KANSAI GAIDAI UNIVERSITY

ELE Learners' Vocabulary Comprehension Using Edpuzzle in the Flipped Classroom Model in a Japanese University

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Abstract

　　Learning vocabulary is important in acquiring a second language (L2) or a foreign language (FL). Many scholars have focused on different methods of teaching and learning vocabulary. Recently the flipped classroom methods have shown positive results. Therefore, this study aims to investigate the effectiveness of vocabulary learning using Edpuzzle in a flipped classroom environment for Japanese ELE learners, to highlight factors that influence students' participation. A quantitative-experimental methodology approach was used in this study. Forty students of second-year ELE learners in a Japanese university were selected. The study aimed to answer if flipped classroom learning using Edpuzzle influences vocabulary learning for Japanese ELE students, the categories that influence vocabulary learning in a flipped classroom environment and the way teacher's participation can influence them. The results show the effectiveness of the relationship between teacher-cohesive participation, the students-teacher cohesive participation and the characteristics of the original material as important factors that influence the engagement and positive outcome of the flipped classroom for learning vocabulary in teaching and learning for Japanese ELE students.

Keywords: Edpuzzle, flipped classroom, group cohesion, foreign languages, Spanish vocabulary

1. Introduction

　　Scholars have highlighted the significance of pre-teaching vocabulary for second language (L2) acquisition. "The method of pre-teaching vocabulary could assist students in learning more words on their own, improving their language output through active learning" (Ebadi et al., 2022, p. 2). The number of vocabulary words learned helps students improve their fluency and is also required for proficiency in any foreign language (FL) (Moghadam et al., 2012, p.558). However, it is important to mention that learning vocabulary in L2 and any other FL has some differences that must be considered before each lesson activity.

L2 generally is the language that is learned or acquired after L1; however, the term has a restricted picture when it is contrasted to the term of foreign language, in which L2 acts as an identified medium of communication among people who speak some other languages as their mother tongue, and the foreign language plays no significant role in the community and is mostly learnt only in the classroom. (Ellis, 1994, cited in Moghadam et al., p.556, 2012).

For Japanese students, Spanish is learned as an FL. However, English is taught from elementary school; therefore, students have pre-knowledge of English before studying it as an L2 or FL. This is different from when they learn Spanish as an FL, mostly through first-time study and practice in the classroom. Consequently, a Japanese Español como lengua extranjera (Spanish as a foreign language, ELE) learner's breadth and depth of Spanish vocabulary knowledge begins in FL university classes. In university classes, the time between teaching the general content of the syllabus and vocabulary activities is limited. These tasks are crucial for supporting students in the process of learning an FL, especially learning vocabulary. Therefore, we propose learning vocabulary through self-study using Edpuzzle in a flipped classroom model for Japanese ELE learners.

"The flipped classroom approach is a common form of active and integrated learning that involves supplying and assisting learners with learning materials before class time" (Ebadi et al. p.2). Kırmızı & Kömeç (2019) proved the validity of the flipped classroom on vocabulary learning through experiments and questionnaires. They administered a vocabulary quiz to the experimental group with four-week flipped instruction and the control group was provided with traditional instruction. The results indicated that flipped instruction effectively and significantly promoted English learners' vocabulary development. Furthermore, the results of the questionnaire showed that students who received flipped vocabulary instruction generally had positive attitudes towards the learning environment and activities involved in a flipped classroom. The students enjoyed learning from videos, which were quick and easy. These results support the findings of our study.

In this study, we investigated whether flipped classrooms using Edpuzzle could improve vocabulary comprehension for ELE learners in Japan. Vocabulary comprehension is the first problem students face when they begin to learn an L2, particularly when they must engage in reading and listening comprehension. "Students' spelling knowledge is, therefore, a powerful foundation for their reading and vocabulary development" (Pikulski & Templeton, 2004, p.7). Furthermore, when students start speaking a new language, the output can reflect their vocabulary knowledge and fluency. Pre-teaching vocabulary is an important task to

consider before developing class activities.

In Lagones and Yanagida (2020), we measured the frequency of using Edpuzzle via smartphones to study vocabulary words, as well as the categories that emerged from ELE learners' experiences of using Edpuzzle in a Japanese university. We found that students' use of Edpuzzle was positive according to the frequency of use. Some of the variables included native pronunciation, course teacher participation, usage of two languages, and motivation. Furthermore, we recommended that videos be short, available on smartphones, and recorded by native speakers. Therefore, this study aimed at two objectives: first, to investigate the effectiveness of vocabulary learning using Edpuzzle in a flipped classroom model for ELE learners in Japan. Second, to highlight factors that influence students' participation in the flipped classroom model.

