

| Article |

Using a Flipped Classroom Approach to Supplement a Shared Syllabus

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Abstract

This paper is a report on action research involving integrating a flipped classroom approach into a larger syllabus of English instruction taught by several different teachers at a Japanese university. Flipped classroom study, which integrates preparatory study online at home with more practical and output-based study within the classroom, has become popular within the last few years. The paper introduces key aspects of flipped classrooms (Bergmann and Sams, 2013; Moore, 2017; Hirsch, 2015), and then outlines some of the benefits of its application in EFL education and specifically within the author's teaching situation, in respect to whether the lessons can be integrated into a syllabus shared by ten different teachers, and whether students and teachers will continue to interact with the lessons across a semester. Finally, it reports on the progress made, including successes and failures of the system so far, and contends that the lessons have been consistently utilized by a proportion of the students and teachers involved, and are therefore seen as useful to them.

1. Introduction

Flipped classrooms are a relatively new trend in education. Although a flipped classroom might look different depending on who is implementing it and for what purpose, Bergmann and Sams contend that teachers should start the process of designing flipped classrooms with the question: "What is the best use of your face-to-face class time?" (2013, p. 24). The idea is to remove more direct instruction from group learning instances, and requiring students to individually engage with it outside the classroom. On the face of it, this is a simple and powerful idea: students watch videos and complete activities to learn through what Nation describes as "deliberate attention to language items and language features" (1996, p. 7), freeing up group learning opportunities for additional meaningful output and interactions. Output in peer-to-peer and student-to-teacher interactions has been shown to be greatly beneficial to L2 acquisition (Swain, 1995; Ellis, 1997; Swain & Lapkin, 1998; Fernández-García & Martínez-Arbeláiz, 2002). Other benefits of using a flipped classroom approach are, for example, that "there is more time to spend with students on authentic research"; "students who miss class for debate/sports/etc. can watch the lectures while on the road"; and that "students are more actively involved in the learning process" (Herreid and Schiller, 2013, p. 62). Moore (2017) also reports a reduced disparity between generally high formative and lower summative test scores,

indicating a better retention of coursework throughout the semester.

For these reasons, I decided to trial a flipped classroom approach to supplementary materials in my EFL courses at a Japanese university. This approach seemed appealing for other reasons as well: due to a recent textbook change, homework was no longer provided in workbook form; a tightening of the schedule meant that to rush through or even omit some sections of the textbook, even though the coursework followed a cumulative approach; and my colleagues and I were interested in testing out ways of encouraging more autonomous study outside the class. The tight schedule also meant that the process of creating videos would have to be simple and easy to replicate, and that, at least while piloting the concept, there would be insufficient time to make a video for every lesson at every level.

Further, in addition to piloting the work myself, the lessons would be shared amongst the ten lecturers teaching the course. This provided the biggest challenge: many practitioners point to the necessity of flipped lessons being tied intrinsically to work done inside the classroom (Bergmann and Sams, 2013; Seery, 2015; Strayer, 2012) – but with so many teachers and teaching styles, the flipped lessons needed to be “one size fits all”.

The classes needed to match both teacher and learner expectations, too: when planning for content, other teachers were asked about what they thought would be beneficial and applicable, and their answers varied – between vocabulary-based lessons, explicit grammar instruction, videos on similar topics to the text book, and original videos of teachers having conversations using targeted language. Accordingly, each of these types was experimented with, with adjustments made to the content as what was effective and engaging became apparent. A breakdown of these types is shown in Appendix A. Student expectations also needed to be considered: they needed to regard these flipped lessons as beneficial and approachable, so it was important to find a balance between making the lessons and their contents too simple or too challenging.

My research questions, therefore, were:

1. Could a flipped classroom approach be manageably and meaningfully applied to a shared curriculum environment? In other words, would I be able to comfortably accommodate the extra workload into my schedule, and would the lessons be of a sufficient quality and relevancy to enough teachers to make it worthwhile?
2. Would students and teachers both continue to implement the flipped classroom videos throughout the semester, or would usage drop off after the initial novelty of them wore off?

