

Flipping Linguistics 100:

A case study in flipping a large undergraduate class

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0. Introduction

We were both recently instructors for a large undergraduate linguistics course which took the flipped classroom approach. Our goal for this chapter is to share what we learned from this experience.

After introducing the context (where we started from, and general information about the course) we will share (i) our motivation for flipping the course, (ii) the steps we took to implement the flipped model, (iii) samples of flipped classroom sessions, comparing the structure for the session before and after flipping, and (iv) student and faculty perceptions of the resulting course structure.

Please note that we are not attempting here to systematically compare flipped vs. non-flipped approaches and outcomes; our goal is rather to share methods, approaches, and lessons learned based on our experiences as instructors and student feedback.

1. Context: Where we started from

The course we flipped is called *LING 100 - Introduction to Language and Linguistics*, and it is a large introductory course at the University of British Columbia (UBC), in Vancouver, Canada. UBC has over 62,000 students, including more than 14,000 from 162 different countries. Even before flipping, Linguistics 100 has for many years had increasingly large enrollments, and the course is currently offered in four separate sections each year, with 170 to 180 students in each class. Typically (based on course-internal surveys) more than half of the students in each section are either second-language speakers or are bilingual in English and a heritage language.

Class time consists (as it also consisted before the flip) of (a) two hours of face-to-face time with the whole group, and (b) one hour of smaller tutorial sections, taught by TA's; these tutorial sections each have around 30 students.

Before flipping, teachers varied somewhat in their methods, but generally followed the traditional signature pedagogy for linguistics, which for introductory courses has been to combine:

- lectures, with some limited classroom response activities (students mainly passively listening and taking notes, sometimes a few clicker questions or questions to the group)
- problem solving sessions in tutorial, commonly with the students working in groups
- additional homework problems (usually short-answer or analysis of linguistic data sets)

- written mid-term and final examinations (consisting of informational and short-answer problem-solving questions)

In terms of technical infrastructure, we started with almost everything already in place before we flipped: a suitable learning management service, blog spaces for delivering online components, media support, and audiovisual and classroom response systems in classrooms (though UBC has some more suitable spaces, our class continued to be taught in lecture theaters, however, which was something of a limitation, as discussed in Section 6 below).¹

And in terms of student access to technology, we started with a student group who (with few or no exceptions) all have access to the internet at home and at school, who all have mobile devices, and who all have iClickers. Comfort levels among the students with online media and online interaction are very high.

2. Motivation: Why we flipped

Our decision to implement the flipped classroom model was based on a number of mutually supporting factors, summarized below.²

2.1 Improve outcomes

We were aware of research studies and meta-analyses that have found the general model of blended learning to be associated with improved learning outcomes across a range of learning situations (Cameron 2003, Means, Toyama, Murphy, Bakia, & Jones, 2009, and Freeman et al., 2014). The flipped classroom model fits clearly within the continuum of blended learning, and so this empirical evidence was an important factor for us in choosing the flipped model.

2.2 Support students with a range of learning styles

Any large undergraduate class will necessarily include students with a range of learning styles, and this has important implications for the course structure. As Becker and Watts (1996, cited in Lage, Platt and Treglia 2000) put it:

Great orators should lecture. The rest of us should consider using a variety of teaching methods to actively engage our students. Variety in the pace and format of undergraduate classroom instruction—across different class periods and even within a particular class—may well be the missing spice of good teaching and enthusiastic learning.

¹ There has been strong institutional support for blended learning at UBC, discussed further in Section 2 of this paper, which is part of the reason the technical infrastructure we needed was all there. Ours was far from the first blended-learning course at UBC; for other case studies of blended learning projects at UBC see: <http://flexible.learning.ubc.ca/case-studies/>

² We speak here only to our own individual motivations; these do not necessarily represent the motivating factors for UBC at the institutional level, or the motivations of the other UBC instructors involved in the project.

The ability to appeal to a range of learning styles has long been recognized as a value in the flipped or 'inverted classroom' model (Lage, Platt, and Treglia's 2000), and this was also an important factor for us in deciding to move to the flipped approach.

2.3 Maintain engagement in large classes

With our steadily increasing class sizes, we were also concerned that students in such large groups would become increasingly dis-engaged and dis-interested—a concern that research suggests is well-justified (see for example Blatchford, Edmonds, & Marin, 2003 and Fenollar, Roman, & Cuesta). Since the flipped classroom model allows for more active learning, and active learning models are known to increase student engagement (Baddeley, Lewis, Elridge, & Thomson, 1984; Hake, 1998), this was another potential advantage that we saw in the flipped learning model, especially for large classes like ours.

2.4 Free class time for constructive and connected learning

We had also become aware of research into human learning that argues that real learning, as opposed to passively absorbing information, requires students to (a) actively construct their own models, explanations, and arguments, (b) work together socially, and (c) reflect on their own process of learning (Bransford, Brown, and Cocking 2000). Because it promises to introduce more active and group learning into the classroom, we hoped that the flipped model would help promote this kind of deep learning in our own students.

