



# Large TLEF Project Completion Report

Report Completion Date: (2015/09/26)

## 1. PROJECT OVERVIEW

### 1.1. General Information

<b>Project Title:</b>	2013FL1_EDU_KIN_Kennedy		
<b>Principal Investigator:</b>	Paul Kennedy		
<b>Project Initiation:</b>	July 2014	<b>Project Completion:</b>	May 2015

### 1.2. Project Summary

KIN 469 seeks to transform the traditional lecture format of course delivery by developing and incorporating online delivery of lecture material, demonstration videos, readings and resources, discussion activities, online quizzes, and reflective journals. The result will be a partial flip of the classroom that will enable the instructor to spend greater amounts of class time fostering the use of problem- and team-based learning. The transformation of this program will also help students, alumni, and community service partners better share and leverage ongoing work and information within the course to develop and maintain an ongoing repository of educational material.

### 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
Sarah Koch	Course TA and Project Assistant	Built many of the supportive material (i.e. identified journal articles for class discussions, generated multiple-choice questions for pre-reading quizzes, created questions that guided students through the reading assignments, etc.).

### 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
KIN 151 (future flip Sept 2015)	001	150 students	1
KIN 151 (future flip Jan 2016)	002	80 students	2
KIN 469 (maintain flip in Jan 2016)	001	60 students	2
Developing a new course for Sept 2016 (which will incorporate flexible learning)			



## 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:
PowerPoint presentation with voice-over defining concepts around health and wellness	<a href="https://connect.ubc.ca/bbcswebdav/pid-2606430-dt-content-rid-10681673_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Defining%20Health%20and%20Practice.mp4">https://connect.ubc.ca/bbcswebdav/pid-2606430-dt-content-rid-10681673_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Defining%20Health%20and%20Practice.mp4</a>
PowerPoint presentation with voice-over defining what it means to be physically active	<a href="https://connect.ubc.ca/bbcswebdav/pid-2615369-dt-content-rid-10728911_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Defining%20Physical%20Activity.mp4">https://connect.ubc.ca/bbcswebdav/pid-2615369-dt-content-rid-10728911_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Defining%20Physical%20Activity.mp4</a>
PowerPoint presentation with voice-over examining the process for conducting a physical fitness test	<a href="https://connect.ubc.ca/bbcswebdav/pid-2630946-dt-content-rid-10802995_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Health-Related%20Physical%20Fitness%20Testing.mp4">https://connect.ubc.ca/bbcswebdav/pid-2630946-dt-content-rid-10802995_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Health-Related%20Physical%20Fitness%20Testing.mp4</a>
PowerPoint presentation with voice-over discussing health issues that can arise during pregnancy	<a href="https://connect.ubc.ca/bbcswebdav/pid-2644490-dt-content-rid-10967811_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Should%20I%20Exercise%20During%20My%20Pregnancy.mp4">https://connect.ubc.ca/bbcswebdav/pid-2644490-dt-content-rid-10967811_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Should%20I%20Exercise%20During%20My%20Pregnancy.mp4</a>
PowerPoint presentation with voice-over discussing exercise prescription guidelines for individuals dealing with obesity	<a href="https://connect.ubc.ca/bbcswebdav/pid-2690640-dt-content-rid-11601247_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Exercise%20and%20Obesity.mp4">https://connect.ubc.ca/bbcswebdav/pid-2690640-dt-content-rid-11601247_1/courses/SIS.UBC.KIN.469.001.2014W2.41182/Audio%20Presentation%20-%20Exercise%20and%20Obesity.mp4</a>

Whenever students were provided with online presentations, questions were asked in the following class that built on topics covered in those presentations, thus leading to conversations during class time.

Besides the online presentations, which were all placed on Connect, students were also directed to research articles. There were 8 classes over the term in which we spent class time discussing these journal articles. Another 3 classes were spent doing a problem-solving activity in groups.

On a side note: here are two online presentations that I have created for my KIN 151 course, which is currently being offered. Each lecture provides students with an overview of material that has been covered in class. Instead of posting these lectures to promote discussion, these lectures have been posted so students can review the material at any point they like (or before tests). I have a plan to create 6 online presentations for this KIN 151 Biomechanics course.