These questions are limited for good reason: the study involves students who are using a newly designed curriculum with many other variables; because of this, I did not attempt to measure any increase in language proficiency amongst the students, as I could not claim that it was solely the effect of the flipped classroom lessons.

2. The Study

2.1. Context

The lessons were used in tandem with English classes at a Japanese university. Specifically, they were made for all first and second year students – a total of 213 participants – in their core subject studies, a class meeting twice a week for a total of 30 one and a half hour lessons per semester. The levels of classes are

matched to the Pathways series of English Language textbooks published by Cengage Learning, and books 1A through 3A are used across the two years, roughly covering A2-B2 levels of CEFR. Students move up a level of textbook per semester.

There are ten lecturers teaching the course, and a total of 12 classes of first years and 16 classes of second years. Eight of the ten lecturers share an office space and attend regular meetings, so communication and sharing of ideas has been possible and frequent during this project.

2.2. Making the Lessons

The work given is all within a set style, and with a repetition of pattern intended to make it easier for students to focus on the content, rather than trying to understand what is required of them to do. A one-sided A4 worksheet in landscape format is given to the students, with pictures, tables, read-around clozes, questions, or other structured activities on it. Usually the paper is divided into two or three sections, with instructions to watch a video. A QR code is included at the top of the page, as is the actual YouTube URL address in case the students cannot access videos through QR codes. The same sheet is distributed to teachers along with a sheet of answers, where applicable (some sections require original answers and cannot be prepared for in such a way).

The content of the videos and worksheets matches sections of the textbooks, which I either decide upon by myself, or ask coworkers for help in deciding. Often, the lessons are vocabulary-based: one example, shown in Appendix B, is Book 2A Unit 2's first video lesson, entitled "Energy Words". Designed to be completed before starting the new unit, this worksheet has a list of cloze-style sentences missing target vocabulary – such as "S_____ power comes from the sun". Students are told both in the video and on the worksheet to try and complete this section first without watching the video, to test and find gaps in their L2 (Swain, 1995). The video then displays the correct answers, and asks students to use the target vocabulary in another cloze paragraph, with sentences like "Although Australia is a very large exporter of c_____ and other f_____ f_____ to the rest of the world, they are ...". The answers to this part are again displayed in the video and talked through a little, before students are finally advised to write some other kinds of energy production and whether they are renewable or otherwise. These will be shared in class during the time for checking homework, and can be used as a springboard for discussion.

The videos themselves are recorded and uploaded to YouTube, and are between two and ten minutes each. The technology used is a Windows-based laptop computer using a program called Screencastomatic, which is free to use for simple videos either of the PC screen or of video taken using the built-in web camera of the computer. The content of each video is, therefore, limited to either a video of my face (or others) talking, or of a PowerPoint presentation with voices overdubbed.

Videos are uploaded to YouTube as "unlisted", which does not require students to have, or log into, their Google accounts to view – a requirement of "private" videos – but also does not allow anyone unbridled access to the videos without a direct link – as a "public" listing would. This allows control over who can see the videos and when. The QR code is easily generated by one of many websites – in this case, www.goqr.me, which is also free. The image, once generated, is simply copied across onto the worksheet before printing.

3. Data

3.1. Data Collection

Data collection was considered carefully before starting the project, and although there are some software options that would allow me to track exactly which students were accessing the lessons and how often – for example, PlayPosit, EdPuzzle, EduCanon, and Nearpod looked the most comprehensive – ultimately, I decided against them. This is because all of those options understandably required students to sign up to the software, download it, or work through some other hurdle before accessing the content. I wanted students to be able to access the lessons as freely as possible, so as to minimize the inevitable issues, for example with some students being unable to log in, or some teachers unable to interact effectively with the sites as well. Because of this, all the hard data that this project collected are the “viewed” counts on each YouTube video.

I also asked my students directly in class what they thought of each video, taking down any particularly positive or negative comments in a notepad. Periodically, I checked with the other lecturers to see what issues and successful elements they had discovered. Looking at these together, I hoped to gain a more adequate understanding of the successes and failures of the project.