2.5 Follow a broader institutional strategy

Finally, the support and encouragement we received from our institution was also a key factor. UBC has identified a 'blended transformation in learning' as a key strategic goal (UBC Flexible Learning Transformation Team, 2014), and without the strong institutional support and encouragement that this project received it would have been much more difficult for us to decide to flip our class.

3. Implementation: How we Flipped

Starting in the Fall of 2014, the UBC Linguistics department received support for flipping LING 100 (in conjunction with some related projects), through a fund called the UBC Teaching and Learning Enhancement fund. Specific support included:

- a one-year teaching post-doc position, filled by an experienced instructor (Evan Ashworth) who was familiar with the flipped classroom model;
- additional funding for media development, web support, and related expenses.

Utilizing this support, the project team (consisting of the post-doc, UBC support staff, and a group of UBC linguistics instructors that included the authors) worked to transform the course curriculum in the following ways.


3.1 Lecture content > Pre-class videos

A major part of the flipping process for us was the development of a series of weekly video-lectures. These videos introduce the students to some of the core concepts and background that, on the traditional model, would have been taught live in a lecture. As with many instantiations of the flipped model, LING 100 students are required to watch these videos as preparation for the live sessions.

Some of these pre-class videos were professionally produced with media developers, but most were scripted and produced by an instructor or the teaching post-doc, often using screen capture software with narration over lecture slides. The videos are fairly short (often in the 10-15 minute range, some as short as 4 or 5 minutes), generally focusing on a few fundamental concepts for the week, and students also read standard textbook readings on the same topics. For a sample of some of these pre-class videos, see <http://enunciate.arts.ubc.ca/linguistics/introductory-videos/>.

3.2 Lecture Time > Active Learning Time in Class

For the active learning time in class, we tried to create activities that would (a) promote dialogue, discussion, and cooperation, (b) have students construct explanations, models, and hypotheses, and (c) connect the discussion, where possible, to real-life examples outside the classroom. Two examples from one of the authors' recent classes are shown below (the second example connects sentence-structure analysis to a real-life \$10,000,000.00 dollar lawsuit).



3 Minute Discussit

Form groups of THREE. Answer the questions below together.

Consider the sounds /p/, /s/, /t/, /i/

Q1. With your partner, write down 5 sequences built out of these sounds that are *possible* (or actual) words in English (e.g. /spit/, /is/)

Q2. Now with your partner, write down 5 sequences built out of these sounds that are *impossible* words for English (e.g. /t~~p~~sit/).

Q3. Can you identify any *generalizations* about what is a possible or an impossible sequence for English words?

Fig. 1 - Example of an active learning exercise for in-class group work

Compare the two syntactic structures below.

A

No overtime for ...

```

graph TD
    NP1[NP] --- N1[N packing]
    NP1 --- PP1[PP]
    PP1 --- for1[for]
    PP1 --- NP2[NP]
    NP2 --- N2[N shipment]
    NP2 --- or1[or]
    NP2 --- distribution1[distribution]
        
```

B

No overtime for ...

```

graph TD
    NP1[NP] --- NP2[NP]
    NP1 --- or1[or]
    NP2 --- N1[N packing]
    NP2 --- PP1[PP]
    PP1 --- for1[for]
    PP1 --- NP3[NP]
    NP3 --- N2[N shipment]
    NP3 --- or2[or]
    NP3 --- distribution2[distribution]
        
```

Which reading did the truck drivers need to prove the law meant, to get their overtime pay? Argue for A or B as the key reading.

2

Fig. 2 - Example of an active learning exercise, here based on a legal dispute between the Oakhurst dairy company and its drivers, reported at <https://www.nytimes.com/2017/03/16/us/oxford-comma-lawsuit.html>

For most instructors, active group exercises of this type replace a significant part, but not all, of traditional lecture style presentation (e.g. giving definitions, explaining concepts, discussing examples); see below for more discussion of this balance.

3.3 Other major changes

We also made two other changes to the course structure which, while not strictly part of the flipped model, fit with our underlying motivations for flipping. These changes were:

- Students now produce major group project presentations. These are 3-minute pieces, where the group explains a linguistic topic of their choice. Students can present in various formats, but they usually choose to share their final presentations as YouTube videos. Students still write two traditional-style mid-term exams, but the group presentations, done at the end of the course, replace the final exam. Some examples are here: https://www.youtube.com/playlist?list=PL-1Aa-bAY7Lla1bY4aN6HuikS_Cj1w50t.
- Instead of just doing problem sets (transcribing data and analyzing patterns) for homework, students taking the flipped version of LING 100 now also do individual homework assignments where they create a reflective 'linguistic autobiography'. This autobiography, documenting their personal background and experiences with language, is submitted twice: one version early in the course, and a second revised version, framed using linguistic terminology and concepts, towards the end. These two reflective exercises now constitute two out of four homework problem sets for the course.

These assignments could, of course, also be used independently of flipping the classroom; but we introduced them along with flipping because, as noted, they fit with the active and reflective approaches that we wanted to use to transform our course.

4. Examples of how specific classes were transformed

To show how the transformation affected individual classes, in the sections below we give examples of three transformed classes, drawn from notes and lesson plans from the authors' own recent teaching.

