

Flipping a Japanese language classroom: seeing its impact from a student survey and YouTube analytics

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The 'flipped classroom' is gaining popularity in university teaching. However sceptics question if students actually come to classes prepared by viewing the given video. In this study, 163 university students enrolled in an intermediate level Japanese subject that was taught in a flipped mode were surveyed on their experiences of viewing the pre-learning video. The access records to the video were also analysed to determine how students behaved online. The survey showed only 50% of students had viewed the video regularly, but had done so thoroughly. On the other hand, 17% answered that they did not even attempt to access the video. This paper will present reasons the students gave for watching or not watching the video as a part of their learning and argue for an improved methodology.

Keywords: flipped learning, video, Japanese language, survey, analytics, motivation

Introduction

The flipped classroom design, a form of blended learning (Garrison & Vaughan, 2008), asks students to learn what they traditionally learn in a classroom before the classes and engage in activities that are traditionally given as homework in classes (Bergmann & Sams, 2012). Before the classes, students are to view materials that are usually distributed using technology, often in the form of video clips. The method became popular recently in various educational settings, including universities. A brief survey of recent publications on flipped classroom shows that the method has been used to teach a diverse range of subject matters: marketing (Jarvis, Halvorson, Sadeque, & Johnston, 2014), history (Gaughan, 2014), statistics (Wilson, 2013), and foreign languages (Simon & Fell, 2013), to list a few. Utilising the pre-presented knowledge, class time is commonly used in student-centred activities, such as peer-teaching and problem-based learning. These activities have the potential to engage students' deep learning, i.e., to truly understand the meaning of what is being taught (Ramsden, 2003). It can potentially transform classroom teaching to become more individualised by giving students more choices in spending time on areas where they need the most practice (Bergmann & Sams, 2014), and allowing teachers to work as a facilitator, correcting students' misconceptions as they engage in exercises and guiding students in applying the newly acquired knowledge (Hamdan, McKnight, McKnight, & Arfstrom, 2013; Jarvis et al., 2014).

However, what this rhetoric appears to ignore, at least at the initial stage of implementing the flipped classroom, is students' readiness to accept such model of education. Resistance from students can be felt when implementing the flipped mode of teaching, as they are forced to take control of their own learning and may perceive this as increased workload on their part (Simon & Fell, 2013). Most presentations to date only appear to present how the flipped classroom model has been implemented in different subjects (Wilson, 2013), and/or report on whether students viewed the video clips as intended for flipped methods (Gaughan, 2014). In this concise paper, a limited analysis of data from the video server will be used in conjunction with students' survey data to shed light on students' perceptions on the flipped classroom after trialling the method for a semester in an intermediate level Japanese language subject at the University of Melbourne.

Current study

In Semester 1, 2014, an attempt to flip a lower intermediate-level Japanese language subject was made. Of the four contact hours each week, about one hour's worth of a class (dedicated to conducting grammar instruction) was flipped. In the traditional mode of language teaching, two to three new grammar structures are introduced each week in class, followed by drill and conversation exercises using the new grammar structures. This is followed by reading and writing practices which also incorporate the use of new grammar structures to let students construct and consolidate their learning of the target language. Of these three new grammar structures to be taught each week, one grammar structure (the key to all language practice during the week) was selected to be presented with a video clip.

For each week of the 12-week semester, a short video clip of three to six minutes, explaining the key grammar structure, was created using Microsoft PowerPoint with a voice-over in Japanese. It was then uploaded to YouTube and made available to students via the embedded video player on the subject's LMS, along with other

teaching materials. A series of short online quizzes to assess students' learning from viewing were made to accompany each video clip. However, time constraints meant not all video clips were followed up with the quizzes. Each video clip consisted of three sections: 1) explanation of a new grammar structure; 2) example sentences to illustrate various uses; and 3) references for further information and encouragement to attempt the online quizzes. The explanation was structured to expand students' existing knowledge by contrasting the new grammar structure with similar structures that they already know.

Recognising the need to accustom students to the practise of flipped classes, the flipped method of teaching was explained and the link to the video clip was shown in class during the first week. The video clip was then viewed together to familiarise students with the content and the style of presentation, and the accompanying quizzes. Students were told to view the video clip before the following week's classes.

After several weeks of teaching, the teaching team started to become aware of more than normal level of differences in mastery of content among students. It became obvious that some students were not mastering the points being delivered by the pre-learning video. A survey was conducted towards the end of the semester to see how students reacted to the flipped classroom method to answer the two research questions: 1) did students watch video clip in preparation for classes; and 2) how did students engage with the video clip. At the end of the semester, the analytics available to YouTube account holders were accessed to compare with the survey data.

Analysis: student survey

The anonymous survey was conducted in May, 2014. A total of 163 valid responses were collected from 202 students enrolled in the subject. Although other questions were asked in the survey, only the section related to accessing video clips for the flipped classroom will be analysed here.

Accessing LMS and video

In order to determine whether students have a means to access video clips, their usual methods of accessing the university's LMS was asked. The question asked the location and devices used to access the LMS, allowing multiple answers. A total of 255 responses were recorded for accessing the LMS from their homes and 248 for on campus access, while 167 responses were recorded for accessing the LMS while they are on the public transport system. Cross-searching the survey data found that there was no student who responded that they did not access the LMS from all three locations, meaning everyone accessed the LMS by one way or the other. It can be argued that the flipped classroom method can be sufficiently accommodated by the cohort of students being surveyed.

However, when students were asked whether they watched the video required for the flipped classroom, the responses were mixed. Only a small percentage of students made an effort to prepare for flipped teaching every week, while the majority appeared to watch the video only when they felt it necessary. Table 1 shows the number of students who accessed the video in a chronological order of events.

