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The Use of Flipped Learning in EFL Grammar Instruction

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Abstract: Although grammar has been central to L2 research and methodology over the years, the approaches to teaching grammar have long been a controversial topic in teaching English as a foreign language (EFL) even today when we are introduced with innovative methods especially with technology. Considered as an innovative and effective instructional approach, Flipped Learning (FL) might have the potential to transform the instructional design of the traditional teacher-led classes through the integration of technology and active learning strategies. To explore the role of flipped learning in the EFL context, the researchers investigated the impact of flipped learning on students' development of grammar proficiency and their attitudes towards the new instructional model. A total of 37 students (19 subjects in the experimental group, 18 subjects in control group), who learn English as a foreign language at a state university in East Europe, participated in this study. The study employed a quasi-experimental mixed-methods research design using a variety of data collection instruments including pre-and post-tests on grammar proficiency, a questionnaire (Flipped Grammar Class Attitude Questionnaire) and semi-structured interviews. The results showed that learners trained through FL considerably surpassed the non-flipped group in terms of their success in English grammar. Furthermore, FL was found to have notably enhanced the students' involvement, engagement, and performance. The results provide insights into the implementation of FL in the EFL context. Further studies might investigate the efficiency of multimedia materials, including animations or video lectures in the use of flipped instruction.

Keywords: flipped learning, blended learning, EFL learners, grammar competency, attitudes.

Highlights

What is already known about this topic:

- Flipped learning has been growing exponentially in higher education.
- Flipped learning has been utilized to enhance foreign language education.
- Flipped learning promotes more time dedicated to higher-order cognitive tasks.

What this paper contributes:

- Few studies were available in the literature with regard to the use of flipped learning in enhancing grammar instruction.
- Flipped learning could be a remedy for challenges that EFL teachers face during in-class instruction.

Implications for theory, practice and/or policy:

- Flipped learning should be used with rich multimedia resources.
- Flipped learning requires a higher time investment at the beginning.
- In-class activities should be based on higher cognitive tasks to benefit from flipped learning.
- Flipped learning does not necessarily mean creating video lectures.

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Introduction

Lecturing as a traditional instructional method still dominates most of contemporary higher education (Bergmann & Sams, 2012). However, it hardly meets the demands of the students and overwhelmingly deprives them of effective learning experiences (McLaughlin, 2014). Additionally, lectures based solely on teacher-led lessons in a classroom environment do not appeal to digital native students anymore (Prensky, 2001). In the traditional lecture-based classroom, there is a one-way basic knowledge transfer from teachers to students. Comprehensive practice and deeper learning is usually assigned beyond the classroom environment. That is why; educators are usually criticized as being ineffective when giving long lectures (Lasry et al., 2008). It is also emphasized that this type of instruction creates passive observers and minimizes the attention of the audience, as most of the class time is devoted to long ineffective lecturing hours (Bouwmeester et al., 2019). In the meantime, learners are expected to sit in silence and listen without interaction (Littlewood, 1999). Such traditional approaches end in failure in improving students' interests in learning (Buitrage & Diaz, 2018). In foreign language education, lecturing is basically used for the presentation of grammar structures and teaching writing skills. However, many students have difficulty in understanding particularly abstract concepts in grammar and their usage in daily life (Abdulmajeed & Hameed, 2017). Larsen-Freeman (2003) examined grammatical difficulty from different aspects such as linguistics, semantics and pragmatics. He found out that the use of grammar is harder than any other aspects for students. Additionally, it is difficult to teach students having lower motivation towards grammar (Graus & Coppen, 2015). Thus, it is important to use a suitable instructional method to address students' needs. For this reason, some scholars were in pursuit of an instructional model for a more motivating and engaging language learning environment (Cheh Hsieh et al., 2017). To this end, technology and web-based interactive tools have paved the way for a more learner-centered and practice-based one. That has also enabled a transformation of the instructional model in a way that curbs teacher talk time by providing a learning environment outside of the classroom.

The current study set out to fill the gap in the EFL context by the integration of innovative instructional design that extends teaching and learning outside the classroom and leads to flexible learning environment in which students are more likely to experience self-paced learning. In this respect, this study focused on the development of EFL students' grammar competency in a flipped classroom in order to increase students' motivation and attention during in-class activities and engage them with interactive pre-class video lectures. It was an effort to set more time for meaningful learning during the class by reversing the instruction with the help of technological affordances. It also analyzed the attitudes of students towards the flipped classroom in a mixed-method research design.

Literature Review

Flipped learning also named inverted learning (King, 1993) is defined as "events that have traditionally taken place inside the classroom now take place outside the classroom" (Lage et al., 2000, p.32). Instructional content is delivered through videos or slides outside of the classroom while activities and assignments based on practice are completed inside the classroom. It suggests an overall approach about how to integrate the instructional videos rather than creating and sending videos on their own (Tucker, 2012). Flipped learning is also considered a blended learning approach due to the need to exert effort to implement both in-class and out-class activities in a coordinated way (Bozkurt & Sharma, 2021). Blended learning promotes the same core values as flipped learning such as flexibility and accessibility with the integration of educational technology (Ashraf et al., 2021). It is believed that this type of instruction is capable of transforming traditional lecture-based classes (O'Flaherty & Phillips, 2015). Students can learn at their own pace with pause, rewind and replay options while watching videos provided by the teacher (Cheh Hsieh et al., 2017). Therefore, it creates a more dynamic, engaging, flexible, and interactive learning environment (G. Akçayır & Akçayır, 2018). However, there is a range of factors affecting the short and long-term outcomes in flipped learning (see Fig. 1). Internal influences including technology, teacher, environment etc., should also be taken into consideration during the flipped intervention to optimize the language learning process.

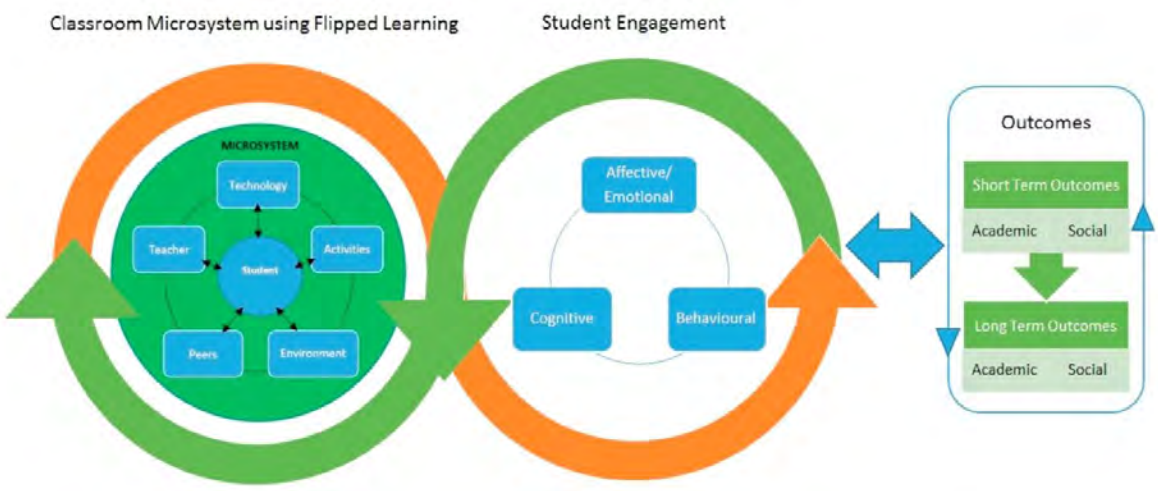

Figure 1. Learner engagement framework in flipped learning (Bond, 2020).