The first two examples are of flipped 'lectures' (i.e. large face-to-face sessions with the main instructor), and the third example illustrates how we transformed one of the tutorials.³

4.1 Sample A - Class on 'design features of language'

One important topic in introductory linguistics is the 'design features of language': what are the basic components of human language? And how are human languages different from other forms of communication? This topic is normally one of the early topics covered in the course.

Before flipping, we typically taught the topic according to the signature pedagogy for our field as described in Section 1 above, so that for this topic:

- Students were assigned a chapter to read about design features (they could read it before or after the lecture).
- in class, the instructor explained the design features of language and compared human vs. animal communication, with some examples, while the students took notes. There would be some questions addressed to the group, and sometimes (depending on the instructor) a few clicker questions.
- After class, students would read the chapter (if they hadn't done so already), and answer a few informational questions as part of a homework assignment.

After flipping, the same topic is covered quite differently:

- Prior to the class, students read a chapter from the textbook (but now they are required to read it *before* the face-to-face session).
- Prior to class, students also watch a pre-class video or videos, (for example, this 3rd party video on animal communication, <https://youtu.be/-7ijl-g4jHg>, and perhaps also this video, which was a final group project from a previous year of LING 100: <https://youtu.be/uJf68VzrOU>).
- While reading and watching the videos, students prepare answers to questions about the topic.

³ Except where otherwise indicated, the specific strategies and examples here represent only the authors' own teaching. UBC instructors for LING 100 currently all use a version of the flipped structure, but not all teachers use the exact approach or materials shown here. We discuss some of the differences between instructors in the sections below.

- At the face to face session (formerly a lecture) students start by answering a series of clicker questions, designed to test whether they have done the pre-class preparation.⁴
- For the rest of the class, a significant part of the work is then taken up with group activities that challenge the students to articulate concepts and compare systems, as in Figures 3, 4, and 5 below. Groups share and compare their answers with the whole group, in a discussion facilitated by the instructor.
- After class, one of the authors sends a mind-map summary of the lecture to her students so that they have some written notes about what was discussed and decided.

Low Stakes Writing - Pairs

Write the answer to the question below, working together with your neighbour.

What is language?

?

You have three minutes to provide your own definition. You may be asked to present and explain your definition with examples.

Fig. 3 - Low-stakes writing exercise to start discussion of meaning of 'language'

⁴ Some instructors use a pre-class online quiz instead, for the same purpose, i.e. to test that the students are coming to class prepared.

Group Activity


Form groups of three-four and complete the activity below (you may need to swap speakers with other groups, if you don't have a different language in your group)

Choose two languages to compare in your group.

Come up with a list of things that are the same/different across these languages

Discuss whether one language is better suited for communication than the other

Fig. 4 - Language vs. language comparison group activity

Group Activity 

Work in new groups of two to address together the question below

How do human languages differ from animal communication systems?

You have three minutes to characterize some of the differences. You may be asked to present and explain your account, with examples.

Fig. 5 - Human language vs. animal communication comparison activity

Exactly which activities of this kind to include, and how many, depends on the instructor:

- Some instructors (including one of the authors) have taught this particular topic almost 100% 'flipped', i.e. the face-to-face class time was almost entirely structured around a series of activities like those above, with little or no traditional lecture activities (providing definitions, explaining examples, etc.) during class.

- Other instructors use a more mixed approach, including at least a certain amount of traditional lecture materials (explanations, definitions, etc.), mixed in with activities like those illustrated above.

4.2 Sample B - Class on writing systems

Another key topic in LING 100, covered around mid-semester, is the topic of writing systems.

Prior to flipping, following the traditional pattern identified above, a typical class on this topic would give definitions of writing systems, discuss some examples, and possibly (but not always) test the students with some informational clicker questions.

After flipping, one of the authors now teaches the same topic according to a plan like this:

- As with the previous example, prior to class students read a textbook chapter and watch a short pre-class video, with questions to think about as they prepare.
- At the large group face-to-face session (formerly a lecture), students again start the class with clicker questions that test that they have done the pre-class work. An example of this type of question is shown in Figure 6.