3.2. Data Analysis

From these data, a very simple scale of utility can be inferred – if the view count consistently matches the approximate number of students expected to be watching across the semester, then the videos will have probably be deemed useful beyond the novelty of the idea. Further, if the view count is larger than the student numbers, then the video has been successful enough (or too difficult) to attract repeat viewing; on the other hand, if there are fewer views than students, it means that something has gone wrong – either some or all of the students have not done the work required of them, or the teachers involved have not distributed the worksheets. Comments provided by students and coworkers were used to clarify any anomalies found.

4. Results

Empty boxes indicate where a flipped class was planned for, but not finished on time, and therefore not distributed to teachers and students. Student numbers are marked with an “approximate” symbol (~) because, at the time of distributing the worksheets, the actual number of students varied slightly, with absences, drop-outs, or teachers failing to distribute the worksheets to their students.

Some anomalies exist in the data, and are marked with an asterisk – for example, book 2A Unit 1 B video only has 11 views, which was caused by a broken link embedded in the QR code on the worksheet given to three classes. Unit 3-A of book 3A only has 8 out of an expected 20+ views, due to one teacher not distributing the worksheet on my advice: the 8 views are from my class, who complained (rightly) that the worksheet was too hard.

Accounting for these anomalies, however, the number of students watching each video does not seem to vary wildly across the semester – for example, students studying from book 1B had view counts of 25, 35, 23, 17, and 23. Although fluctuating to 35 views (more than the 22 students in the classes) and down to

Table 1. Total views of flipped classroom videos, Term 1 2017 (first teaching term)

Textbook	Unit/section	Views	Textbook	Unit/section	Views
1A Students: ~80	U1 A	165*	1B Students: ~22	U7 A	25
	U1 B	49		U7 B	35
	U2 A	70		U8 A	23
	U2 B			U8 B	
	U3 A	68		U9 A	17
	U3 B			U9 B	
	U4 A	44*		U10 A	23
	U4 B			U10 B	
2A Students: ~50	U1 A	71*	2B Students: ~40	U6 A	61*
	U1 B	11*		U6 B	19
	U2 A	25		U8 A	14
	U2 B			U8 B	
	U3 A	26		U9 A	11
	U3 B			U9 B	
	U4 A	23		U10 A	16
	U4 B			U10 B	
3A Students: ~21	U1 A	Another YouTube video – no way to track			
	U1 B	22			
	U2 A	8*			
	U2 B				
	U3 A	20			
	U3 B				
	U5 A U5 B				

17 students at points, the view counts roughly match the expected student participants. Even for book 2A, which suffered a dramatic drop in views after the first video and never recovered to expected levels, the last three videos still remained consistently at the same level of 25, 26, and 23. From this it can be inferred that, although there were many students or teachers who chose not to utilize the worksheets, about half of the students who were expected to still did consistently interact with them.

In total, disregarding the anomalies, there were an expected 702 total views, of which the videos received 486 actual hits. This is an average of 69.2% of the expected interaction rate.

Some excerpts of feedback from the students, recorded by myself while checking the homework, include complaints about the design of the worksheets, for example “I didn’t understand what to do in the second section” (1A U1 A), and “It took me two hours to finish it last night” (3A U2 A). Other comments provided feedback about the student’s attitude towards the appropriateness of the worksheets, such as “The video was interesting” (2A U1 A), and “It’s too difficult” (2A U1 B). Some students gave feedback regarding the content of the videos themselves, such as “I want to try cooking the meal” (1B U6 A), and “I enjoyed this

topic” (2B U8 A).

5. Findings

In general, the first video for each book has a high number of views, with following videos showing a precipitous drop. However, this is not necessarily due to student disinterest. In fact, at least one video was used in teacher training exercises, and others have also been given to faculty staff as examples of the flipped class approach, which has inflated the numbers somewhat. One teacher also stopped distributing the worksheets, as the lessons reportedly did not match their teaching goals. Another teacher, however, expressed frustration that the students were not doing any of them in his class, and so he stopped distributing them.

Another reason for some anomalies, especially in later videos – for example, book 1A Unit 4-A – could be that, by the latter part of the semester, the teachers were struggling with the admittedly heavy workload and tight schedule, and simply forgot or neglected to give out the optional worksheets.