The research questions addressed in this study are as follows: (RQ1) Do flipped classrooms using Edpuzzle influence vocabulary learning for Japanese ELE students? (RQ2) Which categories influence vocabulary learning in a flipped classroom model for Japanese ELE students? (RQ3) How does teacher participation influence a flipped classroom model using Edpuzzle for vocabulary learning among ELE Japanese students?

2. Research Design

The quantitative experimental methodology is shown in table 1. This is a "simple true experimental design called a post-only control group design" (Salkind, 2012, p. 136). The instruments used to collect the data were Blackboard, Edpuzzle, Zoom, Google Forms, and a structured vocabulary test.

Table 1
Research design

Control group design with only one post test	MI (Intentional sample)	Independent Variable	Dependent Variable
Treatment group (experimental)	MI B (ELE students)	(X) Treatment: Edpuzzle Videos	(0) Post test: Edpuzzle-KGU vocabulary test
Control group	MI A (ELE students)	C No treatment	(0) Post test: Edpuzzle-KGU vocabulary test

Note. During the experiment, four videos were recorded; however, the last video was sent only to the experiment group during the final step.

2.1 Participants

Second-year Spanish students at Kansai Gaidai University (KGU) in Osaka Prefecture participated in the experiment. Students belonged to the Faculty of Foreign Language, School of Spanish and Communication. From 12 classes of ELE learners at KGU in Osaka, Japan, forty students from second year ELE were selected and split into two groups A (N=20) and B (N=20). The participants' ages ranged from to 19-20 years old. Group B, the experimental group, attended grammar and communication classes with the teachers who participated in this study. Group A, the control group, attended communication classes with the teacher in the present study, and grammar classes with another teacher who did not participate. According to the university evaluation during their first year of study, Group B's Spanish proficiency level was lower than that of Group A.

2.2 Video material

To create video material, students first selected new vocabulary words and looked for their meanings in dictionaries. Then, they created a picture dictionary for each word and wrote the spelling in the picture dictionary format as shown in Figure 1. The format was created by the teacher and sent to the students using the university's Blackboard platform as shown in Figure 1. Next, the students submitted their tasks by placing new words and spellings into their picture dictionary. The tasks were corrected by the native Spanish and Japanese teachers (authors). The teachers selected one task for creating a video. Finally, the videos were sent to the students in Edpuzzle and they were asked to watch the videos on their smartphones.

Figure 1
Student picture dictionary format
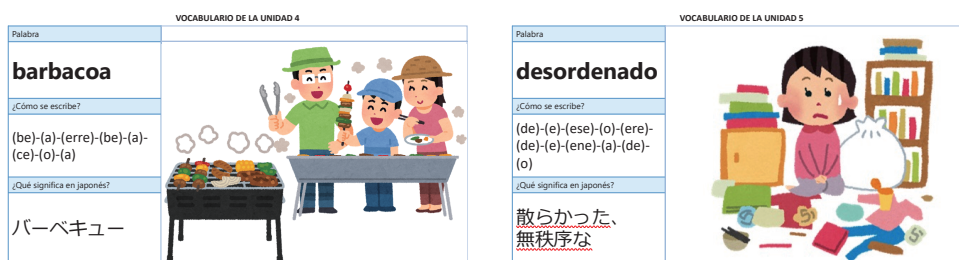
Note. Edpuzzle videos contained writing, spelling, images, and sounds in Spanish and Japanese, in the teacher's voices. Some videos contained specific explanations in Japanese for some vocabulary words.

2.3 Target words

Students selected novel words from each unit in their textbook. The native Spanish teacher corrected the spelling and meaning of each word and native Japanese teacher corrected the Japanese translation before creating the videos. Finally, students were asked to watch videos from the picture dictionary. Students had to repeat each word after listening to the pronunciation in Edpuzzle via their smartphones. Each vocabulary word was recorded in Spanish and Japanese by native Spanish and Japanese teacher.