[https://connect.ubc.ca/bbcswebdav/pid-3031174-dt-content-rid-13430446\\_1/courses/SIS.UBC.KIN.151.001.2015W1.53128/Online%20Presentation%20-%20Translation.mp4](https://connect.ubc.ca/bbcswebdav/pid-3031174-dt-content-rid-13430446_1/courses/SIS.UBC.KIN.151.001.2015W1.53128/Online%20Presentation%20-%20Translation.mp4)

[https://connect.ubc.ca/bbcswebdav/pid-3048848-dt-content-rid-13576351\\_1/courses/SIS.UBC.KIN.151.001.2015W1.53128/Online%20Presentation%20-%20Linear%20Kinematics.mp4](https://connect.ubc.ca/bbcswebdav/pid-3048848-dt-content-rid-13576351_1/courses/SIS.UBC.KIN.151.001.2015W1.53128/Online%20Presentation%20-%20Linear%20Kinematics.mp4)



**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:
There is typically a community service-learning component to the KIN 469 course. One of the intended goals was to use the online space to connect the content with the student’s experience so classroom time can be spent discussing the community experiences.	The community service-learning component to the course was removed because several partners dropped out before the start of the term (due to financial reasons or staffing issues). Therefore this item was not completed. I hope to find new partners in 2015 for the 2016 course offering and then integrate the CSL component in the course flip.
Online pre-reading quizzes were removed in 2014-2015	I adopted a new textbook in 2014-2015 and wanted to spend more time with the text before including pre-reading quizzes. The students in 2013-2014 did not find the text (and hence the quizzes) useful.

**3. PROJECT EVALUATION**

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

*Intended benefits of the project for the students:*

Application of material: The KIN 469 course examines how to design activity plans for individuals dealing with health issues. First, we discuss how to assess an individual’s fitness using modified aerobic, strength and flexibility protocols. Then, we try and define what safe and effective exercise is for individuals dealing with an underlying health issue using available scientific data. Finally, we develop an exercise program with the aim of improving an individual’s physical, mental and social health. Instead of providing students with the material through a lecture format, students can discover the issues by asking questions and discovering the information in online presentations.

*Intended benefits of the project for the teaching assistant:*

Counseling and supporting students: The TA would have a better sense of what was covered in class, since specific reading assignments were provided to students, online presentations would provide an overview of material, and class PowerPoint presentations would contain a series of questions. This would enable to the TA to be more effective when meeting with students to address specific questions about class content.

Getting involved in class discussions and activities: by switching the focus of each class away from a lecture-style format and moving towards whole class discussions and small group activities, the TA could get more involved and help facilitate some of these activities.

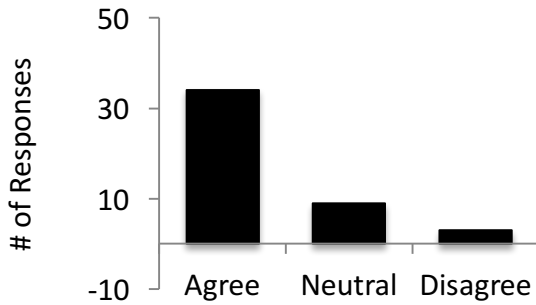
*Intended benefits of the project for the instructor:*

The focus of the class: no long is the instructor at the center of it all. Instead of being the “sage on the stage” the instructor is more of a “guide on the side”. The flip will allow a more student-centered approach to be applied to the KIN 469 course.

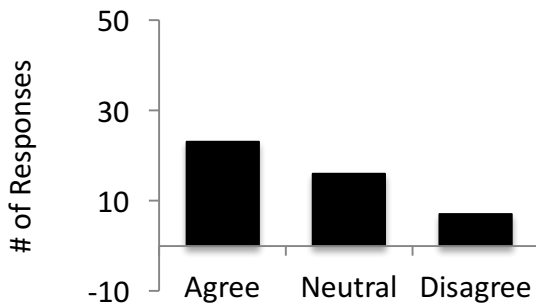


**3.2. Findings** – Please describe the findings of your project evaluation effort: to what extent were intended project outcomes achieved or not achieved? You are encouraged to include both graphical representations of data as well as scenarios or quotes to represent key themes.

