The Impacts of the Flipped Classroom Approach on the Grammar Performance of Students at a High School in Ho Chi Minh City, Vietnam

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ABSTRACT

In the era of educational digitization, many teachers have widely adopted the flipped classroom approach to enhance their English teaching, supplementing in-class time and promoting learner autonomy. However, the application of the flipped classroom approach in teaching grammar to high school students remained underexplored with limited research investigating its impacts. This study aims to investigate the impact of the flipped classroom approach on the grammar performance of high school students and their attitudes toward this instructional method. Forty-eight students, divided into a control group and an experimental group, participated in a 10-week grammar course. The study employed a pre-test and a post-test to examine the impacts of this approach in teaching grammar and semi-structured interviews to explore students' opinions. Results revealed that after the treatment, the experimental group achieved better grammar performance than the control group. Positive attitudes toward the flipped classroom strategy were also recorded in students' responses. These findings suggest further pedagogical implications for flipping grammar classes to improve both students' academic performance and communicative competence.

Keywords: Flipped classroom, high school students, grammar performance, attitudes

Introduction

The debate over which grammar teaching method is the most effective in delivering grammar instruction to students has been ongoing for a long time (Al-khresheh & Orak, 2021). The two main approaches, inductive and deductive, come with their own lists of advantages and disadvantages. For the teachers who choose to apply the deductive approach, usually with the Presentation-Practice-Production (PPP) model, a lack of time for producing language with learned grammar is reported in their classes due to excessive concentration on the Presentation and Practice stage (Le, 2011; Nguyen, 2014). To compensate for this insufficient class time, the flipped classroom approach is recommended to be adopted, increasing production time in the

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final stage of the grammar teaching process. Flipped-taught grammar classrooms have been proved to generate certain positive effects (Al-Harbi & Alshumaimeri, 2016; Al-Naabi, 2020; Azar, 2006), with most of the studies being conducted either in university (Khodabandeh & Tharirian, 2020) for specific courses such as translation skills (Nguyen, T. P. N. & Nguyen, T. K. T., 2022); listening skills (Nguyen, T. K. & Nguyen, T. P. H, 2022); speaking skills (Nong & Thieu, 2023), or writing skills (Nguyen et al, 2019); or in private language center contexts (e.g. Noroozi et al., 2020) with certain success. However, there is a scarcity of research on applying this approach to teaching grammar using the PPP model, especially in the high school context. Therefore, this study aims to investigate the process of applying the flipped classroom approach in teaching grammar to determine its potential positive outcomes and to explore the attitudes of high school students toward this approach.

Literature review

Flipped classroom approach

The original form of the first flipped model, conducted in 1991 by Professor Erik Mazur of Harvard University, involved students studying with the prerequisite reading material at home (Nguyen, 2017). The use of videos first appeared in the flipped class of Bergmann and Sams, as reported in 2012, when they provided recorded lectures for their absent students (Al-Naabi, 2020) as a warm-up activity and a review section before class (Noroozi et al., 2020). In this case, the learning steps were "flipped", with lectures being assigned as homework to students while practice was brought into classes (Bergman & Sams, 2012). They further defined flipped instruction as "an act of delivering an outside-class direct instruction to the individuals in an attempt to have more strategic use of in-class time to further engage in group work, individualized and personalized attention" (Bergmann & Sams, 2014, p. xi). Bishop and Verleger (2013) believe that the activities assigned to students at home could vary between different studies; therefore, the flipped classroom model is not simply the rearrangement of tasks, but it is an extended version of the curriculum, which may be too broad to give an exact definition. To flip a class, Estes et al. (2014) suggest a model with three stages: pre-class, inclass, and post-class. In the pre-class stage, teachers provide students with prior materials in any form, which are directly linked to the upcoming in-class discussion (Reidsema et al. 2017), ensuring students' self-assessment and self-reflection beforehand. During the in-class stage, teachers organize activities, mainly focusing on communicative tasks. Finally, in the post-class, students have the opportunity to review and complete homework, which can be facilitated using learning technology.