Flipped learning is believed to owe its efficiency to the extensive use of educational technology and active learning during class time (Strayer, 2007). However, it is worth mentioning that technology might not be an indispensable component for flipped learning (Mehring, 2018). It is possible to deliver content with printed materials as an alternate form of instructional support such as transcripts of videos or handouts for reading. Technology only acts as a facilitator to transform a teacher-centered learning environment to student-centered active learning and communicative learning environment. According to the Faculty Focus Special Report (2016), although there is not a definition that everybody across the world is unanimous, flipped learning is simply founded on "active learning and student-centered approaches" (p.2). Active learning can be explained better through the theory of Bloom's taxonomy of cognitive domain (see Fig. 2). Lower-level cognitive tasks such as remembering and understanding are carried out outside the classroom; on the other hand, higher-level cognitive tasks such as creating and applying are conducted during class time. In this way, students spare more time for tasks based on higher level of the taxonomy such as presentation, group discussion, projects, peer evaluation etc.

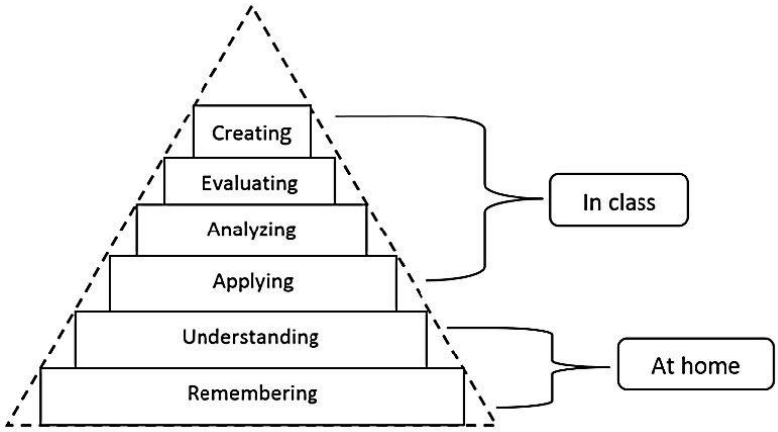

Figure 2. Bloom's Taxonomy in the flipped learning (Zainuddin & Halili, 2016, p.316).

Based upon the concept map put forward by McLaughlin et al. (2016), flipped learning is comprised of four basic elements. It starts with setting clear objectives for the course and making sure that activities and materials serve these objectives. Later, effective preparation for the class time must be done with the help of instructors. This is completed by providing materials to students and making them study on their own or with their peers. Particularly, technology integration in this phase facilitates the process outside the classroom, such as videos or podcasts (Herrald & Schiller, 2013). Thirdly, students are deeply engaged with the materials provided to them in advance. Scaffolding is of great importance during this phase, as suggested by Vygotsky's zone of proximal development (ZPD) theory (Wette, 2015). He claims that scaffolding fills the gap between learning individually and with the help of a teacher. Students may be exposed to input outside the classroom; however, it does not necessarily mean that they can learn individually without any support. The last one in the concept map is students' attainment of the stated objectives. If the above-mentioned phases are organized, designed and conducted well, there is no hindrance to reaching the defined objectives of a course. As a result, it can

be understood from the concept flipped learning involves pre- and in-class procedures with a focus on the type of activities and interaction.

A number of studies were conducted about the impact of flipped learning in different fields of education such as statistics (Strayer, 2007), TV arts (Enfield, 2013), and nursing (Ling, Hwang, and Hsu, 2019). However, there are not many research studies within EFL contexts despite a growing body of research on flipped learning. Of all the studies conducted in flipped learning, there are only 43 studies indexed within the Web of Science conducted in EFL and only 5 in the Turkish context (Turan & Cimen, 2019). Some of the pioneer studies were conducted at the University of Taiwan to analyze the efficiency of flipped learning over academic performance. They examined the effects of WebQuests (Hung, 2015) and the use of *Line* phone application for studying English idioms (Chen Hsieh et al., 2017) and also focused on pre-service ELT teachers' academic performance in a material design course (Adnan, 2017) and proficiency level of intermediate-level students (Hung, 2017). In Hung's (2015) study with 75 EFL learners, the instruction was delivered in the form of WebQuest in the experimental group, which resulted in a higher achievement compared with the control group. The reason for that difference was reported to be the videos and pre-class content in WebQuest to prepare students for in-class tasks. Chen Hsieh et al. (2017) asserted that "the key to the success of the flipped instruction is whether the students do the preparation work outside. If they do not, the teacher cannot engage them at an advanced level inside the class" (p.17). The results of the other studies are also in parallel to the findings of this study. In addition to the aforementioned studies, there have been some other studies conducted at tertiary level EFL context to enhance students' higher-order thinking skills (Alsowat, 2016), writing (Ekmekçi, 2017), preparedness of learners (Choe & Seong, 2016), motivation (Boyraz & Ocak, 2017), speaking skills (Çetin Köroğlu & Çakır, 2017) and peer interactions (Zainuddin & Perera, 2019). These studies have shown that flipped learning encourages students to be more active, engaged and outperform in and outside the classroom.

What inspired the current study is the research study conducted by Webb and Doman (2016) at two institutes for higher education in Macau and the US. The researchers analyzed the students' learning outcomes through flipped intervention. It also investigated learners' perception, levels of satisfaction and achievements with flipped learning. The findings demonstrated that the flipped approach to language learning helped students to increase their achievements in grammar skills. Besides, it was found to help learners feel more confident and relaxed in their learning process and promote engagement.

Despite some evidence stated by a few studies over flipped learning in English language education, there are very few studies focusing on the development of grammar competency in EFL context. Thus, the present study was conducted at a state university in East Europe to investigate whether flipped learning could have a positive effect on students' grammar competency and to explore whether they had positive attitudes towards a flipped grammar class by employing a mixed-method research design. Therefore, this study seeks to answer the following questions:

- Research Question 1 (RQ1): Does flipped learning enhance the development of learners' grammar competency compared to a traditional lecture-based classroom?
- Research Question 2 (RQ2): What are the attitudes of learners in the experimental group towards a flipped grammar classroom?
- Research Question 3 (RQ3): What are the participants' overall experiences in a flipped classroom?

Method

Research Design

The current study was based on a mixed-method research design in which both the quantitative and qualitative data collection instruments were employed in order to obtain in-depth information about the effects of a flipped classroom. The qualitative model used in this study consisted of a semi-structured interview, and quantitative instruments included first a pre- and a post-test conducted through quasi-experimental design with a control group and secondly a questionnaire- based upon learners' attitudes towards flipped grammar instruction.