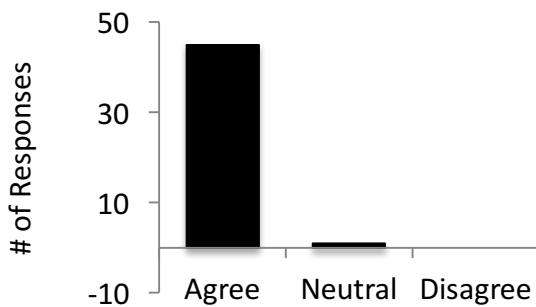
**The flipped class style made it easier to understand the course content.**



**The online presentations were beneficial in preparing for the class.**

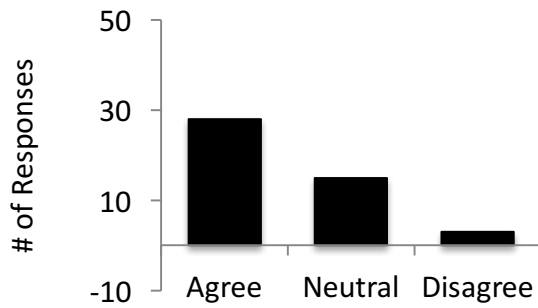


**The classroom discussions were effective in applying the course concepts.**

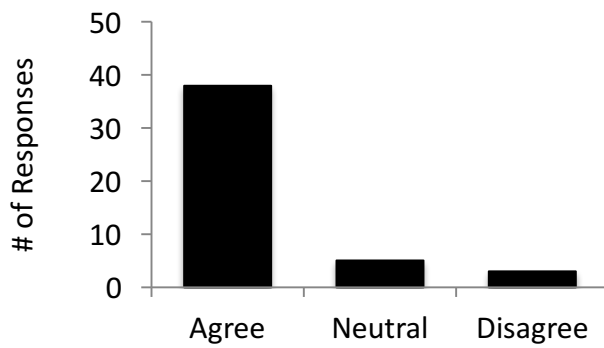




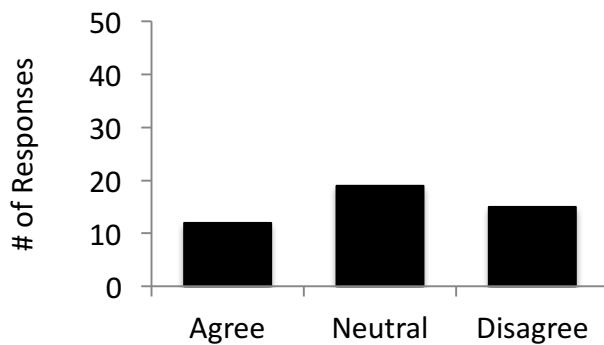
**The flipped approach helped me learn more than I would have if we had used in-class lecture methods only.**



**I was challenged by this course.**

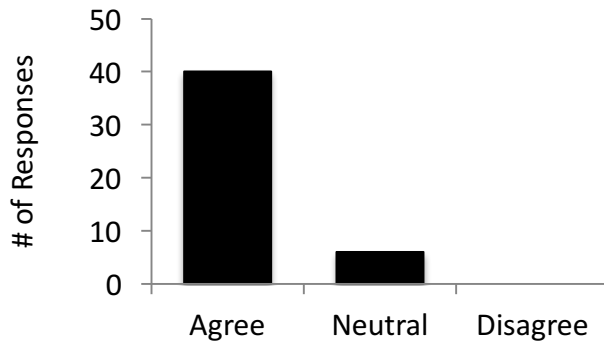


**A flipped class is more work than other classes that use a traditional, lecture-style approach.**





**This course actively involved me in what I was learning.**



**What, if anything, did you like most about the format of the flipped class?**

Many of the students commented on the increased interaction in class and the frequency of the discussions. Some of the specific student comments include:

- “Discussions were continuous, easy to see how everything related, very connected”
- “Instructor lets us guide the conversation”
- “Kept me engaged, concentrating, and thinking critically”
- “Instead of being fed the information, I was able to find the information through discussion”
- “A lot ideas were generated through discussion that I might not have thought up on my own”
- “Students were prodded by instructor to collaborate on the answers”
- “Instructor never gave us the answers, he constructed the answers with students”
- “The discussions during class kept it lively”
- “I liked how I was challenged to participate in discussions”
- “Allowed me to be more engaged with the lecture material”

**What, if anything, did you dislike most about the format of the flipped class?**

There seemed to be a split between those students that found the online lectures to be pointless versus those that would like to see more videos uploaded to Connect. Some of the comments from students include:

- “I didn't really look at the online presentations so not sure how it would've changed”
- “There wasn't much incentive to look at the online stuff unless studying for the midterm/final”
- “The online lectures (some are okay), would not recommend weekly”
- “Online lectures create more work, all info given in class would be better”
- “Potential to spend more time on lecture-style teaching”
- “I would enjoy more reading”
- “Nothing”
- “Nothing, should be more videos”
- “Make it regular so that there was 1 video uploaded per week on a Friday (promote regularity)”