The advantages of the flipped classroom are numerous. It fosters a student-centered learning environment (Burgan, 2006), benefits both lower-order cognitive learning (Prunuske et al., 2012) and higher-order cognitive activities (Sahin et al., 2015), increases students' learning autonomy (O'Flaherty & Phillips, 2015; Aliye et al., 2018; Demski, 2013; Gannod et al., 2008), and improves academic performance (Ekmekci, 2017; Nguyen, 2017). Significant improvements in the listening skills of Iranian students in a flipped classroom have been recorded in two separate studies by Hosseini et al. (2021) and Vaezi et al. (2019). The flipped classroom approach also appears more compelling to students (Hung, 2015) and encourages students to be more cooperative (Strayer, 2012). A high level of satisfaction with novel learning methods is also recorded by Garrison and Kanuka (2004), So and Brush (2008), and Nanclares and Rodriguez (2016). Harrison (2025) found that while the flipped classroom approach did not significantly outperform traditional instruction among 58 Korean students, participants expressed a positive attitude toward the method. Moreover, preparation before class time

enhances students' confidence and reduces the anxiety for further in-class discussion (Hsieh et al., 2016; Al-Harbi & Alshumaimeri, 2016). Nevertheless, few studies have investigated further aspects of students' perspectives, such as the obstacles they face or their opinions on the platform and technology employed in flipped classrooms.

While flipped classrooms offer practical benefits, they can blur the teacher's role, shifting it from knowledge provider to facilitator, monitor or guide (Berman, 2015; Berrett, 2012; Nguyen et al., 2019b). Although learners' positive opinions are recorded in most of the studies, some students strongly resist this change (Bishop and Verleger, 2013). Strayer (2012) also noted that learners often struggled to adapt to the new learning format, despite clear instructions. In Vietnam, studies by Nguyen et al. (2018) and Vo (2022) revealed that students faced a heavy workload and extensive out-of-class tasks. Adapting to digital tools also posed difficulties, especially with limited ICT infrastructure, such as poor internet access and a lack of devices, which affected both students and teachers. Additionally, the absence of timely support outside class left some learners' questions unanswered (Baig & Yadegaridehknordi, 2023). As Herreid and Schiller (2013) observed, students accustomed to traditional methods may resist flipped learning due to unfamiliarity and unclear perceived benefits.

Concerning the grammar aspect, Noroozi et al. (2020) found that intermediate-level students at a private language institute in Iran achieved better academic performance when studying grammar in flipped classrooms. Although this study confirmed the positive influence of flipping a grammar class, it has focused on one grammar point (conditional sentence) with participants' aged 15 to 25. Therefore, it remains unclear whether this effectiveness would extend to the high school context, where the curriculum and learning time are more strictly controlled than in private language centers. Similarly, Al-Harbi and Alshumaimeri (2016) reported positive outcomes for grammar teaching in the flipped classroom, with the experimental group outperforming the control group. However, the participants' proficiency and the content of grammar points covered in the course were not explicitly stated in the study. Furthermore, although the study involved high school students, its findings may have been influenced by the gender imbalance (100% female students) and the short duration of the experiment. Bezzazi's study (2019) with 132 university students in Taiwan indicated a positive impact of the flipped approach on grammar learning and confirmed various skill-related benefits, aligning with the findings of Kereibayeva and Baisbay (2024) in their research with 28 students in Kazakhstan. In Vietnam, Nguyen et al. (2019) conducted a qualitative case study using a flipped classroom approach with 34 university students majoring in English. Most students retained a positive attitude toward using technology and the new learning method, but the research did not measure the effects of the flipped approach on students' learning, student proficiency levels, or the process of flipping grammar instruction.

The role of teaching grammar

Grammar is one of the crucial aspects of a language, which is used to connect words and structures to make meaningful sentences. According to Brown (2001), grammar is "the system of rules governing the conventional arrangements and relationships of words in a sentence." (p. 362), playing an important role in language teaching (Terrell, 1991) and in a person's language competence. Grammar contributes significantly to the development of four major skills in English (Widodo, 2006; Batstone, 1994; Purpura, 2004); therefore, a profound understanding of grammar can lead to improved productive performances (Mart, 2013). Previous studies have shown the need for formal grammar instructions. Bade (2008) and Farjami (2011) suggest that students generally hold positive and demanded attitudes toward grammar learning. The grammar teaching process, which "involves any instructional technique that draws learners'

attention to some specific grammatical form [...] so that they can internalize it" (Ellis, 2006, p. 84), supports students in understanding the predictable and intelligible patterns of language, ultimately enhancing their comprehensibility and acceptability in society (Azar, 2006; Richards & Renandya, 2002).