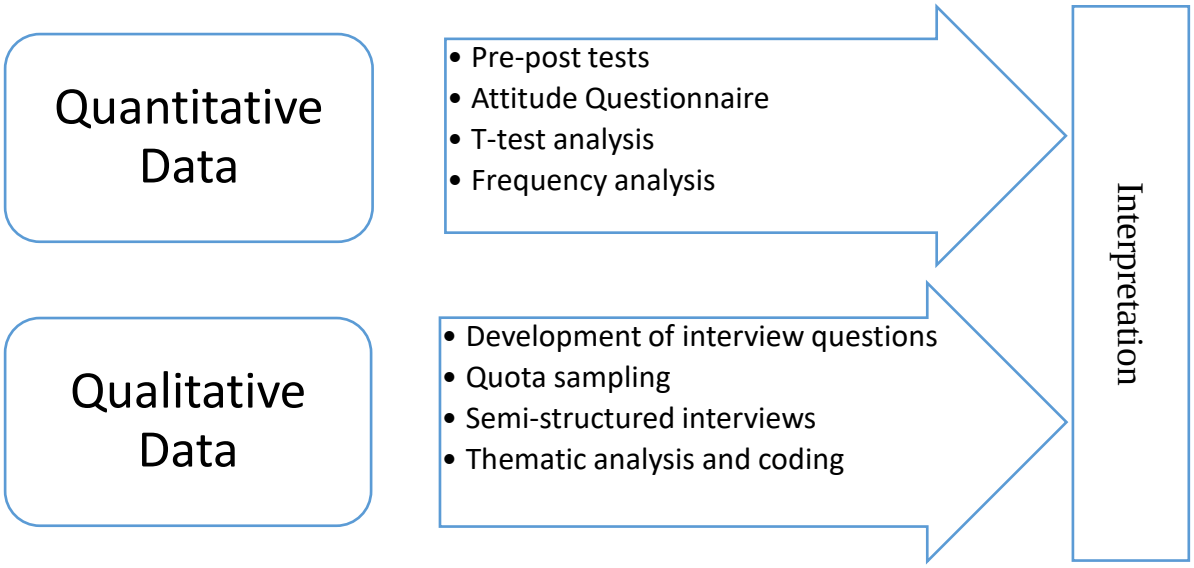

Figure 3. Quasi-experimental mixed-method research design

Participants

The participants of the study (n=37) were selected through a nonrandom convenience sampling due to the distinct features of the language school in which the research took place. Of the ten classes placed according to the English proficiency scores, the experimental and control groups were recruited as two separate classes with a similar proficiency level. The participants were 37 Turkish EFL students attending English language classes of the school of foreign languages at a state university in Turkey. Flipped and non-flipped classes consisted of 19 and 18 male students, respectively. Their ages range from 18 to 21. All the participants were from the Faculty of Engineering, but with different majors. The average level of the students was A2 (pre-intermediate) according to the Common European Framework of References for Languages (CEFR). Eighteen class hours per week were allocated for the English course as 16 hours for the main course and 2 hours for grammar practice. The researcher was responsible for the main course and grammar lessons of both flipped and non-flipped classrooms. The researcher held a meeting with the participants in the experimental group prior to the intervention in order to figure out their knowledge about flipped learning. It was seen that none of the students were familiar with the concept of flipped learning.

Procedures

In order to reach the defined objectives at the end of the year, Speakout (2nd ed.) was chosen as a textbook. Speakout is an English textbook designed for EFL students to meet the expectations in four skills. It includes activities based on oral communication with different topics and lots of tasks to raise language awareness. One of the most distinctive features of the textbook is the online platform called MyEnglishLab. It involves before and after class activities for different skills and quizzes for each unit. It also provides a chance to monitor students' progress. Students in this study were familiar with the online learning platform since they used it in the previous semester. Google Classroom was preferred as a course management system in which the interaction between the instructor and students would take place. It is available as a mobile phone application in addition to its desktop version. Google Classroom enabled sharing links, graphics, assignments and massaging between students and teachers. The students were trained on the use of Google Classroom through a tutorial video.

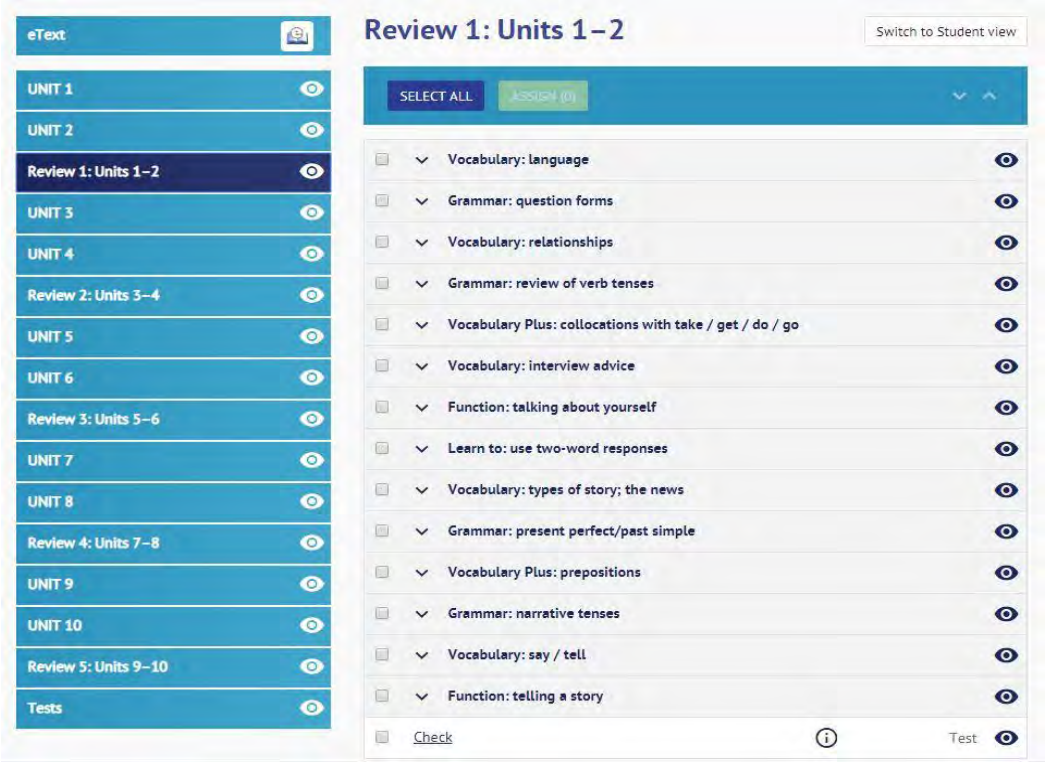

Figure 4. An example of MyEnglishLab Online Learning Platform

In the flipped grammar classroom, both the students and the teacher joined *Google Classroom*. Additionally, they were instructed about the concept of the flipped classroom and upcoming procedures. During the treatment process, the students watched the instructional videos about the target structures of the week prior to class time. Afterward, they completed the online module and took the quiz in MyEnglishLab. The educational videos were not created by the teacher himself. Instead, they were drawn from YouTube in line with the guidelines stated by Brame (2016) to maximize student learning from video content (Appendix 4). The researchers looked for videos that would emphasize key concepts, include audio and visual elements for the explanation, promote active learning and impact engagement. Furthermore, the researchers sought videos designed according to multimedia principles (Appendix 5) described by Mayer (2005) in order to optimize comprehension. Such principles as eliminating extra information, segmenting a lecture, signaling keywords, and professional voice effect were of great importance in the video selection process. Thus, 11 videos varying between 5 to 20 minutes for ten different topics (Appendix 1) were used during the treatment process. The videos were served with embedded interactive questions through Edpuzzle, which is a website enabling interactive video design and feedback about the students' performance.