2.4 Instruments

First, to conduct the experiment, we used the textbook used in the conversation class. We selected four units from the text (Units 1, 2, 4, and 5): Secondly, we created an activity using the Blackboard platform to send our picture dictionary formats to input vocabulary words selected by the students. Third, we input a video for each unit using Edpuzzle. Each student watched a video for each unit in the textbook. Using Google Docs, we conducted a vocabulary test in the classroom. The students took the test using their smartphones in class under the guidance of their teacher, and the time spent on each exercise was also managed by the teacher.

2.5 Procedures

The study was conducted in four stages. Spanish grammar and conversation classes are compulsory subjects for students to obtain credits, in the School of Spanish Language and Communication, for graduation. Furthermore, KGU is one of the universities which has more Japanese ELE learners in comparison to other universities in Japan. There were approximately 12 second-year Spanish ELE classes. Students were grouped according to the evaluations obtained in the previous semester. Consequently, we selected Groups A and B. Group A scored higher than Group B during the previous semester. Therefore, we examined whether using Edpuzzle in a flipped classroom improved Group B's vocabulary learning.

Stage-1: Video-1 (7:30)

The native Spanish teacher oversaw this stage. The video was recorded in Spanish. First, both groups were informed that the task was for only one subject (conversation). This meant that their task scores were considered only for one course. We wanted to observe how the frequency of watching the video task would be considered for only one subject in the target language. This was the longest video with seven minutes recorded.

Stage-2: Video-2 (3:52)

During this stage, both teachers informed the students in Group B (the low-scoring group) that this task was important for communication and grammar. The grammar subject was not considered in the evaluation task. A reminder from the grammar teacher doubled the significance of the video task for the students. At this stage, we wanted to observe how this input changed the participation of the students in Group B in the second video task. By contrast, for Group A (the high-scoring group), the task was considered by only one teacher. It was assumed that Group A, which has a higher Spanish proficiency level, will participate more. The novelty of this stage was that the videos were recorded in Spanish and Japanese. The goal was to determine whether novelty increased participation in both groups. The duration of the video was 3 minutes 52 seconds.

Stage-3: Video-4 (4:48)

At this stage, the input was the same as in Stage-2 without any novelty. The duration of the video was 4 minutes 48 seconds. Both groups watched the videos.

Stage-4: Video-5 (5:55)

Figure 2
Video screen

Note. Each figure was recorded using the voices of the native Japanese and Spanish teachers in both languages.

During this stage, only the experimental group received a video via Edpuzzle as shown in Figure 2. The control group did not receive the video. We wanted to evaluate the differences in test scores between Groups A and B. Group B studied vocabulary using Edpuzzle, and Group A studied vocabulary using the traditional method by themselves.

Among the two groups, only Group B watched the video.

2.6 Test

The test model was developed in Spanish and Japanese using four types of questions (Figure 3). The questions included 10 Japanese words that had to be translated into Spanish along with 10 choice questions, 15 picture dictionary questions, and 15 Spanish words that students had to write after the teacher read them. The exam was elaborated using Unit 5 of the textbook. Only experimental group received the final Edpuzzle video (the independent variable) for this unit.

Figure 3

> Edpuzzle videos contain writing, spelling, images and sounds in both languages. Therefore, we created the quetions related to the content ofthe video.

SAMPLE VOCABULARY TEST (Edpuzzle-KGU)

Results and Data Analysis

Stage-1:

Six students participated in the experimental group (Group B) and eleven students participated in the control group (Group A). This result was expected, because the control group obtained a higher evaluation than the experimental group during the previous semester. The university conducts this evaluation every semester to classify students into their respective groups for the following semester (See Figure 4).

Stage-2

Participation in this stage was 100% in both groups. One reason for this could be that

the videos for this stage were recorded in Spanish and Japanese. Group B received support from conversation and grammar teachers. The students were informed that both subjects would be considered in this task. Group A did not receive support from a second teacher. Even though they participated 100%, one reason could be that in this group, students had a higher score than Group B in the previous semester's evaluation (See Figure 4).

Stage-3

Group B outperformed Group A in terms of video views. This is possible due to the "cohesion-teachers" variable. This means that both teachers' worked in coordination, constantly motivating Group B students to participate (See Figure 4).

Stage-4

At this stage, we conducted the final experiment using a vocabulary test. We first sent Video 5 only to the experimental group (B) and did not send any video material to the control group (A). Of these 20 students, 18 participated in the study. The results of the vocabulary test applied to both groups showed that the experimental group (B) obtained a higher score than the control group (A) (See Figure 4).