PPP approach to Grammar teaching

One of the two main approaches to teaching grammar suggested by Thornbury (1999), the deductive method, involves the initial explanation of grammar rules and the division of smaller language components (Al-Kharrat, 2000). Examples and further sentence-creation practices then follow this. The whole process is commonly "PPP-like" (Harmer, 2007, p. 203), which stands for Presentation, Practice, and Production. The first two stages provide students with the theory and practice of the structure, while the Production stage allows for further and less controlled practice. During this stage, students apply the structure in specific situations or solve problems, often in groups with the assistance of their teachers (Cullen, 2001).

The effectiveness of PPP model has been proved in numerous studies. Criado (2013) highlights that the first two stages of the model provide psycholinguistic benefits, helping students notice the features of new forms and practice applying the rule, while the Production stage encourages language use through instructions. Norris and Ortega (2000) and Spada and Yasuyo (2010) report that PPP is preferable in the classroom and generates relatively similar effectiveness compared to implicit techniques. Nguyen (2014) found that Vietnamese high school teachers preferred explicit form-focused instruction with a high belief that grammar mastery is key to successful communication. However, due to limited class time and expertise, these teachers often covered only the Present and Practice stages, skipping the Production stage. These findings aligned with Le (2011), who reported that most teachers in his study opted to apply the PPP model in all grammar lessons, but often skipped or minimized the Production stage due to the time constraints. Bui and Newton (2021) also found that while primary teachers valued explicit teaching, they were concerned about the time-consuming nature of drills. Similarly, studies by Choi and Andon (2013), Nguyen (2014), and Nguyen et al. (2015) report failed attempts to conduct the Production stage, with high school teachers in Vietnam lacking the time and expertise to organize the third stage in the model, where students practice using real language. Moreover, a lack of research on bringing the PPP model to blended classrooms for high school students is also recorded for further investigation.

Theoretical frameworks

The three stages in a PPP grammar class are closely linked to Bloom's taxonomy, the most popularly accepted systematic category of learning outcomes and assessment (Adams, 2015). The revised version encompasses six cognitive domains, ranging from lower to higher levels, namely Remember, Understand, Apply, Analyze, Evaluate, and Create (Wilson, 2001). The Presentation and Practice stages serve the purpose of familiarizing students with new knowledge and emphasizing the role of working memory (Rodegher, 2019); therefore, they are related to lower levels, which are Remember and Understand. Meanwhile, the production stage, which requires students to produce the language, deals with much higher levels, namely Application, Analysis, or Evaluation. This framework also matches the structure of a flipped classroom in which the pre-stage with prerequisite learning and practice represents the first two stages of the PPP model and focuses on lower levels, while the active learning activities in the production time during the direct meeting class are associated with a higher level in Bloom's taxonomy (Gilboy et al., 2015). When activities at the Remember and Understand level are shifted to homework, more time can be dedicated to higher-level learning tasks in class. This is related to Higher Order Thinking Skills (HOTS), which include four major groups: problem-

solving, Decision-making, Critical thinking, and Creative thinking. They are closely linked to the last four levels in Bloom's Taxonomy (Sagala & Andriani, 2018). Therefore, the application of flipped classrooms not only solves the problem of lacking time for higher learning levels, but also increases both levels of learning in Bloom's taxonomy (Tabrizi & Rideout, 2017; Mohan, 2018) and promotes HOTS, which are crucial for the learning process.

Several studies have explored the employment of technology and the flipped classroom model in various subjects, such as translation (Nguyen, Q. N., 2021) and self-study (Le & Bui, 2017), as well as Edmodo-based flipped classrooms (Le & Bui, 2017). However, these studies primarily target university students and specific language skills, with limited attention to teaching grammar using the PPP model to high school students, particularly in the Production stage.

Research Questions

While previous studies have found positive outcomes in teaching grammar through flipped classrooms and in students' attitudes in general, little is known about its effects on high school students in public schools, where English is a foreign language. This research aims to fill the gaps by answering two research questions as follows:

- 1. What are the effects of the flipped classroom on the grammar knowledge of high school students?
- 2. What are students' attitudes toward flipped-taught classrooms?