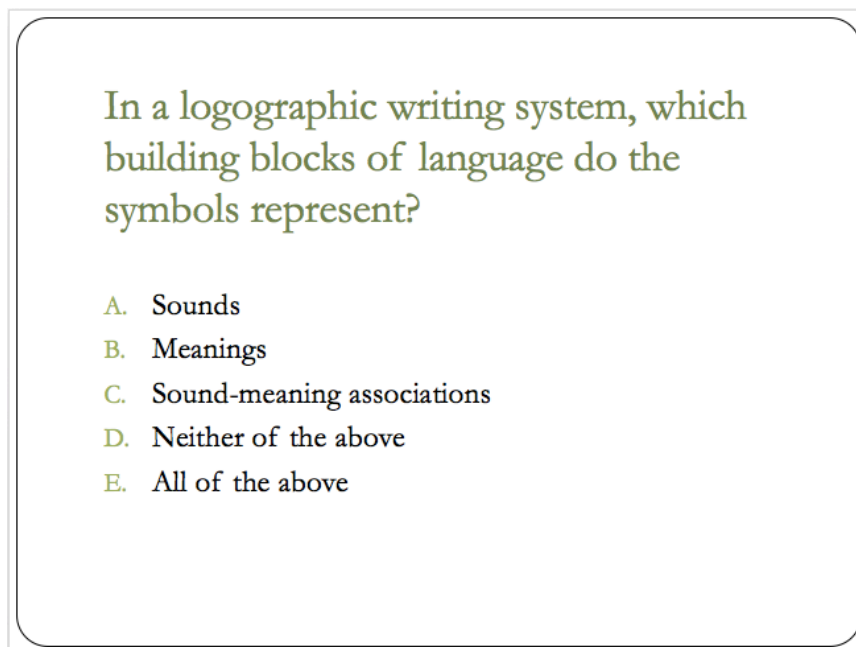


Fig. 6 - Clicker question to probe that students have done pre-class watching and reading

- As the class continues, students then work in groups to create low-stakes written answers to the fundamental question: '*what is writing?*'. No definition is pre-prepared by the instructor. Instead, groups share and compare answers, and the class comes together, facilitated by the instructor, to reach a consensus definition.
- From there, the instructor then challenges the group to test their definition, by applying it to a variety of cases, as in Figure 7 and Figure 8 below. Student responses at this point

can be by clicker or show of hands, and the instructor may ask selected students to explain their answers.

Is this a writing system?

A. Yes
B. No

1 2 3 4
5 6 7 8

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Fig. 7 - Students activity - testing the limits of their own definition

Is this a writing system?

A. Yes
B. No




Image Source: By Szalax (Own work) [Public domain], via Wikimedia Commons

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Fig. 8 - Students activity - testing the limits of their own definition

- After class, one of the authors again sends a mind-map summary of the lecture to the students, so they have written notes of the direction the discussion took.

As with the previous topic, some instructors have taught this particular topic almost entirely flipped; other instructors have included at least some lecture-style materials, such as pre-prepared definitions and explanations to combine with active group learning exercises.

4.3 Sample C - Tutorial on language variation and identity

Our LING 100 tutorials have always centered on group problem-solving. Because that is already quite an active form of learning, we still use that approach in tutorial even after the flip. However, the overall transformation of the class has still influenced the tutorials in two important ways:

- first, though students still do traditional problem-solving, we also now set aside a significant amount of time in tutorial for work on the group final projects (described in Section 3.3 above);
- second, as we flipped the rest of the course, we also introduced a range of new types of active learning exercises also for tutorials, which we hoped would be more engaging for the students.

As examples of the latter, for a tutorial on language and identity, we suggested these activities, quite different from our traditional problem-solving and transcription exercises:⁵

Suggested In-Class Activities for Tutorial Groups: -

- **Languages, Dialects, and Registers:** Students work together in small groups (3-4 per group). Each group writes down 1) The languages and dialects represented among members of the group and 2) The registers used by members of the group. The purpose of this activity is to show students how much linguistic diversity is represented in the classroom and also to show students that even if they are monolingual, they know several registers—that is, showing students that they don't speak the same way to everyone.
- **Slang Sleuth:** Students work together in small groups (3-4 per group). Each group chooses an in-group slang term (from English or any other language) that they think we haven't heard before. Students write down the meaning of the term, its origins, and who it is used by and in what contexts. Groups then share their slang terms with the class. The purpose of this activity is to show students that slang is a legitimate area of inquiry in linguistics.
- **Think-Pair-Share on Language Preservation:** Pose the question: "Should we as humans care about preserving First Nations languages? What reasons do you have to support your claim?" Students first think for a few minutes and write down their ideas, then working with a neighbor they discuss their responses. After this, students could be asked to share their discussions with the class. We could even require students to contribute their discussions to the online discussion board.

⁵ These suggested activities were prepared by the teaching postdoc on the project, Evan Ashworth.

We recognize that these changes to the tutorials are not strictly 'flipping' (since the students were already working in groups to actively solve problems); however, we felt it was important to introduce new kinds of activities along with the overall flip, given that two of our fundamental goals for flipping were introducing a broader range of learning activities and increasing student engagement.

5. Results - Student and Faculty Perceptions

5.1 Student Perceptions

In this section, we explore student perceptions of the flipped structure. To do this, we will focus on feedback from comments from student evaluations for one selected section of the course.

The section we have chosen to focus on here was an early version of the flipped model, and one which used a fairly strong version of the model (i.e. with quite limited traditional lecture material used in the live classes). We chose this particular section for our focus (rather than a comparison or overview across several sections) because (a) this section used the flip model so strongly, which we hoped would elicit particularly clear and strong reactions from the students, and (b) because this section was one of the first times the course was offered flipped, and we hoped it might reveal issues particular to the first time a flipped version of a course is run.