As for in-class meetings held for two hours per week, students were not exposed to lecture-based grammar instruction; however, about 5 minutes of the first lesson were spent on figuring out any misconceptions about the instructional videos. The rest of the class time was devoted to collaborative activities such as group/pair work, oral presentation etc. (Appendix 1). The activities were based on higher-order thinking skills such as creating and analyzing. The flipped classroom procedures are illustrated in Figure 5.

On the other hand, the traditional lecture-based grammar class meetings consisted of revision and clarification about the previous week assignments, the teacher's elaboration on the target structures and in-class activities based on lower-order cognitive skills such as understanding and remembering (Figure 6). Higher-level cognitive tasks which were used as in-class activities in the flipped class (Appendix 1) were set as assignments to be completed outside the classroom as usually done in traditional classrooms. The treatment process for both flipped and non-flipped groups lasted for 10 weeks.

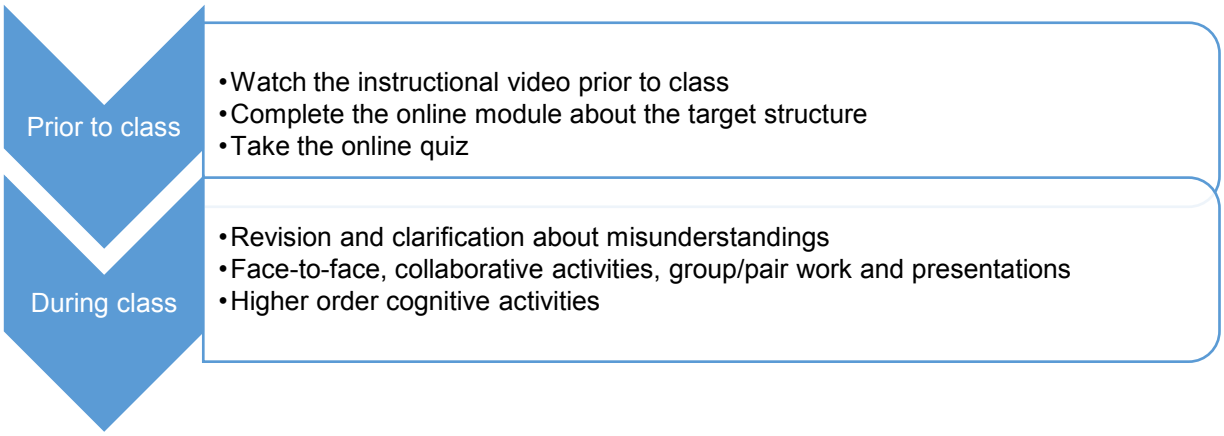

Figure 5. In and out class procedures for the flipped grammar classroom.

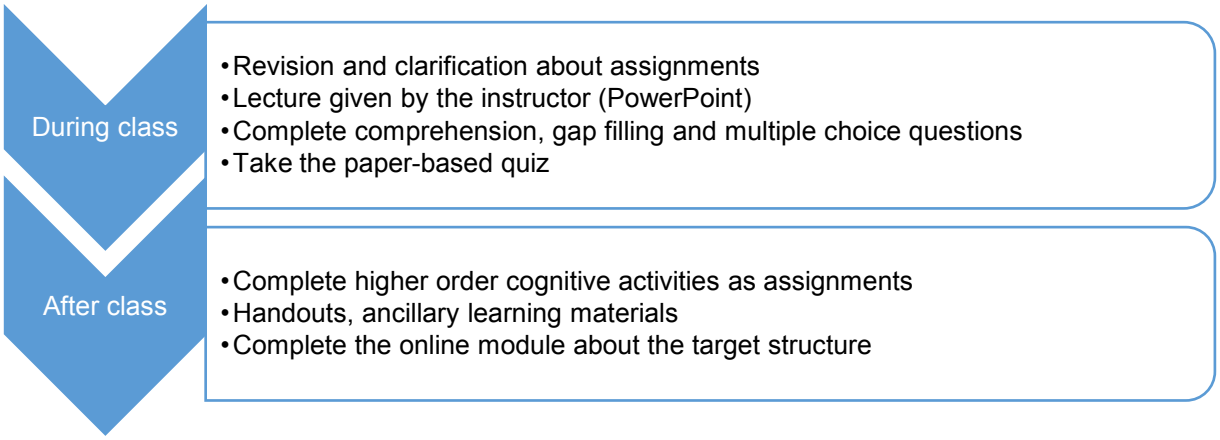

Figure 6. In and outclass procedures for the lecture-based grammar classroom.

Data Collection

The consent of the participants was obtained at the beginning. Then, in order to address the first research question, the same grammar test was employed to both experimental and control groups as a pre-and post-test to see their grammar level before and after the implementation. The test was adapted from the textbook of the course. The textbook provides grammar tests for mid-term, end-term and each unit as an achievement and proficiency test. The tests were standard tests developed by the publisher as a component of the textbook series. The test employed in this study consists of ten different parts for ten topics sent to students as videos and practiced in the class time. Question types vary from multiple-choice, gap-filling to transformation and error correction. In order to assure the validity of the tests, they were also analyzed by two experts in the EFL field. In addition, test-retest reliability analysis was conducted to ensure its appropriateness. While Cronbach's Alpha of the test-retest is found .967, the intraclass correlation is .939 that demonstrates strong reliability.

As for the attitude questionnaire, it was originally created and designed by Ekmekçi (2014) for his doctoral thesis. He conducted a pilot study with 115 students in Flipped Learning Network (www.flippedlearning.org) in which there were many groups teaching with flipped learning at the time when the research was carried out. As a result of the pilot study, some items with issues in terms of inter-item correlation and reliability were removed. Then, the questionnaire was finalized, consisting of 23 items with a Likert scale. The Cronbach's Alpha was reported as .926 in Ekmekçi's and it was .899 in the present study, which indicates a high level of reliability. Furthermore, semi-structured interview questions were developed to answer research question three, about the learners' overall ideas and experiences throughout the treatment process. In answering the interview questions, the students were required to (1) compare the flipped learning model with the traditional lecture-based instruction, (2)

express whether they liked video lectures, (3) state problems or challenges they had during the treatment process and (4) make suggestions about how to improve the flipped learning model.