Methods

Pedagogic Setting & Participants

The study involved 48 tenth graders from two classes during the 2023-2024 academic year at a public high school in Vietnam. The participants, aged 15, had learned English for at least 7 years and were at about pre-intermediate level after completing grade 10. They were used to employing technology, especially the LMS system. The platform used in this course is K12-online, a preferred platform due to its functionality, flexibility and effectiveness (Tu, 2022)

Purposive sampling was used to select participants based on specific research criteria. To ensure reliable findings, the study controlled participants' prior exposure to the flipped classroom model. Since no teacher at the school had previously implemented this approach, it was unlikely that students had experienced it. Additionally, any student with prior knowledge was excluded, reducing the risk of bias from previous experiences or expectations. The sampling procedure started with 5 classes, taught by the researcher in the previous school year, taking a pre-test. The results from this test were analyzed through an independent samples T-test to identify two classes with equivalent grammar competencies for the experiment. The control group (CG), consisting of 24 students, traditionally received grammar lessons while the experimental group (EG) studied with prerequisite videos beforehand.

Design of the Study

This research employed a quasi-experimental design, combining quantitative and qualitative data to gain a better understanding of the research problem (Creswell, 2012). This approach enriched the data by incorporating words, visuals, and narrative responses, allowing for a deeper understanding (Pardede, 2019). The pre-test and post-test were employed to compare scores and record any improvements made by students, examining the effectiveness of the flipped classroom approach on grammar performance. Furthermore, at the end of the course, semi-

structured interviews consisting of eight main questions were used to explore students' experiences with the grammar-flipped classroom. This can help to facilitate "the exploration of perceptions and opinions of respondents regarding complex issues" (Barriball & While, 1994, p. 330).

The study took place during the summer to capitalize on the flexible schedule and reduced academic pressure. During this time, participants could engage with the experience without the constraints of a full academic term, which was suitable for gathering information and honest feedback, evaluating the effectiveness in a more relaxed learning context, and minimizing any distracting factors that could influence the outcome. To ensure that maturation was avoided and internal validity was enhanced, the flipping course consisted of 10 sessions over 10 weeks, with a primary focus on grammar. Both groups received equal in-class instruction, with each lesson lasting 40 minutes - the standard duration of a school period. However, the experimental group also engaged in supplementary online learning at home. One teacher oversaw both classes and delivered the same lesson to minimize the differences between the two groups. The course followed the organization as illustrated in the table below.

Table 1.

Process of conducting the study during a 10-week course

Week	Content	Control group	Experimental group
0	Students took pre-tests		
1	Present tense contrast	• Students received explicit grammar instructions, completed exercises, and corrected	Activity within online session: • Students watched videos and completed required tasks (giving
2	Articles Will – Be going to	homework in class.Students were	short answers, matching, quizzes,
3	Past tense contrast	assigned controlled	mind maps,)
4	Used to	grammar practice	 Data about students'
5	Present Perfect and Past Simple contrast	and got corrections.	completion of online sessions was recorded.
6	Present Perfect simple and continuous	_	Activities in classDiscussions
7	Speculating and predicting	_	 Communicative
8	Future continuous and Future perfect	_	activitiesPresentation and
9	Comparison	_	receiving feedback
10	Imaginary situation	_	from the teacher.
11	- Students took post-tests.	tructured interview after the f	lipped classrooms.

Students in the EG were assigned videos and tasks to complete at home. The specific grammar points were divided into short video clips (each lasting up to 10 minutes) with embedded practices in between. These videos, created by the researcher, were a fixed component of each pre-class lesson. However, the practice activities following the videos varied from quizzes and mini-tests to short-answer questions or matching exercises to ensure that students would not become bored with the repetitive tasks during online sessions. In contrast, the EG received all instructions in a traditional classroom setting, with drills and activities led by the teacher. The

teaching process for both groups followed the PPP model, which is considered appropriate for students with English proficiency at the B1 level and has been proven to be more effective than other forms of implicit instruction (Spada & Tomita, 2010). This model is believed to be familiar to most teachers and students in Vietnam (Le, 2011) and is beneficial for students to perform well on tests.