**If you could offer one suggestion for change in the flipped course format, what would it be?**

Many students appeared to really like the inclusion of the online lectures and would like to see more of them. Additionally, a number of students suggested incorporating quizzes to encourage the class to watch the lectures before class. Some of the comments from students include:

- “If you do a flipped classroom, have a quiz based on that material to force students to read it”
- “Quizzes (pre-reading or post-unit quizzes) to make sure students are learning the material”
- “Incorporate small quizzes (3 to 5%) to promote student involvement online” -
- “Use it for more classes”
- “Need more online presentations, Include one for every lecture”
- “More audio lectures and videos for the visual learners”
- “More readings and audio lectures”
- “More paper discussions”
- “Everything was lovely, thanks”
- “Nothing - it was my favourite class”



**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.**

The following survey was given to students on the last class of the term.

**Evaluation of a Flipped Classroom**

The Flipped Classroom is an instructional strategy that can provide teachers with a way of minimizing the amount of lecturing in their practice while maximizing classroom interactions. The purpose of this survey is to measure the effectiveness of this strategy in KIN 469. This survey is strictly for your instructor’s benefit and by answering the questions below, you can help improve the 469-course for future students. Participation is completely voluntary.

- 1. The flipped class style made it easier to understand the course content.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 2. The online presentations were beneficial in preparing for the class.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 3. The classroom discussions were effective in applying the course concepts.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 4. The flipped approach helped me learn more than I would have if we had used in-class lecture methods only.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 5. I was challenged by this course.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 6. A flipped class is more work than other classes that use a traditional, lecture-style approach.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 7. This course actively involved me in what I was learning.  
 Agree                                       Neither Agree nor Disagree                                       Disagree
  
- 8. What, if anything, did you like most about the format of the flipped class?
  
- 9. What, if anything, did you dislike most about the format of the flipped class?
  
- 10. If you could offer one suggestion for change in the flipped course format, what would it be?





- a. **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.

There are no current plans to disseminate the outcomes of this project.

11. **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?

I can, without a doubt, state that my teaching practices have changed as a result of this experience. For the past few years I have struggled to connect with my KIN 469 course. I have tried a several different approaches to reach out to the students but never quite felt comfortable in the classroom. That is, until this past year. The student feedback I received at the end of the year, along with my teaching evaluation scores, were overwhelming positive. This flipped approach seemed to excite the students and create a level of engagement and energy in the classroom. I am quite confident in using the same approach in years to come only making minor adjustments to the delivery (and of course updating the activities). I believe that this approach is sustainable for several reasons. First, now that I have learned how to use screen capture technology and know that there are students that use the material, it's quite easy to put something together. I am also spending less time building lecture slides and have more time that I can dedicate elsewhere (i.e. marking, student meetings, etc.). Lastly, I am also willing to put in the effort to continue this practice knowing that the students enjoy it, appear to be learning the material, and are challenged more by the class. (Quick note: this term I am teaching a first year course in biomechanics. While I have not totally flipped the class, I have created online presentations to help students to review the material on their own, and plan to do a partial flip with the KIN 151 course. I will also be developing a new course for next year and plan to incorporate flexible learning in that course.)

12. **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?

There are several things that I would like to do to “complete” the transformation of my KIN 469 course.

- 1) Organize the course units better (i.e. 2 week blocks consisting of 6 classes) and ensure that there is an online presentation ready for the start of each unit. It was difficult at times to build material while the class was ongoing. Better preparation before the class begins is essential. I won't have time to do this for the 2016 offering but I hope to have the units better organized for next school year (working on this over the summer months).



- 2) I would also like to increase the variety of activities used. There must be a balance though between having multiple activities to get students engaged yet some consistency so that they know what to expect. Each unit, for example, could consist of an online presentation, followed by a discussion class, followed by a journal club class, concluding with a problem-solving activity. This step involves some rearranging of the units and is tied to my first objective by better laying out the classes for the term.
- 3) The online presentations were fairly simply consisting of a PowerPoint presentation and a voice-over. I would like to create a more detailed presentation with either videos, graphs and figures, animations, etc., so that students find the presentation more compelling. This will require a lot more planning and time on my part and may be difficult in the short term. But once the structure is put in place, the trick will be to build a presentation consisting of the fundamentals (and not information that is dated).
- 4) Lastly, I would like to conduct a formal evaluation of the project so that I could share the results of this transformation with others. I hope to get more involved with the communities of practice at the Centre for Teaching, Learning, and Technology so that I can see what others are doing, which will give me some direction as to what sort of analyses I can do and what would be meaningful information to collect.