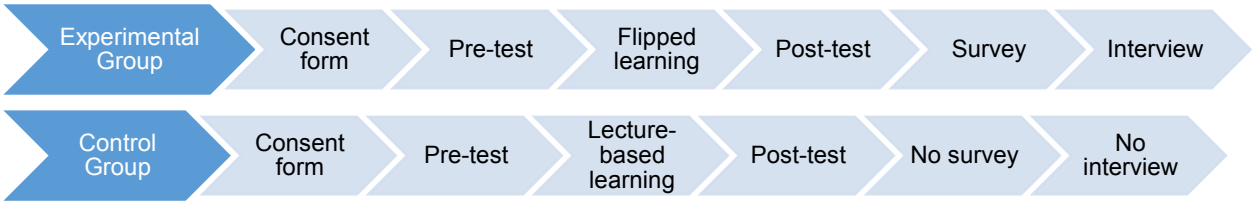

Figure 7. Summary of the data collection procedure.

Data Analysis

The quantitative data gathered through the grammar test and flipped grammar class attitude questionnaire were examined through SPSS 23 (Statistical Package for Social Sciences). Firstly, pre- and post-grammar scores were analyzed with the independent samples t-test to see whether there was a significant difference between the groups. The findings were supported with effect size values. As for the attitude questionnaire, the data were examined through frequency analysis. Furthermore, the face-to-face interviews were first conducted to solicit information about the flipped intervention (Appendix 3), and later transcribed with a program, Otter.ai. Participants (n=7) were interviewed based on quota sampling according to their scores and achievement. Each interview lasted for 10 minutes on average. It was analyzed with thematic and categorical patterns by following Braun and Clarke's (2008) six steps in thematic analysis with the inductive approach that allows the data to find the themes. It begins with familiarization (1), coding (2), generating (3) and reviewing themes (4), defining and naming themes (5), writing up (6).

Findings

Both quantitative and qualitative data in the current study revealed that the flipped grammar classroom outperformed the traditional classroom which was only lecture-based. The findings clearly demonstrated that flipped learning motivated the students, enhanced the development of learners' grammar competency, and engaged the participants in the activities. However, some concerns were expressed in the interviews about the challenges they faced during the treatment process. In the following section, the findings are demonstrated in accordance with the research questions.

RQ1: Does flipped learning enhance the development of learners' grammar competency compared to a traditional lecture-based classroom?

Table 1. Comparison of the Experimental and Control Group's Pre-Test Results

Group	N	Mean	SD	t	df	Sig.
Experimental	19	35.95	9.60	-.219	35	.83
Control	18	36.56	6.96			

An independent-samples t-test was conducted to compare the post-test results in the flipped and non-flipped groups. There was not a significant difference in the pre-test scores for the experimental group (M = 35.95, SD = 9.60) and the control group (M = 36.46, SD = 6.96) conditions; $t(35) = -.219$, $p = .83$. The table justified the assumptions since both groups were considered as A2 level by the school administration. It should also be noted that the mean scores of the control groups was slightly higher than the experimental group. At the end of the treatment process lasting for ten weeks, the same test was applied to both groups as a post-test.

Table 2. Comparison of the Experimental and Control Group's Post-Test Results

Group	N	Mean	SD	t	df	Sig.
Experimental	19	60.42	11.34	3.22	35	.003
Control	18	49.72	8.55			

The results of the independent samples t-test reported significant difference in the post-test scores for the experimental group (M = 60.42, SD = 11.34) compared to the control group (M = 49.72, SD = 8.55) conditions $t(35) = 3.22$, $p = 0.003$ with a large effect size (d = 1.06). These results indicate that flipped grammar instruction enhanced the development of learners' grammar competency compared to traditional lecture-based instruction.

RQ2: What are the attitudes of learners in the experimental group towards flipped grammar classroom?

After the treatment process for ten weeks, the flipped grammar class attitude questionnaire (Appendix 2) was employed to understand students' attitudes towards the flipped model. The results demonstrated in Table 3 revealed that students' responses to items in four different categories fell into the upper intermediate level with the mean scores of 3.92, 3.75, 3.81 and 3.66 for video lectures, learning grammar, studying for exams and flipped versus traditional learning respectively. It can be inferred from these results that students enjoyed instructional videos, evaluated the model as an effective tool to learn grammar and also an effective way to study for exams as they had a chance to rewatch and recomplete the activities whenever and wherever they wanted, and preferred the flipped classroom to a traditional lecture-based classroom. Students' active participation outside the classroom environment gave more responsibility to students.

Table 3. Descriptive statistics of the flipped grammar class attitude questionnaire

Categories	Mean	Min	Max.	SD	N of items
Satisfaction about video lectures	3.92	1	5	0.68	7
Effectiveness of learning grammar	3.75	1	5	0.80	10
Studying for exams	3.81	2	5	0.67	2
Flipped versus traditional learning	3.66	1	5	0.88	4

RQ3: What are the participants' overall experiences in flipped classroom?

The researcher conducted interviews with seven students in the experimental group to have an in-depth understanding of students' perceptions and gain insights into flipped learning. The participants' overall experiences over flipped learning were gathered through semi-structured interviews (Appendix 3). The results illustrated in Table 4 were analyzed in two categories under six themes as retention, flexibility, time saving, motivation, hard work, and language of the videos. It can be concluded from the results that students appreciated the merits of flipped learning despite some concerns.

Table 4. Findings of semi-structured interviews

Category	Themes	Number of Appearances	Examples
Advantage	Retention	4	I never forget when I learn with visual… I can remember the structures easily.
	Flexibility	4	I used my phone for video lectures… I feel like I always have a teacher with me… We can learn whenever we want.
	Time saving	7	Flipped learning saves time for more activities… We can practice more in the classroom.
	Motivation	4	Video lectures are motivating… Learning with computers is fun.
Disadvantage	Hard work	3	I had to study a lot prior to class… It takes time to watch the videos and complete the assignments.
	Language of the videos	3	I would prefer videos in my native language… If the videos were in my mother tongue, I would understand better.

Discussion and Conclusion

The present study is a response to the call that foreign language learning can be enhanced by flipping the grammar instruction (Bergmann & Sams, 2012; Webb & Doman, 2016). Thus, the study set out to examine the effects of flipped learning on the development of learners' grammar competency by transforming the instructional design for in and out of class practices. The results of the study indicate that flipped learning is confirmed as an effective instructional approach by the participants in specifically teaching English grammar. Additionally, the study shows clear evidence from better development of learners' grammar competency compared to a traditional lecture-based classroom. Besides, the results of the study are consistent with the other empirical studies in similar contexts (Hung, 2015; Zainuddin & Attaran, 2016; Webb & Doman, 2016; Ekmekçi, 2017; Adnan, 2017; Hsieh, Wu, and Marek, 2017; Amiryousefi, 2017).