Data collection & analysis

The scores of the pre-test and post-test, and the responses from the interviews are two types of data in this research.

The pre-test, consisting of 40 multiple-choice questions, was used to collect information about students' current competencies of 10 grammar points. These grammar points were taken from Units 1 to 4 of the course book "Friends Global 11" by Vietnam Education Publishing House, which is the main English textbook used in grade 11 at the examined school. These were also the main grammar points to be covered in the course. The content of the test was aligned with the learning outcomes of The General Education English Curriculum promulgated in 2018. This curriculum aims to have high school students reach Level 3, as specified in the 6-Level Foreign Language Proficiency Framework of Vietnam, corresponding to Level B1 in the CEFR. Students completing grade 10 were expected to be at a pre-intermediate level, aiming for Level 3 (B1) within the next two years. Therefore, the questions used in the test were adapted from Grammar for PET (Hashemi & Thomas, 2006) at the B1 level, published by the University of Cambridge (2006). The test items were discussed and examined by the researcher and two peer teachers in the examined high school. The use of multiple-choice questions with a focus only on ten grammar points that were covered during the course ensured the content-related validity, which is "based on a judgment of the degree to which the items [...] adequately represent the construct domain of interest" (Johnson & Christensen, 2017, p. 380). In addition, face validity, which is "the degree to which a test appears to measure the knowledge or abilities it claims to measure" (Devies et al., 1999, p. 59) and based on people's intuitive judgments, was guaranteed by the only presence of grammar questions. The post-test at the end of the course provided scores for comparison, allowing students to assess their progress in grammar performance. To measure the influence of the flipped method compared to the traditional approach, items in the post-test were identical to those in the pre-test but the order was reshuffled.

The quantitative data were analyzed through SPSS Statistics software (version 20). The internal reliability of the pre-test was examined using Cronbach Alpha. Independent samples t-tests were used to explore statistical differences in scores between the two groups in the pre-test and post-test, which helped determine the impact of the method on students' performance. In addition, students' progress was analyzed through paired samples t-tests, in which any significant changes in grammar performance within a group were examined.

Semi-structured interviews were conducted with five students from the EG to explore their attitudes after completing the course. These students were chosen based on a voluntary basis, specifically and randomly among students who expressed a willingness to share their reflections and had availability for scheduled interviews. The interview included eight main question for further exploration of their attitudes toward the learning experience. The questions, partly adapted from those of Do (2022), concerned participants' overall feelings, benefits, drawbacks, and impacts of the flipped classroom approach, K12 platform, learning motivation, and further improvements in the learning experience. The interview was conducted in Vietnamese and the transcript was translated into English for later analysis. Each interview lasted 20 minutes and focused on students' experiences of the flipped classroom approach. The participants were referred to as Student 1 – Student 5 in the findings section. The process of translating

interviewees' responses into English might present potential biases that could affect data interpretation. These included the loss of meaning, translator's subjectivity or oversimplification. To reduce these risks, this study involved cross-checking from other teachers. The transcript was primarily meaning-based rather than strictly verbatim, to preserve the voice, tone, and contextual nuances of participants' responses. The translating process was conducted by the researchers and reviewed separately by two additional teachers of English holding MA degrees in TESOL to minimize translation bias and enhance transparency.

Results/Findings

Quantitative statistics

To address the first question regarding the effects of the flipped classroom approach on high school students' grammar knowledge, pre-test and post-test scores were analyzed using SPSS. First, the reliability of the pre-test and post-test was tested by Cronbach's Alpha, yielding an acceptable score (Cronbach's Alpha = .723). Second, an independent samples t-test was run to determine if there were significant differences between the pre-test scores of the two groups. As shown in Table 2, there was no significant difference in scores (sig. (2-tailed) p =0.965 > 0.05). To ensure baseline equivalence, a Cohen's d was calculated for the pre-test scores with the effect size at 0.016 (95% CI [23.5347; 26.5486]), meaning we can be 95% confident that the true difference in means lies within this range and both groups started at a comparable level before the intervention. This indicates that students' grammar competencies were relatively equivalent in the two groups before the experiment and any differences in post-test results can be attributed to the treatment.