Another glaring issue is the lack of actual videos. I had initially planned for at least two videos for every unit of every book, constituting 40 lessons over the semester. This seemed a reasonable and attainable number of videos to create within the time constraints; however, it soon became apparent that decision suffered from optimism bias. Although initially allowing for about an hour of work for each video, some lessons took more than two or three to create, and others – in which I collaborated with co-teachers – took even longer, due to scheduling issues, technology-related delays, and other projects and deadlines getting in the way.

The making of the videos has become somewhat streamlined, although the biggest issue which has surfaced is deciding on content. The textbooks are very content-heavy, and all of the teachers involved have expressed a need to omit parts of the textbook to keep up with the schedule. In this way, what is put into the flipped lessons becomes an even more crucial question. If part of the textbook’s content is covered in a video that is omitted from subsequent lessons, then it may not be an effective use of the students’ out of class time to watch it. On the other hand, if it is only omitted by one teacher, and included in the others’ lessons, that makes it difficult to argue for the implementation by all teachers as a rule.

One compromise was occasionally changing the focus of the videos to a different topic, while still using the grammar or vocabulary in the textbook. For example, flipped class 1B U6 A – the first module for the first unit in the 1B level textbook – features a recipe, whereas the topic of the unit is space exploration. The common point between the two is the textbook’s coverage of the use of sequencers such as “first” or “after that”. These lend themselves very naturally to a recipe, and in this way, it was able to show students other uses of the language they acquired in the textbook.

My first research question was: could a flipped classroom approach be manageably and meaningfully applied to a shared curriculum environment? The sheer number of missed videos in the first semester – where I did not have time to finish them according to the schedule I set myself – shows that I was overly optimistic in my assumptions about how easy the lessons would be to make. In fact, before I started the project, I was warned off of doing double the amount I finally decided on – four videos for each unit rather than two – by my colleagues, because of the workload. Ultimately, I managed to make and upload 24 of the

planned 40 worksheet-assisted flipped class modules for students, and they were generally meaning-focused in their design. Additionally, although most teachers distributed the worksheets, and most students did the work on time, the worksheets were not able to become a “one size fits all” aid that anyone could find benefit in.

This ties into the second research question – as to whether the stakeholders would see the lessons as beneficial and utilize them. The videos definitely have found an audience with some students (and teachers) – although there was only a 69.2% interaction rate overall, the number of students accessing the videos – taking other fluctuations into account – did not drop significantly over the semester for any of the textbook groups. If the lessons have been consistently used by a substantial proportion of the students, it is enough justification to continue this research project for the time being.

Although this research was limited in scope and couldn't measure the effect of using a flipped classroom approach on language proficiency, the data show that making videos supported by structured activities can be an effective way to capture a student's interest, which can lead to more learning outside the classroom. Although it is difficult to cater to the needs of every student and teacher in a program, overall the videos continue to be utilized by a not-insignificant portion of students.

6. Future Plans

Although an integrated curriculum can be made to work with certain compromises, it is not ideal for a flipped class approach. There were also some issues with individual lessons which needed to be rectified. Further, a sixth textbook – level 3B – has been introduced to the top classes, and needs flipped classes to supplement it as well.

Finishing the now 48 videos by the end of this semester in order to reuse them for next years' classes is now a main focus. Some of the videos need to be adjusted; some of them already have been since this research started. I will conduct a practical teacher training workshop on the production of these lessons for my colleagues at the start of the next year, and encourage them to supplement their own lessons as well. Perhaps in doing so, I can consult the teachers who did not implement the classes, finding a way to adjust the lessons so that they also match their expectations, and in doing so, encourage them to either begin using the lessons, or to make their own.

The chief resource in this endeavor has always been time. Although the benefits of using the flipped classroom approach are clear, and many students regularly interact with them, thus increasing their out of class study, the workload of the teacher is definitely substantially increased. Each video, even after streamlining the process, takes at least one hour, and sometimes up to three hours, to produce. One recommendation for other teachers, therefore, is to start small: make flipped classes for one subject at first, and try to keep a regular schedule. Then, as that resource is developed, it can be reused in the future, allowing you more time to repeat the process with other classes. As long as the textbook or syllabus for the classes remains the same, little needs to change within the lessons themselves. If it is likely to change, not numbering the lessons may be effective, as many textbooks or syllabi cover the same or similar topics, though not necessarily in the same order.