For the chosen section, 109 students completed a standard anonymous UBC online course-evaluation survey (out of 248 students enrolled in that section, so a response rate of 43.95%). Out of 132 written comments overall in the evaluation report, we found that close to half (63) of the comments were specifically about flipped learning and/or the course format/structure. Of these 63 comments (all of which are reproduced in an appendix to this chapter), we found that:

- 31 comments were clearly positive. Where students gave a reason for liking the model, it was generally because they said the approach improved understanding.
- 8 comments were mixed, or positive but with caveats.
- 24 comments were clearly negative. Students who gave a reason for their negative reaction often said that the workload outside of class was too high on the flipped model, and/or that they didn't feel that they were using their class time effectively to learn.

The following sub-sections explore the student perceptions in more detail, with some examples of students' comments.

5.1.1 *Positive Student Perceptions*

Some students used quite strong language in their positive comments, such as saying that flipped learning was like '*a breath of fresh air*', or that they '*loved the 'flipped classroom' experience*'. Reasons students gave for liking the model include (paraphrasing) that:

- the model enforces knowledge and making connections,
- it takes pressure off having to take notes in class,
- it solidifies knowledge through active learning,

- it helps them by forcing them to prepare for classes, and
- it promotes deep learning, critical thinking, and discussion.

For examples, students said (here quoting):

- *I didn't just learn, I understood.*
- *...it trained me to be more of a critical thinker.*
- *...promoted learning over marks*
- *The flipped learning style was effective ... practicing with and discussing the topics in class helped to solidify understanding.*

A number of students specifically commented on how the pre-class videos helped them learn:

- *The videos were extremely helpful in learning topics, and was [sic] a good complement to reading the textbook, as the videos sometimes went more in depth on a topic and allowed for better understanding.*
- *I liked the video system, because classes are really big and it helps to re-watch the videos.*

Two students also specifically commented that they liked having the group project presentation instead of writing a final exam.

5.1.2 *Mixed Perceptions*

Some students found they liked the model overall, but that it also added a lot to their workload outside of class. For example, one student said:

- *The "flipped classroom" style is effective, though it requires more outside-of-class work than the "usual" format.*

Other students said they personally liked the approach, but that they were aware of negative feelings on the part of other students, reflecting the somewhat polarized reactions of this particular section:

- *The flipped-classroom thing may not be for everyone, but I approve of the message she always tried to convey about knowledge and education.*
- *Contrary to what seemed to be the opinion of some students, I think the flipped-classroom teaching style was very effective in this class.*

5.1.3 *Negative Perceptions*

A smaller, but still significant, number of comments expressed negative perceptions of the model. Some statements (quoting) include:

- *Flipped classroom not effective*
- *Flipped Classroom was awful*

- *Flip class room is not a good idea.*

Where students gave reasons for their negative reactions, the work-load outside of class was again a common issue:

- *You should also not expect students to watch the video and readings on time every single class because Linguistics is not the only course that students have.*
- *Although I enjoyed the term ... I didn't really like the flipped classroom aspect of the course as I found it was very easy to procrastinate and fall behind in the class*
- *...this course demanded to [sic] much of students*

A number of students who objected to the flipped approach also said that they simply preferred the traditional lecture format, and wanted more focus on 'content':

- *I think there should be more time available for lecturing rather than group discussions.*
- *The class has too much activities, should focus a little more on the content*
- *If the material is presented, even briefly, at the beginning of lecture instead of expecting us to know the material already, I believe it would go a long way in student understanding.*

5.2 Faculty Perceptions

Based on our own experiences as instructors, and also on informal interviews with two other instructors who have taught with the flipped model for this course, we can offer the following comments.

5.1.1 *Positive Faculty Perceptions*

Three of the four of us, as instructors, have had overall positive reactions to the flipped approach, and for two general reasons:

- First, we found that the flipped model led us to explore a much more active, engaged style of teaching. This has led several of us to also use a more active style beyond LING 100, in our other classes.
- Second, on a practical level, having gone through the initial development phase, we now enjoy having a set of resources (pre-class videos, assignments, etc.) that we can re-use; this can help a lot with course preparation.

5.1.2 *Issues and problems encountered*

The pre-class videos, though useful and sometimes well-received by the students, also raised some issues for the instructors:

- First, we found that even short videos can take a considerable effort to produce—one instructor found herself working more than 12 hours a week just to prepare the pre-class videos for her first flipped section of the course.

- Second, not all pre-class videos are easily shared between instructors. Depending on how the content in the video is presented, using another instructor's video can sometimes make it seem like someone else is the main 'teacher' for the course.

Logistical issues also arose with in-class group work. The main problem for instructors was that it was often difficult to move among the groups during the group discussions, which made it hard to ensure that the groups were all on task. The physical layout of the rooms in which we taught (all large lecture theaters) appears to have been a factor here.

Some faculty also commented that the flipped approach reduced the number of topics they could cover effectively: it simply takes longer to cover a topic through active learning and group discussion than through traditional lecturing. It may well be, of course, that it is better to teach fewer topics, and teach them better; but for planning purposes, it is important to keep in mind that active learning takes time.

6 Conclusions

Our experience suggests two broad conclusions about flipped learning:

- First, flipped learning can have a strongly positive effect, in that it promotes a more active, varied, and (for some students) a more engaging approach to teaching and learning.
- But we must also recognize that flipping, depending on how it is implemented, can provoke strong negative reactions among certain other students.