Table 2. Independent samples T-tests on the pre-test of the two groups

Group	N	Minimum	Maximum	Mean	Std. Deviation	t	Sig. (2- tailed)	Point Estimate
Control	24	12.00	37.00	25.0000	5.50099	055	056	016
Experimental	24	15.00	33.00	25.0833	4.97749	033	.930	.016

Post-test results were then compared, using an independent samples T-test. As demonstrated in Table 3, the post-test results revealed differences in the performance of the two groups. The means of marks of EG (M=28.25, SD=5.31) were reported to be higher than that of CG (M=25.13, SD=3.98) in the post-test. There was a significant difference in the post-test grammar performance of students in CG (M=25.13) and EG (M=28.5) (sig. (2-tailed) p=0.026 < 0.05). The figures also reveal that the gap between the mean scores of the two groups increased from the pre-test to the post-test. The effect size was moderate to large (Cohen's d = 0.666, 95% CI [0.2635; 0.28111]), suggesting a noticeable impact of the intervention. This implies that students in EG, after studying in flipped classrooms, performed better than their peers in CG in terms of grammar knowledge.

Table 3. Independent samples T-tests on the post-test of the two groups

Group	N	Minimum	Maximum	Mean	Std. Deviation	t	Sig. (2-tailed)	Point Estimate
Control	24	17.00	32.00	25.1250	3.98162	_	.026	.666
Experimental	24	19.00	38.00	28.2500	5.30996	2.307		

To examine students' progress after receiving the treatment compared to those who did not, the paired samples T-test was employed to explore any significant changes within each group during the experiment. The data in Table 4 indicate that there was no statistical difference between the pre-test and post-test results of CG (sig. p = 0.883 > 0.05), which may suggest that students did not improve significantly after the course. In contrast, with the sig. value at 0.003 (p < 0.05), the difference between the results of two tests in EG was statistically significant.

Table 4.

A comparison of the results in the pre-test and post-test of the two groups

Group		Mean	N	Std. Deviation	Std. Error Mean	Mean	Std. Deviation	t	df	Sig.
	Pre-test	25	24	5.5	1.123	125	4.1	-3.31	23	.883
CG	Post- test	25.125	24	3.98	.813					
EG	Pre-test	25.083	24	4.98	1.016	-3.167	4.69	149	23	.003
	Post- test	28.25	24	5.31	1.083					

In summary, the analysis indicates that students in flipped-taught classrooms outperformed their peers who received traditional instruction. The improvement recorded in EG was notably greater. Consequently, it can be concluded that flipped classroom approach positively impacted students' grammar performance.

Qualitative statistics

To explore the students' attitudes toward the flipped-taught experience, a thematic analysis was conducted following Braun and Clarke's (2006) six-phase framework. The analysis aimed to identify recurring patterns in students' opinions, experiences, and emotional responses. The researchers first familiarized themselves with the data by reading responses repeatedly and generated initial codes, capturing both explicit and implicit attitudes. These codes were then grouped into broader themes such as "General opinions", "Advantages and disadvantages of this approach", "Opinions about the platforms and online materials", and "Learners' motivation" (Table 5). For example, segments such as "I saved much of my time" and "I could learn at any time" were coded under concepts like "Satisfactory aspects of the experience". In the fourth and fifth phases, these themes were refined until they reached clarity. Representative excerpts were selected to support each theme, and the transparency of the text was maintained through reflexive notes. This thematic analysis provided valuable insights into how students perceived the flipped classroom model, revealing both its benefits and the obstacles they encountered during its implementation.

Table 5.

Themes identified during content analysis with their corresponding codes

Theme	Sub-theme	Code/ Keyword	No. of Students
	A more engaging	Less boring	04
	approach	More enjoyable	
Overall aminions		More engaging	
Overall opinions		More effective	
	Traditional classes are	Unfamiliar	01
	better	Prefer traditional learning	
	Time saving for in-	Save time	03
	class time	Listen to instructions while taking notes	
		More time to practice communication	
	Be more proactive in	No longer awkward experience	
Satisfactory	learning	Take care of it by myself	
aspects	Learning flexibility	Learn at any time	03
		Study at my own pace	
		Learn with different learning style	
	Enhanced autonomy	Self-disciplined	05
		Sufficient time to reflect	
		Actively update the tasks	
	Concentration	Distracted by social media	03
		Multitask	
		Surf the Net	
	Technical issues and	Inconsistent sound quality	05
Difficulties	Platform limitations	Video quality inconsistence	
Billicultures		Lack of visual and audio	
		No correct answers shown in quizzes	
	Lack of immediate	Not getting immediate explanations	02
	interaction	from teacher	
		Could not talk to friends	
	Convenience, the ease	Familiar platform	04
Students'	of access	Easy to use	
opinions		Clear instructions	
1	Issues	Could not load	01
.		Logged off me	0.4
Learning	Implicit motivation	Wished to understand the lesson	04
motivation		Scared of being left behind	
		Well-prepared for lesson	