Table 1: Number of students who accessed the video for flipped classrooms in relation to classes (multiple responses allowed)

	Total number of students	Before class	During classes	After classes
Yes, every week	19 (11.7%)	14 (73.7%)	3 (15.8%)	2 (10.5%)
Yes, but not every week	61 (37.7%)	41 (59.4%)	11 (15.9%)	17 (14.6%)
Yes, but less than 3 (25%) of them	54 (33.3%)	25 (43.9%)	11 (19.3%)	21 (36.8%)
Not at all	28 (17.3%)			
Total	162	80	25	40

Only 19 students watched the video clips every week. However, these regular viewers were more dedicated than other groups of students with a larger proportion of them (73.7%) watching the video before the target classes as intended for the flipped classroom. There were a larger number of students (37.7%) who watched the video clips often but not every week. Although smaller in proportion compared to regular viewers, 59.4% of these students also watched the video before classes to experience the flipped classroom appropriately. A similar number of students (33.3%) made an attempt to watch some of the videos, but did not continue to immerse themselves in the flipped environment throughout the semester. What appears interesting is that more students in this group

watched the video after the target classes (36.8%) compared to the other two groups. This may suggest that this group of students turned to the videos as needed when they experienced difficulties in class. Finally, there were 17.3% of students who responded that they did not watch the video.

Table 2 shows the range of reasons given for not watching the video clips. The majority of the reasons appear to have derived from students' negative attitude towards video instruction or preparing for classes, such as not having enough time and being lazy. Some also seemed to have arrived at their conclusion after viewing some videos. For example, four students responded they did not like the voice used on the video, and four others gave their difficulty understanding the content as their reason. These ideas must have been derived from viewing at least a part of the video. On the contrary, there was one student who responded that he already knows the grammar explained in the video. Finally, there are also 6 students who seem to prefer gaining information from written sources rather than audio-visual sources.

Table 2: Range of reasons given for not viewing videos

Textbook is good enough	6
No time to watch the video	5
Did not like the voice used in the video	4
Difficult to understand	4
Laziness	3
Forget to watch	3
Did not know about them	2
Do not want to watch the video	2
Because this is my breadth subject	1
I already know the contents explained in the video	1
I do not feel it necessary to watch the video	1

Analysis: YouTube analytics

Table 3 shows the length and contents of each week's video for 12 weeks, the total number of access up till 30 June, 2014, and the average length of time each video was watched.

Table 3: Video access data from YouTube analytics

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Length	3'04"	2'39"	3'20"	3'07"	4'36"	4'06"
Total access no.	150	87	67	62	84	76
Average viewing length	1'44"	1'44"	2'48"	2'19"	3'00"	2'52"

	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Length	3'24"	4'17"	5'39"	5'10"	6'35"	6'36"
Total access no.	55	70	84	70	57	48
Average viewing length	2'41"	3'11"	3'41"	3'16"	3'41"	4'28"

The total access was the largest for the video clip in Week 1, with 150 accesses recorded. The access number dropped to almost half the following week and appeared to fluctuate depending on the week. On the other hand, the average viewing time was the shortest in Week 1 in relation to the total length of the video, and increased each week. This is probably because students were curious about the new teaching method and attempted to access the video clip, but decided to leave without viewing the whole video for various reasons.

In terms of the length of viewing each video clip, it seems that most students were watching the initial explanation of the grammar when it was introduced in comparison with other patterns, but not the examples of the sentences shown towards the end of the video. Perhaps an improvement is needed to make the given section of the video more interesting and engaging to students.

Discussion and conclusion

The first experience of flipping a subject for an entire semester achieved some success and provided valuable data on how to improve the future incarnations of the subject. It was disappointing that less than 10 percent of students became regular viewers of the video as intended by the flipped methodology, i.e., viewing the video before the class to prepare for deep-learning tasks (Bergmann & Sams, 2014). However, it also became clear that some students who found the contents of the video clips useful become dedicated viewers who watched the entire video clip and, although not confirmed by the analysis in this paper, may have understood the contents at a higher level.

Why did some students find the video clips useful while others found them trivial? The YouTube analytics revealed two major issues: not every student accessed the video clips, and students' interest faded towards the end of the semester. The former can be explained by reasons such as "textbook is good enough" and "I already know the contents explained in the video". Because the selection of grammar patterns to be introduced in the video clips was made from the prescribed textbook, although more information on and examples of the introduced grammar patterns were included, it may have given some students the idea that they can manage the subject without watching the video clips. It is also conceivable that the proportion of activities associated with the flipped classroom method was not perceived as significant enough by the students to justify viewing the video clips every week. The latter may have been caused by the way the video clips were presented in Japanese, which gave some students an impression that the video clips were "difficult to understand".

The piloting of the flipped classroom also highlighted the issue of students' workload. The comment "because this is my breadth subject" (i.e., not my major area of study) suggests that some students were overwhelmed by the amount of information presented and the time required to work on the material. A balance between students' academic level of engagement and time commitment needs to be considered.

Three recommendations can be made. Firstly, in an ideal "blended learning" mode, the contents of video clips needs to be well integrated into the entire curriculum (Garrison & Vaughan, 2008). Classroom activities following the video clips should sufficiently leverage on the content presented in them to encourage pre-viewing. Secondly, the video clips themselves should be made more accessible to students so that they do not feel intimidated by them. The video clips used in the future semesters are currently being revised. Finally, a careful explanation of the purpose and educational benefits of the flipped classroom method and expectation on students should be made repeatedly and clearly to students (Jarvis et al., 2014). Although the piloting of the flipped classroom was partially successful in terms of freeing some time for tasks to encourage students to engage with the subject matter at a deeper level than otherwise possible, modifications to further improve the curriculum will continue to be made.

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