Some potential ways of keeping the positive aspects of the approach, while mitigating to some degree the problems, include:

- Try (as many instructors for LING 100 already do, as noted) mixing the active learning exercises with a proportion of more traditional lecture-style teaching, to balance the needs of the different types of students.
- At the start of the course, be as clear as possible about how you will be using the method and why, and the special expectations and work requirements for the course.
- Have a realistic understanding of how long it takes for an instructor to prepare the pre-class materials, and make every effort to streamline the process. When making pre-class videos, try to make them in a way that will allow different instructors to re-use them.
- Consider reducing the number of topics covered, if you flip a course.
- Encourage your institution to develop physical spaces that allow for group work with large classrooms, such as large classroom spaces with pod style seating.

There is, of course, no ideal formula for how to teach, and no simple answer about how to balance the traditional lecture format with more blended learning approaches, as through the flipped learning model for large classrooms explored here. We hope that our experience may be of some help in helping other instructors find a balance in their own teaching.

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APPENDIX - STUDENT COMMENTS

NOTES:

- *We reviewed all student comments for one section of the course, during the first Academic year in which the course was offered in flipped format.*
- *Evaluations were anonymous and completed online. 109 students completed the course evaluation survey overall (out of 248 students enrolled, so a response rate of 43.95% [compare to response rate overall to course evaluations at UBC?]).*
- *We identified all comments that we judged as either (i) specifically referring to the flipped learning model, and/or (ii) specifically commenting on the course format/structure.*
- *We divided these into those comments into three categories: what we judged to be (a) clearly positive perceptions, (b) mixed perceptions, or positive but with caveats, and (c) clearly negative perceptions.*
- *All comments that fit in any of those categories are reproduced below. (students also had other comments, positive and negative, not reproduced here, that did not meet those criteria.)*

POSITIVE PERCEPTIONS (NOT INCLUDING THOSE FOCUSED ON VIDEO OR THE FINAL EXAM)

1. I liked the 'out-of class' format of the course a lot! It was very helpful for me in terms of learning the content and the bi-weekly quizzes and assignments also helped me a lot. Liked it a lot!
2. I personally liked the before-lecture learning system. Her lectures enforced the knowledge we learnt in the video and made connections between informations, which I thought was crucial in grasping the holistic view about what linguistics is all about.
3. Personally I found the flexible learning system quite effective and it took the pressure off having to take a lot of notes in class. Also, it made the classes a little lighter and more fun.
4. The flipped learning style was effective - after having read the textbook chapters and watched the videos to understand the basic subject matter, practicing with and discussing the topics in class helped to solidify understanding.
5. The flip-classroom format was new to me, however it encouraged me to actually study before the lecture and helped me create a schedule for studying, which I am horrible at.
6. The format of the course was really good as well!
7. This is a very well designed course. This is the first course at university that promoted learning over marks in my opinion.
8. This is the first time I have ever heard of the flipped class, and it is a pretty effective way of teaching and learning in my opinion.
9. I really liked the flipped classroom because the lectures were available to see again and again. It must have been a lot of work to put them together, and it helped us use our time efficiently.
10. ...at first i was a bit hesitant about the flipped classroom style that martina implemented in LING 100, but i believe that by the end of the course, it trained me to be more of a critical thinker. flipped classroom style forces me to learn and find things that i feel are interesting so i can bring those things to class. good technique - not for everybody, but it worked for me.
11. I found the "flipped classroom" method really effective as it encouraged me to read the textbook and watch her videos before class, and then when we talked about it in class, I didn't just learn, I understood. :)
12. She is definitely making the content interesting. I love flexible learning.
13. she used many kinds of materials to explain our topic, so the lecture was so clear. In addition, the classmates were eager to learn linguistic, so the atmosphere was great.
14. The flipped classroom concept was well coordinated. It was clear what we needed to read and prepare before going to class.
15. I think the flipped classroom learning style is very interesting. Instead of spending time in class to explain definitions, we learn it through videos made by prof
16. She always engaged the class through activities and her push for student participation.
17. A breath of fresh air with her unique teaching methods and her true passion for teaching
18. She and TA's gave us enough time in class for group discussion and leads us to the correct way of thinking about a problem.

19. I really enjoyed Martina's teaching style. Instead of spoon-feeding us with information during lecture, we were asked to watch videos/read our textbook before the lecture and we had more interactive activities and discussions to have a greater understanding and application of concepts. I felt her teaching style engaging, creative and fun.
20. I really benefited from her style of teaching. I was able to understand the material much quicker by having read the information before class and then being able to ask any questions I had in class.
21. I loved the 'flipped classroom' experience with this course. Martina was always engaging and made the material clear and interesting. She even took the time to record instructional videos to explain concepts and demonstrate examples that could be regularly accessed outside of class. I used them for studying and they were extremely helpful. I had never taken a linguistics course before and, if my future course load allows, I'm sure I will take another!
22. Despite the size of the class, she can make the class personal - she would make you feel that it was more of a dialogue rather than a monologue.
23. Enjoyed the flipped class format. It was effective in helping me learn.