From Table 2, it is clear that students in the experimental group outperformed the traditional classroom. The result mainly stemmed from the students' extra effort outside the classroom compared to the control group. Cheh Hsieh et al. (2017) state that the success of flipped learning depends on whether the students really study prior to their classes. If they do not, it becomes challenging for students to follow the lesson inside the classroom (Akçayır & Akçayır, 2018). We also see the value of students' personal investment throughout the learning, which is a prerequisite for the achievement of language learning. One of the most important principles in language learning is a strategic investment, which means students' personal dedication and attention to language learning (Richards & Renandya, 2002). Many suggestions have been made for teachers to make sure that the pre-work is done (November & Null, 2012). The researcher in the current study was able to cope with this issue thereby integrating the results of the activities in the online platform, MyEnglishLab into the grading system of the school. Furthermore, the students knew that their progress was being monitored as the online platform was providing reports regularly about students' overall performance. In this way, it was possible to detect students who did not complete the activities and the challenges students had during the pre-work. Additionally, the online platform provides interactive learning environment for students, which fosters retention of knowledge and is useful particularly for those who must memorize abstract concepts of grammar (Liu et al., 2019). Thus, successful preparation for in-class activities resulted in better outcomes in the experimental group. Another reason for this success is the student-centered activities during class time. Gilboy, Heinerichs, and Pazzaglia (2015) expressed that flipped learning promotes student-centered learning, which in turn results in an increase in interaction in a classroom. Class time is utilized more effectively with student-centered activities such as discussion, brainstorming, role play etc. (Bergmann & Sams, 2012). According to Amiryousefi (2017), the effectiveness could be best increased by a student-centered language learning environment.

The findings also fit well with the characteristics of active learning theory. Active learning has long been regarded as one of the most successful teaching strategies (Jonassen, 1995). According to Jensen et al. (2015), active learning is the key element for the success of the flipped learning. It provides students an opportunity to acquire lower-level content knowledge out of the class and the class time is devoted to developing higher-level analysis with the support of the teacher. Extra time for in-class activities made it possible to increase interaction skills. The value of collaborative learning is based on Socio-Cultural Theory, in which language is viewed as an outcome of social communication (Theorne & Lantolf, 2007). The framework suggests that grammar and vocabulary are best learned through communicative language learning. In flipped learning, the participants found more time for meaningful communication with scaffolding provided by the teacher. It paved the way for more productive learning in line with Zone of Proximal Development as put forward by Vygotsky (Wette, 2015). If the vital components of active learning such as critical thinking, collaboration, creativity (etc.) are applied effectively, it will support the flipped learning to run smoothly (Roehl, Reddy & Shannon, 2013).

The current study indicated a high level of positive attitude towards video lectures on students' side, which can be interpreted as quite accountable since flipped instruction has been said to create a flexible learning environment and coherent with other similar studies since ready-made YouTube videos were found to help learners to learn better and engage with the content. Students' attitudes also confirmed the argument that YouTube has a tremendous potential to boost language learning (Alwehaibi, 2015). The meticulous video selection process based on Mayer's multimedia principles (2005) and Brame's guidelines (2016) helped researchers to use the ideal content for students' comprehension. However, it should be noted that video lectures with poor pedagogical and technical features may affect the students' performance negatively (He et al., 2016). Rasheed, Kamsin and Abdullah (2020) state that

teachers face challenges in creating, uploading and finding videos with quality content. Determining and preparing the pre-class materials is the biggest concern for teachers (Mehring, 2016). Recording a video lecture and designing activities for further time commitment prior to class is time-consuming. On this point, a study by Wanner and Palmer (2015) concludes that preparing materials for flipped learning is about six times more than traditional lesson preparation. Ryan and Reid (2016) drew attention to the quality of the video lectures and argued that the videos should be carefully created and designed to improve learning. Therefore, it would be better to compile and use the already-created content on the condition that they address the pedagogical objectives of the lesson. For instance, Khan Academy widely used in the USA has more than 2,300 instructional videos in different branches (Prensky, 2011). Students can learn the target objectives anytime and anywhere they desire (Hung, 2015). Thus, flipped learning is said to emerge as a solution with more individualized learning (Zainuddin & Attaran, 2016). Particularly students with lower abilities have an opportunity to rewatch the videos many times. On the other hand, one of the most important challenges of the traditional classroom is to keep up motivation in a classroom with a mixture of strong and weak learners. It would be monotonous for strong learners to be exposed to the same content repeatedly in the classroom.

The present study demonstrated a higher preference for flipped classroom over traditional classroom and revealed that the majority of learners were in favor of flipped learning, which was also verified by the interview data. The study also revealed several advantages of flipped classroom such as its role in increasing retention, providing flexibility, saving time, and motivating learners. Likewise, G. Akçayır and M. Akçayır (2018) conducted a large-scale systematic review study which examined 71 articles in SSCI-indexed journals to reveal the most frequently stated advantages of the flipped learning. They reported that learners perceived flipped learning as motivating, engaging, effective in improving learning, and time-saving. However, some concerns were expressed in the present study over the language used in the video lectures. The students thought that it would be easier to understand abstract concepts of grammar in their mother tongue. This attitude might stem from students' previous language learning experience and dependence on the use of L1 in learning grammar because, as stated by Sali (2014), most of the students in Turkey and possibly in other similar contexts are exposed to grammar instruction in their native language.

The current study also confirmed the argument that one of the pitfalls in flipped learning was students' prejudices against the new instructional method (Herreid & Schiller, 2013). It was hard to convince the students to take more responsibility for their own learning at the beginning of the study since they were required to do extra work prior to the class. Smith (2013) found that students usually view studying outside the classroom to be a burden. Additionally, some students are more liable to passive learning by spending less time due to their learning experiences in a traditional classroom (Chen et al., 2014). The researcher in the present study overcame this challenge through active intervention and support for learning. The students started to be aware of the advantages of flipped learning during the treatment process with self-paced learning outside the classroom and collaborative activities in the classroom. Despite their initial concerns about the workload, they realized that they were getting better at achieving strong outcomes. Another point that should be considered to overcome such challenges as students' dependence on rather traditional methods is that there might be a need for an online platform in order to remove barriers to effective interaction and enhance learning. Fautch (2015) argues that some students get confused when they see or hear the content at first and incompetence in asking immediate questions to a teacher impacts students' attainment negatively. Hsieh et al., (2017) and Amiryousefi (2017) assert that a less threatening learning environment can be created by using social technologies such as Telegram and Line. It is emphasized that they facilitate the interaction between a teacher and students or among students by making it possible to design more cooperative and collaborative learning environments (Zainuddin, 2018). Therefore, Google Classroom as a learning management platform used in this study provided opportunities for participants to elaborate on the materials during the pre-class time of flipped learning. It made it easy to communicate and stay organized. This cooperation might lead to a better learning process (Ghaith, 2003).