Another important consideration is the reliance upon video and worksheets. Andreou, Andreou, and

Vlachos (2008), in a very comprehensive study of learner styles which builds on the work of Kolb (1976, 1984), concluded that teachers should incorporate a wide variety of tools and styles in the classroom in order to accommodate the often very disparate preferred learning styles of their students. They concluded that teachers should “use handouts, videos, encourage note-taking and reading, write key information on the board, use class or group discussions, lectures, tapes, peer tutoring, give oral explanations and instructions, and encourage active participation” (2008, p. 671). If this variety of tools and styles is important for the classroom to accommodate students’ learning styles, then why should homework not also have the same variety? The assumption of having to use videos is, according to Talbert (2017), discouraging teachers from trying flipped lessons. He suggests mixing up the videos with text, video, group discussions, games, or simulations, all paired with a structured activity. Personally, I have trialed using a comic as reading material for one module, and student-led self-study with a scaffolded worksheet for another. These modules seemed effective, although further experimentation in the future is needed. Doing so will surely also cut down preparation time.

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Appendix A

Details of flipped classes by book level. Lessons marked with a strikethrough or left blank were not made in time for classwork in Semester 1, 2017.

Book 1A topics		
Title	Details	Style
U1 A – Sorry, What?	Survival Classroom English	Expressions
U1 B – Present tense vs present progressive tense	Describing differences in using these tenses; also 3 rd person present tense	Grammar
U2 A – fun and funny	Difference between fun and funny, Keeping the conversation going p. 28-29	Expressions
U2 B – Relaxing and Free Time	Short interviews with many teachers	Listening
U3 A – ed and s pronunciation	Explaining and using verbs from p. 46 – 3 rd person “s” and past tense “ed”	Pronunciation
U3 B – looks, looks like	Explaining and giving examples of how to use, then show pictures and elicit speaking and writing	Grammar
U4 A – words from context – weather	Inferring and deducing vocab meanings from sentences, guessing other key vocab	Vocabulary, deducing and inferring
U4 B –		

Book 1B topics		
Title	Details	Style
U7 A – Space words	Simple vocab work about space	Vocabulary
U7 B – Time adverbs with cooking	Using time adverbs and a video to complete a recipe	Vocabulary
U8 A – modals of possibility	Might, may, can’t be, must not be practice using picture or video prompts –What’s that art?	Grammar
U8 B – Museum Rules	Must, have to, don’t have to, need to, must not – modals of necessity	Grammar
U9 A – comparatives and superlatives	Explain when to use –er and –est vs. more and most	Grammar
U9 B –		
U10 A – Grammar and genre	Use of present perfect/past/future tense in news Use p. 194 article to check, write examples	Grammar / genre
U10 B –		

Book 2A topics		
Title	Details	Style
U1 A – Staying Healthy	Interview with another teacher about exercise	Listening
U1 B – Tag Questions	How to ask and answer tag questions	Grammar
U2 A – Energy words	Energy and fuel related vocabulary with cloze	Vocabulary
U2 B – Graph reading	Vocab for reading graphs (p. 24)	Vocabulary
U3 A – guessing from context – cultural words	Inferring and deducing key vocabulary	Vocabulary, deducing and inferring
U3 B – Cowboy words	Matching vocab p. 46 to a picture, p. 50 verbs (past tense and past progressive practice)	Vocabulary
U4 A – Brainstorming water words	Vocabulary list brainstorming related words to the topic	Vocabulary
U4 B –		

Book 2B topics		
Title	Details	Style
U6 A – Let's Go Shopping	Supermarket food categories and vocab	Vocabulary
U6 B – Healthy Advice	Interview using zero and first conditionals	Grammar
U8 A – Archeology words	Teaching target vocab and use them in a cloze? Or matching similar words	Vocabulary
U8 B – Phrasal verbs	Get, look, write, show	Vocabulary
U9 A – Scientific animal words	Guess the meaning of the word from the sample sentence, then check the video	Inferring and deducing; vocabulary
U9 B –		
U10 A – What happened? What will happen next?	Show pics or movies – speculate about the next moment	Grammar
U10 B –		