Firstly, the overall opinions about the experience were mixed among the interviewees. Most students described the flipped classroom as "less boring", "more enjoyable" and "more engaging with numerous communicative activities" compared to traditional classrooms. However, one student found this learning unfamiliar and preferred the traditional method.

The flipped classroom appeared to be less boring than traditional classrooms. [...] I found that flipped-taught classrooms were more effective in learning grammar. I also enjoyed the use of time in this class. (Student 1)

To be honest, I found this new type of learning quite unfamiliar; therefore, I was still not used to it. I think, overall, I still prefer the traditional way of learning, as I easily lose

motivation when doing things online. (Student 2)

The second theme concerned the satisfactory aspects of learning grammar in flipped classrooms. Two interviewed participants revealed that flipped-taught classrooms saved them a significant amount of time, as they no longer had to listen to instructions and jot down notes; therefore, they had more time to practice communicative activities in class.

By watching the videos and taking notes at home, I saved much of my time in class by listening to the instructions and writing down the information. [...]. I could spend more time practicing grammar and applying it to communicate with others in class. (Student 1)

I've noticed that I've become more comfortable and confident speaking English to my friends. When I learned the lesson at home, I and my teacher had more time in class for communicative activities, in which I had to use the grammar I had learnt. (Student 5)

A more confident and proactive attitude in learning was also acknowledged in participants' responses. By taking control of the learning and participating in numerous communicative activities in the flipped classroom, students in EG seemed to be at the center of activities and developed a more comfortable and confident manner of using English in class.

It was fun and I gradually get used to joining these activities and using English in class. In traditional classes, we barely have such a lot of activities like this. [...]. In EG class, we have more activities, and we used a lot of English to complete the task. (Student 5)

In addition, flipped-taught classrooms provided students with more flexibility in learning. Students agreed that flipped classrooms allowed them to study regardless of time and place. They were offered greater flexibility, studying at their own pace with their own learning style and reflecting on the lesson without disturbing peers.

I could learn at any time with videos and assigned online tasks. I just needed a laptop with an internet connection, and I could study at home, in a café, or even at school waiting for my dad to pick me up after school. I also had sufficient time to reflect on the lesson, take notes in my own way, and study in my own way, without disturbing anyone. (Student 5)

Students' autonomy is reported to have improved during the learning period. To complete all the videos and tasks, students needed to be self-disciplined and independent, being responsible for the lesson's comprehension. All interviewed students were relatively aware of their duties to complete prerequisite videos and tasks and prepare for the lesson in class.

I found the flipped classroom experience interesting and exciting as I could become more autonomous and independent when learning. I had to actively update the tasks and find time to complete them, without parents' reminders. Furthermore, I had to make sure that I understood the lesson; if there was something too difficult, I would take note and ask you later. (Student 5)

Despite the benefits, students identified several issues with the flipped classroom approach, which was the third theme in the interviews. Concentration is the first problem encountered by students when watching videos. As students were surrounded by numerous distractors and were relatively new to this method, they struggled to stay focused during the time of watching videos. Three out of five students admitted to having lost sight of the content of the videos.

"The biggest problem for me was concentration. [...]. Sometimes I got distracted by social networking sites and mobile phones. I kept checking with my phone, so I missed some

information and then I had to pause and rewatch the videos. So, I had to spend more time on the lessons than I expected." (Student 4)

Another issue that students encountered is the technology and platform used. There were issues with quizzes used and the sound quality of videos uploaded. One video was reported by all students to have such small volume that students barely heard what the teacher said. Therefore, this student suggested that teachers should consider using appropriate micro and editing programs to ensure the video sound quality. Inconsistent video quality was also a concern. While some videos were clear and well-produced, others lacked both visual and audio clarity, which discouraged students from fulling engaging with the materials. Two students complained about the design of the quizzes when they failed to show the correct answers after submission.