Judging from the perceived benefits of flipped learning and findings in the current study along with a body of research conducted so far, flipped classroom shifts the instruction to increase the mastery of content by taking advantage of technological affordances in content delivery. The application of higher-order thinking skills and maximizing the teacher-student interaction initiates meaningful and communicative learning. There have been many attempts to use flipped learning in the EFL context in order to improve writing accuracy, speaking fluency, vocabulary attainment, and listening

comprehension. It provides ample opportunities to enhance various skills in English language education through relinquishing teacher control over in-class lecturing.

In general, this study revealed that flipped grammar classroom model with its potential as an innovative and transformative instructional approach in teaching and learning motivated EFL learners to study grammar structures, improved learners' grammar competency, and engaged them in collaborative activities during class time by setting aside more time for in-class tasks. Thus, the study yielded positive results on students' engagement, involvement, and performance. It contributes to the literature by expanding the application of the flipped learning model to specifically grammar teaching in EFL.

Limitations and suggestions for future research

Some limitations are jotted down in the present study. First, the number of participants in both groups is limited (*N*=37). It might be an impediment to making a generalization despite the clear-cut findings. Second, internet access was a real challenge for some students since the flipped design is centered around technology and such dependence on technology might sometimes bring about problems. Third, the videos were not created by the teacher. Some argue that it affects students' buy-in and engagement (Bergmann & Sams, 2014). However, most of the recent studies have been using ready-made videos (Bond, 2020). The question of whether the presence of a teacher in videos and creating video materials by the teacher impacts the results or not remains controversial in the literature. Future studies might focus on the effects of video types on students' learning outcomes and engagement. Lastly, it is always hard to adjust to such a paradigm change in instruction. Both students and teachers were accustomed to lecture-based instruction. The shift in content delivery, instruction, teacher's and student's roles appeared unfamiliar at first. Therefore, all the participants struggled to learn in flipped design in the early days of intervention. Preparation prior to intervention should be elaborated in detail and also, the flipped pedagogy might be introduced not only with videos like in the current study but also some other strategies. The findings of this study would inspire future studies to deepen the understanding of flipped learning in similar and diverse contexts. Particularly in different contexts with students at different age groups and environments, there is a need for more studies to be conducted on flipped learning.

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Appendix 1. Flipped Grammar Class Syllabus

Week	Grammar Topic	In Class Activities
1st	Verb Tenses	Create a digital poster about a worldwide famous actor
2nd	Must – Have to Used to - Would	Imagine that you are in charge of designing the rules for a perfect language school in groups and choose the best school at the end. Search inventions on the internet and take a video about how the things were different in the past before these inventions.
3rd	Comparative - Superlative	Search products and companies at the same sector and compare them from different perspectives.
4th	Tag Questions	Complete the worksheet provided by the teacher and discuss in groups.
5th	Conditionals	Start a chain story and complete it one by one with a new prediction. Continue the story until you find an interesting conclusion. Watch the video and try to guess the consequences when a character can make a decision. Cards with different situations are distributed to students and they are asked to play “What would you do?” game in groups.
6th	Quantifiers	Play the board game with a set of cards and a dice in groups. Try to make sentences with the words on the board and under the cards.
7th	Relative Clauses	Publish an article describing a city in your blogs by using who, which, that, where, when and whose more than once.
8th	Active - Passive	Write a robbery story with active sentences and swap the stories with your pairs. Then, rewrite the story with a passive voice. Make groups of three and play a roleplay activity. Act like a travel agent and try to sell a luxury package to your customers with the prompts given.
9th	Reported Speech	Tell your pair what was said to you at an important time in your life. Play the mingling activity, *Find Someone Who* and report back to classroom what you have learned from your friends.
10th	Verb Patterns	Make groups of three or four and start the discussion about the topics given by using infinitives and gerunds. Students are required to ask and give information as much as possible. Prepare a presentation about something you want to do in the future and share your work with your friends.

Appendix 2. Flipped Grammar Class Attitude Questionnaire

Please rate how strongly you agree or disagree with each of the following statements by putting a check mark in the appropriate box. There are no right or wrong answers in this list of statements. Your sound and sincere responses will contribute to my study a lot. The results of the survey will be used only in this research and kept confidential.

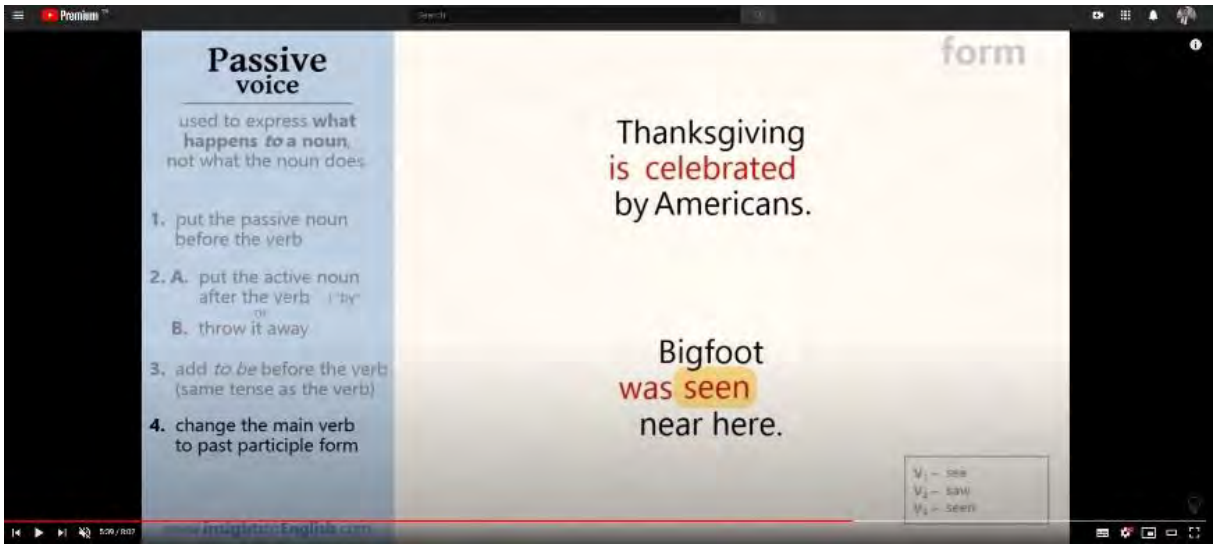
Thanks for your cooperation in advance.

		Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1.	I like watching the video lectures.					
2.	I regularly watch the video lectures.					
3.	I feel that Flipped Grammar Class has improved my grammatical accuracy.					
4.	I am more motivated to learn grammar structures in the Flipped Grammar Class.					
5.	I believe that Flipped Learning is an effective way of improving grammatical accuracy.					
6.	I am able to follow the lesson through videos even if I miss a lesson in actual class.					
7.	Flipped learning helps me prepare for the exams since I can watch all related videos before the exams.					
8.	Watching the analysis of several sample language structures (grammar) helps me produce more accurate sentences in English.					
9.	Videos uploaded in YouTube by the teacher are very useful.					
10.	Videos uploaded in YouTube are informative enough to understand the form, meaning and use of language structures (grammar).					
11.	I feel more motivated when I watch the videos rather than listening to teacher in the class.					
12.	When I watch grammar course through videos, I enjoy grammar more.					
13.	I can study for the exams by re-watching the videos.					
14.	Thanks to Flipped Grammar Class Model, we have more time to practice grammar in class.					
15.	I can watch the videos anywhere, anytime I want by downloading the videos.					
16.	I would not recommend the Flipped Grammar Class to a friend.					
17.	I would rather watch a traditional teacher led lesson than a video lecture.					
18.	I think that Flipped Learning is a waste of time for improving my grammatical accuracy.					
19.	If I were a teacher, I would not prefer a Flipped Grammar Class.					
20.	I believe that Flipped Grammar Class did not contribute much to my accuracy in grammar.					
21.	Videos are too boring to watch.					
22.	Traditional classes are always more enjoyable					
23.	Traditional classes are always better than Flipped Classes.					