Book 3A topics		
Title	Details	Style
U1 A – Boss vs Bossy ad	Positive and negative nuance of words using ad	Vocabulary
U1 B – Gendered Titles and Words	Gendered and non-gendered words used to refer to people	Vocabulary
U2 A – Word trees	Suffixes p. 28 words, and nouns and verbs that are the same	Vocabulary
U2 B – stress and meaning	p. 36 stressing content words and new info → stressing words to imply different meanings	Non-verbal
U3 A – Immigration at the airport	Visa words, listening for visa status etc.	Vocabulary and listening
U3 B – meaning from context – immigration words	Meaning of vocabulary from p. 54 in context is guessed from context	Vocabulary
U5 A –		
U5 B –		

Appendix B

Sample lesson worksheets

3A U3 A

Immigration at the airport

Name _____

Find these words in the document, circle them, and guess what they might mean:

- temporary
- abroad
- immigration
- permanent
- nationality
- resident
- employment

YOUR CONTACT DETAILS IN AUSTRALIA Phone () E-mail OR Address State		EMERGENCY CONTACT DETAILS (FAMILY OR FRIEND) Name E-mail, Phone OR Mail address	
PLEASE COMPLETE IN ENGLISH ▶ In which country did you board this flight or ship? ◆ What is your usual occupation? ▶ Nationality as shown on passport ▶ Date of birth Day Month Year		PLEASE X AND ANSWER A OR B OR C <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 5px; border-radius: 10px;"> A Migrating permanently to Australia </div> <div style="border: 1px solid black; padding: 5px; border-radius: 10px;"> B Visitor or temporary entrant ▶ Your intended length of stay in Australia Years Months Days OR ▶ Your country of residence ▶ Your main reason for coming to Australia (X one only) Convention/conference 1 Employment 4 Holiday 7 Business 2 Education 5 Other 8 Visiting friends or relatives 3 Exhibition 6 </div> <div style="border: 1px solid black; padding: 5px; border-radius: 10px;"> C Resident returning to Australia ▶ Country where you spent most time abroad </div> </div>	
<small>Information sought on this form is required to administer immigration, customs, quarantine, statistical, health, wildlife and currency laws of Australia and its collection is authorised by legislation. It will be disclosed only to agencies administering these areas and those entitled to receive it under Australian law. The leaflet, Safeguarding your personal information is available at Australian ports and airports.</small>		03051504 © Commonwealth of Australia 2005 15 (Design date 03/05)	

Research the words and write the meaning here if it was different to what you thought. Were there other new words you learned? Write them as well.

Word	Meaning	Word	Meaning

<https://youtu.be/gZ7mIXs33yY>



2A U2 A

Energy Words

Name _____

Part 1 – Watch the video and write in the words.

- Fossil fuel comes from dead trees and animals many millions of years ago.
- O_____ is a liquid fossil fuel we burn for energy.
- C_____ is also fossil fuel. It's a black rock that we can burn for energy.
- C_____ d_____ is the gas which is released when burning fossil fuels.
- R_____ energy means energy from things that won't run out. It is the opposite of fossil fuel.
- S_____ power comes from the sun.
- H_____ power comes from water, usually in dams or the ocean.
- W_____ power is made using fans that are moved by the air around them.
- C_____ means to use energy.
- C_____ means to save energy.
- A_____ is the air around us.

Part 2 – Use the words in context.

Although Australia is a very large exporter of c_____ and other f_____ f_____ to the rest of the world, they are recently investing more in s_____ panels and home batteries. The major problems with s_____ power in the past have been the high costs of producing the panels, and also the issue of when we c_____ power in our daily lives. With new technology making batteries and materials for panels cheaper, however, s_____ systems are now affordable for many Australians, and can help us to reduce the amount of c_____ d_____ we are releasing into the a_____. Electric cars are also helping to reduce how much q_____ we c_____.

Part 3 – To share in class:

What are some other kinds of energy production? Are they renewable, fossil fuel, or other?