POSITIVE PERCEPTION OF METHOD FOCUSED ON THE GROUP PROJECTS... also like how there's no final exam but a big group project.

1. Also, there is no final exam but group presentation, which I think is a new way of testing the knowledge we obtained and also a relief from all the exam stress.

POSITIVE PERCEPTION OF METHOD FOCUSED ON THE VIDEOS

1. The videos were extremely helpful in learning topics, and was a good complement to reading the textbook, as the videos sometimes went more in depth on a topic and allowed for better understanding.
2. I liked the video system, because classes are really big and it helps to re-watch the videos. I wish the in class quizzes could be online
3. The pre-class videos she provided were extremely useful.
4. The instructor made the content of the course very interesting, and her videos were very good in explaining new concepts.
5. Martina had produced excellent videos that students could tell she spent a long time making. The videos of her were very useful and an excellent resource to turn to. Since this was my first experience with a flipped classroom, I was not used to it and affected my learning in the beginning as I had not adjusted and adapted yet. Since Martina does not lecture or directly "teach" material in class, I can only evaluate Martina's teaching from her videos. The activities in class were mostly helpful in solidifying the content from the videos and pre-readings, but not all the time.
6. ... the pre-class lecture videos were definitely helpful in helping students to understand concepts.

MIXED PERCEPTION, OR POSITIVE BUT WITH CAVEATS

1. The format and content of the course is good however sometimes I feel like I had nothing in the lecture. All I had is knowledge from the videos online and I think the content of the lecture is exactly the same with the video sometimes, which makes me think there is no need going to lectures even if I go every time.
2. The "flipped classroom" style is effective, though it requires more outside-of-class work than the "usual" format. Though, ultimately, I find that other non-flipped courses require the same amount of work, though there is a temptation to cram a term's worth of work into the week before the exam. Swings and roundabouts.
3. In general, I do not like the group project aspect of the course because my mark relies on others' motivation. ... However, I found the content very interesting and would consider taking another linguistics course in the future.
4. Martina has a very unique teaching style. Although I am not very interested in Linguistics, I appreciate the way she approaches learning as something we should WANT to do, and not as facts being forced upon us. The flipped-classroom thing may not be for everyone, but I approve of the message she always tried to convey about knowledge and education.

5. She encouraged everyone to do their best and to take what we've learned and transform it into wisdom. She is very respectful and caring of all the students. However, some students did not like the "flipped classroom" style and I actually quite enjoyed it because it made me learn things before hand to prepare for the upcoming class. I was able to clarify things I was confused about in lecture and I wouldn't have had those questions if I didn't watch her instructional videos.
6. Contrary to what seemed to be the opinion of some students, I think the flipped-classroom teaching style was very effective in this class. It would perhaps be beneficial to push for this style of learning earlier in the course, so that people have time to evaluate if they are comfortable with the style.
7. I liked the flip classroom concept and enjoyed watching the videos prior to class however if I didn't watch the videos then I wouldn't understand what was going on in lecture. With a full load of courses, it can be hard to always watch the videos. Your encouragement for students to do well was shown all throughout the term.
8. Great class overall. Subject matter is very broad so it was sometimes difficult to figure out what parts or how in depth we should learn things in relation to the text books videos and lectures. Assigned pre readings are a bit broad only signifying the chapter and videos might need to be refined. Class was very interesting with thought provoking questions.

NEGATIVE PERCEPTION OF METHOD

1. Although I enjoyed the term with Dr. Wiltchko, I didn't really like the flipped classroom aspect of the course as I found it was very easy to procrastinate and fall behind in the class. I felt during class time, there could be more explanation of the content instead of assuming all the students have done their pre-reading/video-watching (however, I understand that is expected of the student). This was mainly due to there being so many assessments in the course, such that it became somewhat overbearing as the term continued on as our other courses also piled on more assignments.
2. Also for a first - year level course, this course demanded too much of students who had no knowledge of linguistics before. Once again, the flipped classroom was not a good method at all.
3. I think there should be more time available for lecturing rather than group discussions.
4. Martina's expectations of participations in the class were a bit too high. How could people actively engage in a class with 200-250 people? It's just not viable. Also, sometimes I wish the classroom was not a flipped classroom.
5. Martina's "flipped classroom" style was ineffective.
6. The class has too much activities, should focus a little more on the content
7. The flipped classroom style did not work for me personally. I thought tht material that was necessary to know could have been communicated more effectively. Study guides were helpful. I did not find the videos to be particularly helpful in my learning, I prefered te textbook to the videos. That being said Martina was very passionate and enthusiastic about the material.
8. I liked the idea of the flipped learning system but I think it is ineffective in a class size so large. It would be great in a Masters Program, where students are interested in research but the majority of students are first years. Students take so many classes now days where they just do the necessary components to complete the class. Instead of putting a "lack of interest" on the students, try to look at it at their point of view. University is a lot different than what it first sought out to be, now students focus on achieving the highest grade so they can get into Masters Programs. It is more about numbers and completed courses rather than the knowledge.
9. Martina treated her students like they were in high school. The format of the classroom was awful
10. You should also not expect students to watch the video and readings on time every single class because Linguistics is not the only course that students have. Also the flipped classroom style, was not at all helpful. I do not see how students should take out some so much more time into watching videos AND attend lectures. This simply demands too much out of their time.
11. I understand Martina's method of a flipped classroom and while it may be an effective method for some aspects of the course, it was not for most areas. I feel if the material was at least given a quick review before the in class activities, then the entire class would be more engaged as sometimes, a student may not have the time to learn the material beforehand.
12. I understand Dr. Wiltchko's "flipped classroom" technique is suppose to bring interactive engagement for the students, but I still had difficulty understanding the concepts. The intentions were great, but it did not carry out with desirable results. Learning activities were not "active" or "social" (it failed to capture