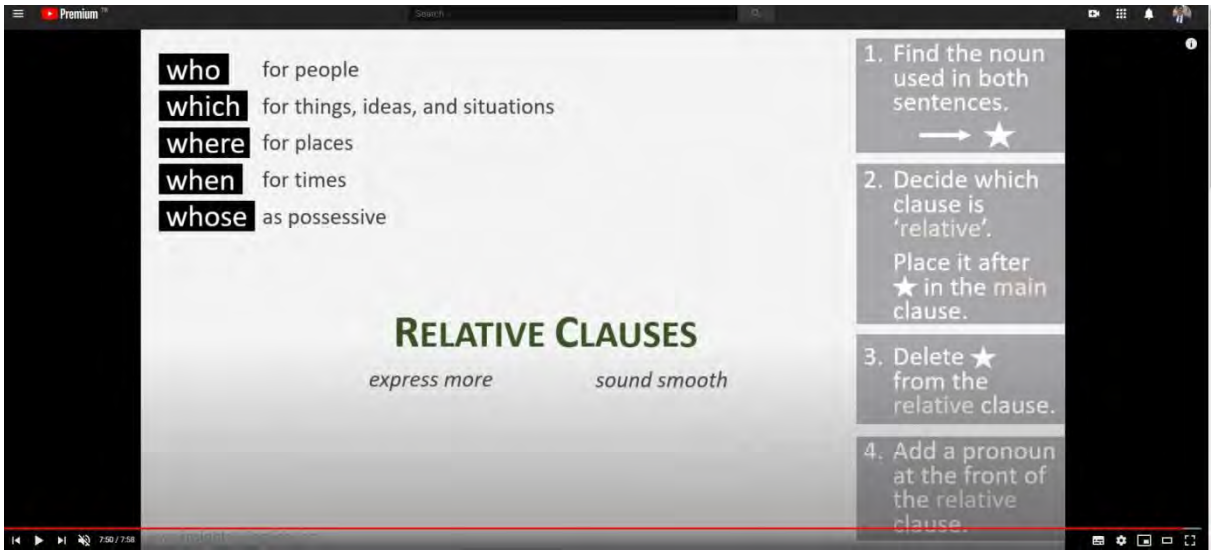
Appendix 3. Interview Questions on Flipped Grammar Class

1. Did you enjoy the videos uploaded in YouTube?
2. Did you think you have learnt grammar rules better in Flipped Grammar Class?
3. What are the pros and cons of Flipped Grammar Class?
4. If you had a chance, would you prefer Traditional or Flipped Grammar Class?
5. Were there any problems you encountered during Flipped Grammar Class? What are they?
6. Do you recommend any changes in the Flipped Grammar Class model to improve learning?

Appendix 4. Sample Video Lectures

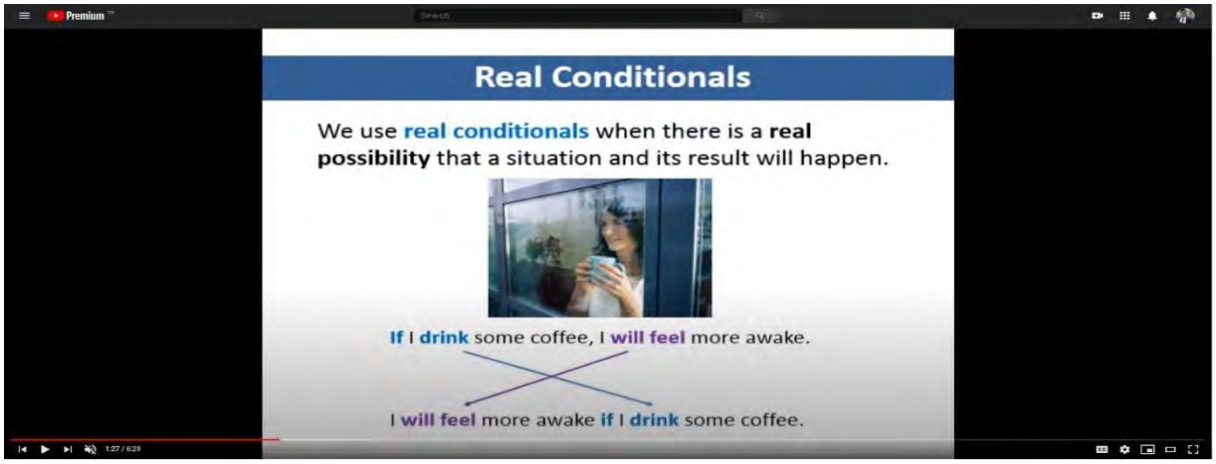


Sample 1: Passive Voice (youtu.be/_PCCZ9Pvk2s)



Sample 2: Relative Clauses (youtu.be/ftZr1_Ny8L8)

Sample 3: Comparatives & Superlatives (youtu.be/13TLUMw6og0)



Sample 4: Conditionals (youtu.be/clZqlmd8OAI)

Appendix 5. Multimedia Principles (Mayer, 2005)

1-Coherence Principle	People learn better when extraneous words, pictures and sounds are excluded rather than included.	✓
2-Signaling Principle	People learn better when cues that highlight the organization of the essential material are added.	✓
3-Redundancy Principle	People learn better from graphics and narration than from graphics, narration and on-screen text.	✓
4-Spatial-Contiguity Principle	People learn better when corresponding words and pictures are presented near rather than far from each other on the page or screen.	✓
5-Temporal Contiguity Principle	People learn better when corresponding words and pictures are presented simultaneously rather than successively.	✓
6-Segmenting Principle	People learn better from a multimedia lesson is presented in user-paced segments rather than as a continuous unit.	✓
7-Pre-training Principle	People learn better from a multimedia lesson when they know the names and characteristics of the main concepts.	✓
8-Modality Principle	People learn better from graphics and narrations than from animation and on-screen text.	✓

9-Multimedia Principle	People learn better from words and pictures than from words alone.	✓
10-Personalization Principle	People learn better from multimedia lessons when words are in conversational style rather than formal style.	✓
11- Voice Principle	People learn better when the narration in multimedia lessons is spoken in a friendly human voice rather than a machine voice.	✓
12- Image Principle	People do not necessarily learn better from a multimedia lesson when the speaker's image is added to the screen.	✓

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