o If you have developed new skills, what are they?
 - o Do you think using Connect OLS will help you with your computer technology skills?
- Do you occasionally reflect on your level of knowledge in preparation for courses next year?
- Do you expect OLS systems to be available for your future Forestry courses?
- Does the OLS provide you with a mechanism to synthesize topics in Forestry?
 - o During your study time, do you find that you occasionally refer to another Connect Forestry course to address a question or curiosity?
 - o Have you ever used other apps from the internet that test your knowledge or skills for these courses?
 - If so, what has been the best resource?
 - If so, do you use apps while riding in a vehicle or other idle time?
 - Do any of your classmates use the app with you? If so, how many students?



Interview questions (Teaching Assistants and Instructors)

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Interview questions 2

Graduate students and instructors, to be conducted at end of term

- What is the frequency of students asking you for information that is provided on Connect? (mid-term and summative: Has the frequency changed?)
- Has the depth / context of questions about Connect / online learning resources changed? (mid-semester summative)
- What attitudes do you see the students reflecting to you about online resources? (Mid-term and summative: Have attitudes changed?)
- What evidence have you seen for student engagement with online learning materials?
- What online resource tools do you think are the most valuable to your course?