Figure 4
A visualization of the videos during the experiment
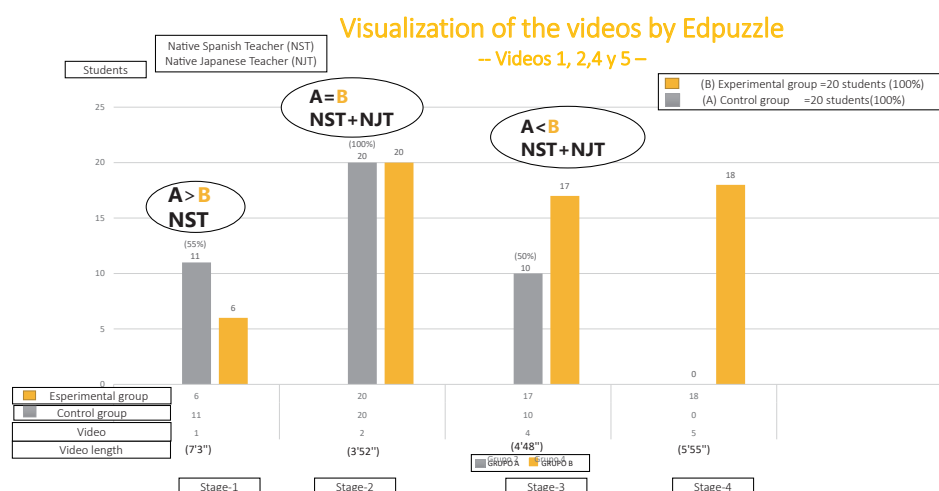
3. Discussion

This study investigated whether a flipped classroom using Edpuzzle would influence vocabulary learning and influence the frequency of students' participation in self-study

homework assignments for ELE learners in Japan. The results indicated that students and teachers worked more cohesively (see Table 2) using Edpuzzle in a flipped classroom model created by teachers; consequently, this influenced their participation in studying vocabulary. Therefore, delivering tasks through flipped classrooms influences student participation in self-study more than traditional methods.

Table 2

The steps of activities during the experiment

	Activity	Participants
1	Sending the format created by the teacher to Blackboard.	Teacher
2	Selection of words from the textbook.	Student
3	Preparation of the slides in the format created by the teachers.	Student
4	Sending the slides through the KGU Blackboard platform.	Student
5	Review of the slides in both languages modifying or correcting spelling or other mistakes.	Teacher
6	Selection of the picture dictionary for recording the video via Zoom.	Teacher
7	Recording of the video via Zoom.	Teacher
8	Sending the recorded video by the Edpuzzle platform.	Teacher
9	Watch and listen to the videos via Edpuzzle on smartphones.	Student
10	Preparation for the bilingual vocabulary test using picture dictionaries.	Teacher
11	Exam preparation via Google Docs.	Teacher
12	Taking the test via Google Docs.	Student
13	Evaluation of the lexical exam using the Google form format	Teacher

Note. Students and teachers work more cohesively

The findings showed that the experimental group (B) obtained better scores than the control group (A) after studying with Edpuzzle using their mobile devices in the flipped classroom, although the experimental group scored lower than the control group. One reason could be that the flipped classroom model with Edpuzzle videos created by the teacher and the capability to use it anywhere from their smartphones enables students to learn vocabulary comprehension more easily than the traditional method of only memorizing words.

The length of the videos was short, between three and seven minutes. Furthermore, studying vocabulary by watching short videos in Edpuzzle motivates students to watch it many times; as a result, they can learn vocabulary by watching the images, listening to the native teachers' voices, writing, reading the spelling, and understanding the meaning of the words. Listening to the native pronunciation of their own teacher was more interesting for students than listening to CDs in common textbooks. This was highlighted in Lagones & Yanagida, (2022).

4. Conclusion

The results demonstrated that Japanese ELE learners benefited from the flipped classroom model because their participation increased continually. This study aimed to investigate the effectiveness of vocabulary learning using Edpuzzle in a flipped classroom environment for ELE learners. Most students who used Edpuzzle participated actively, even though they belonged to different level groups. This is presumed to be because of the novelty of using smartphones to learn vocabulary words. Second, when both teachers participated in the same class with the same activity, 100% of students in both groups participated. In the third video, most students from the low-proficiency group (B) continued with higher participation because both teachers continued to work with the same group. In contrast, group A continued working with only one teacher. This indicates that, even when they continue using Edpuzzle, the participation rate decreases. Finally, in the last video, which was sent only for the experiment group, most of the group participated. Consequently, their test scores were higher than those of the high-proficiency group (A).