student's attention, as I see half the class on their phones the whole time). I found myself more engaged in traditional teaching than flipped classroom.

13. Her intentions were right, but the execution of her lessons were questionable.
14. Flipped classroom was NOT effective. The majority of the videos barely communicated what we needed to learn. Not enough options to practice outside of the classroom (worksheets would be nice!)
15. The format of the course needs an overhaul. This course I had to treat as an online class which I did not enjoy for the subject. If all I'm told to do is watch Youtube videos and read a textbook then I really don't need to be in class. Class attendance was encouraged via participation marks but it was not an effective environment for learning as most students were playing catchup and had no idea what the material we were discussing was about. If the material is presented, even briefly, at the beginning of lecture instead of expecting us to know the material already, I believe it would go a long way in student understanding.
16. The course was informative but the final presentation is not very related to learning linguistics, is annoying to have to work with others who aren't attempting to achieve similar standards as you, and the lack of a final discourages students to come to class after the last midterm
17. Personally, I found the flipped classroom learning style ineffective as it made expectations of material difficult--it was often hard to determine which concepts were most important or relevant to focus on.
18. I found it fairly strange that we didn't have a final exam in this course. There is a lot of material and I felt like it could have been tested better to really enforce student learning. The midterms were very fair but were not very long (only a few questions) so there was not much room for error. It would have been nice to have multiple questions testing the same concept but in different ways. For example if you understood morphemes, but just couldn't get the question on the exam correct because you didn't understand the given data set, you could still showcase your understanding of morphemes in the next question which uses a different type of data set that you can understand better. I loved working on the group project but I also would not have been opposed to a final exam to tie all my new linguistic knowledge together and solidify my learning. I spent
19. I don't like the flipped classroom setup but that's just me
20. I didn't benefit from the teaching style, which I felt didn't contribute to my learning. I feel as if the content discussed in class was not helpful towards gaining a deeper understanding, and the midterm questions didn't cover all the content sufficiently. On the last midterm, there were only a couple of questions on certain topics, and I felt like the majority of what I studied outside of class wasn't even tested.
21. Going to classes don't seem to do anything for the learner.
22. Frankly, the inverted classroom isn't a choice that I liked.
23. Flipped classroom not effective
24. Flipped Classroom was awful
25. Flip class room is not a good idea.
26. Sometimes disorganized and unclear about what was going on in the course.

References

- Baddeley, A.D., Lewis, V., Elridge, M., & Thomson, N. (1984). Attention and retrieval from long-term memory. *Journal of Experimental Psychology: General*, 13, 518-540.
- Blatchford, P., Edmonds, S., & Marin, C. (2003) Class size, pupil attentiveness and peer relations *British Journal of Educational Psychology*, 73, 15-36.
- Bransford, J., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school* (expanded edition). Washington, DC: National Academies Press.
- Brockbank, A., & McGill, I. (2007). *Facilitating reflective learning in higher education*. Buckingham: Society for Research into Higher Education & Open University Press.
- Cameron, B. (September/October 2003). The effectiveness of simulation in a hybrid and online networking course. *TechTrends*, 47(5), 18-21.
- Fenollar, P., Roman, S., & Cuesta, P.J. (2007). University students academic performance: An integrative conceptual framework and empirical analysis. *British Journal of Educational Psychology*, 77, 873-891.
- Freeman, S., Eddy, S. L., Mcdonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, 111(23), 8410-8415. doi:10.1073/pnas.1319030111
- Hake, R. R. (1998). Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. *American Journal of Physics*, 66, 64-74.
- Jones, Leo. (2007). *The Student-Centered Classroom*. Cambridge University Press.
- Lage, Maureen J., Glenn J. Platt, and Michael Treglia. "Inverting the Classroom: A Gateway to Creating an Inclusive Learning Environment." *The Journal of Economic Education* 31, no. 1 (2000): 30. doi:10.2307/1183338.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: *A meta-analysis and review of online learning studies*, U.S. Department of Education.
- Home Depot. (2001). *Home Depot 2000 annual report*. Atlanta, GA: Author.
- UBC Flexible Learning Implementation Team. (2014). *Flexible Learning- Charting a Strategic Vision for UBC* (Vancouver Campus). Vancouver, BC. Report available online at http://flexible-learning2015.sites.olt.ubc.ca/files/2015/04/fl_strategy_september_2014.pdf