The second aim was to highlight the factors influencing student participation in a flipped classroom model using Edpuzzle. One important category that emerged from the results was teacher cohesive participation among more than one teacher. This means that having more than one course had a strong influence on teacher participation. Furthermore, student-teacher cohesive participation as a group is another factor that positively influences the flipped classroom model and the process of learning vocabulary. Finally, the characteristics of the original materials created for this study encouraged participation. The materials were original videos created with words generated from the students using their textbooks; second, the native voices recorded by their teachers and the picture dictionaries created by students.

This study highlighted the importance of a learning environment that can motivate the cohesive participation of teachers and students using original materials with technology in the teaching-learning process. Using flipped classrooms as a pre-class activity would help students learn before a lesson and help teachers in their teaching activities.

References

Ebadi, S., Nozari, F. & Salman, A. R. (2022). Investigating the Effects of Flipped Vocabulary Learning via Online Dictionary on EFL learners' Listening Comprehension. Smart Learn. Environ. 9 (28), 2. Retrieved [10 January 2023] from https://doi.org/10.1186/s40561-022-00209-7

Pikulski, J. J., & Templeton, S. (2004). Teaching and Developing Vocabulary: Key to Long-Term Reading Success. Houghton Mifflin Reading. In Reading/Language Arts, 7.

Kırmızı, Ö., & Kömeç, F. (2019). The Impact of the Flipped Classroom on Receptive and Productive Vocabulary Learning. Journal of Language and Linguistic Studies, 15(2), 437-449.

Lagones, J., & Yanagida, R. (2022). Factors that Influence the Use of Edpuzzle for ELE Learners in Japan: A Methodological Proposal for Individual Learning. Journal of Inquiry and Research, No. 116, 17-31.

Moghadam, S. H., Zainal, Z., Ghaderpour, M. (2012). A Review of the Important Role of Vocabulary Knowledge in Reading Comprehension Performance. Procedia-Social and Behavioral Sciences 66, 555-563. https://doi.org/10.1016/j.sbspro.2012.11.300.

Salkind, N. J. (2012). 100 questions and Answers About Research Methods. Q&A SAGE 100 Question and Answers series. Volume 1, 136. SAGE, Thousand Oaks, California, 2012.

APPENDIX
SAMPLE OF SPANISH VOCABULARY TEST

Nombre:_____

NOTA: (　/50)

1. Traducción al japonés. (10 puntos)

意味を日本語で書きなさい。

1) biografía	2) huracán
3) enseguida	4) fama
5) árido	6) marchar
7) azafata	8) anoche
9) golfo	10) sierra

2. Elegir la traducción al español y encerrar en un círculo su respuesta. (10 puntos)

スペイン語訳として適切なものを選びなさい。

1) きゅうり　　zanahoria　pepino　campo　barato
2) 暗い　　rico　lujo　oscuro　bodega
3) ファイル　　archivo　negrita　palo　cascada
4) 用件　　azafata　nivel　piedad　asunto
5) シーフード　　sierra　marisco　masculino　flan
6) アイスクリーム　　helado　polvo　frito　aguacate
7) 広告　　maíz　chicle　biografía　anuncio
8) 砂漠　　lago　desierto　pico　narración
9) ボールド体　　multitud　barbacoa　negrita　brocheta
10) 飛行機　　entrecot　buzón　avión　plancha

3. Elegir las palabras que expresan las imágenes y encerrar en un círculo su respuesta. (15 puntos)

イラストや写真に合う語を選びなさい。

sacacorchos enseguida lenguado frito	árido cerdo lenguado polvo
pico catarata bodega postre	huevo campo solomillo aguacate
chicle espárrago volcán huracán	multitud marisco campo fama
pepino taza pico cabo	río bodega anoche plancha

salsa　árido　entrecot　carta

flan　cebolla　oscuro　maíz

buzón　lujo　anuncio　valle

cabo　rico　palo　bodega

pepino　energía　pimienta　cebolla

pimienta　cascada　anteayer　sierra

estudiar

↓

estudié

perdonar　pretérito indefinido　masculino　alcanzar

4. Escucha las palabras en español y escribe la traducción en japonés.

(15 puntos)

読み上げられる単語の意味を、日本語で書きなさい。

1)	2)	3)
4)	5)	6)
7)	8)	9)
10)	11)	12)
13)	14)	15)

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