The videos uploaded were not quality-consistent. There were some videos having clear sounds and images; however, some did not. This factor sometimes discouraged me from watching the videos. Another problem was that the quizzes did not show me the correct answers, so I didn't know why my answers were wrong. (Student 5)

The sound of the first two videos was unclear. It was really difficult to hear. [...] And there were videos having only the teacher and words on screen, no pictures at all. There were no correct answers shown after the quizzes too. (Student 2)

Two students mentioned the lack of immediate interaction with the teacher when they had trouble with the lesson. One student expressed their disappointment in this answer:

Although I could rewind the video to listen to the part that I didn't understand, the feelings of not getting immediate explanations from the teacher were irritating. (Student 1)

The fourth theme is related to students' opinions about learning platforms and online materials. Four out of five interviewees agreed on the convenience, and the ease of accessing the material on the website, partly due to their familiarity with the platform. The interviewed participants also showed enthusiasm towards the quizzes and handouts embedded in the lesson, which were useful in helping learners review the lessons. The interface was relatively simple without a few steps for students to get into the lesson. Interviewees' opinions were illustrated in the response below:

K12 was a familiar platform which I had been using for a long time, so it was relatively easy for me to use. I didn't need many instructions to operate the lesson. [...] The quizzes were easy too, but they reminded me of what I had learnt. (Student 3)

I agree that the platform was easy to use. I just needed to log in and instructions shown clearly on the screen, so there were no difficulties at all. [...] The quizzes, with many images and sounds, allowed me to recall the lesson effectively. (Student 4)

On the other hand, there are also some complaints about the occasional technical issues on both the website and app, as students sometimes "could not load any videos or show any tasks" or "logged off me while I was watching the videos." (Student 2). The instability of Internet connections also contributed to these problems.

The last theme emerging from students' responses was learning motivation. The main reason why the participants watched all the prerequisite videos was to be well-prepared for the upcoming class. They "wished to understand the lessons beforehand" so that they "could catch up with the progress in the class and did not feel being left behind" (Student 1, Student 3, and Student 4). One student reported that:

My main motivation to watch the videos before coming to class was to understand all the

knowledge needed to complete the exercises. The vision of being ignorant during class time was scary to me so I tried to watch and take note of everything in the videos to make sure that I could catch up with my friends. (Student 5)

In summary, students from the EG had mixed feelings about the experience. However, they agreed that this approach brought them several satisfactory aspects related to time-saving, learning flexibility, increased autonomy and the familiarity of the platform, together with certain problems, including technical errors and a lack of interaction. Finally, the flipped classroom approach seemed to boost learners' intrinsic motivation to complete tasks at home, when they saw the need to prepare before coming to class.

Discussion

This study demonstrates that the flipped classroom method generated a positive influence on participants' grammar performance. This finding agreed with that of other previous studies in the field, in which better performances in grammar were recorded in flipped-taught groups (Warden, 2016; Al-Harbi & Alshumaimeri, 2016; Lee & Wallace, 2018; Noroozi et al., 2020; Lee & Hassell, 2022). The study confirmed that flipped classrooms can not only be applied to other language skills, such as Translation skills (Nga & Thu, 2022); listening skills (Nguyen & Nguyen, 2022); speaking skills (Nong & Thieu, 2023), and writing skills (Nguyen et al., 2019), but it can also be used for grammar classrooms. More importantly, this research highlighted the significance of flipped-taught grammar classrooms in the high school context, which improved both students' academic grammar performance and their confidence in using the language.

Apart from confirming the positive influence on students' grammar performance, this study also suggested flipped classroom approach be a solution to the time shortage in traditional classrooms where teachers focused on forms, drills, and grammar exercises (Nguyen, 2014; Pham & Nguyen, 2014). This finding is in line with the conclusion of Garrison and Kanuka (2004) who agreed that technology integration could help to remove the issue of time shortage. During the experimenting, unlike the CG where traditional teaching methods limited time for communicative tasks (Le, 2011; Nguyen, 2014), the teacher in the flipped classroom found more time for these activities. Students in the EG had more chances to apply learned grammar and received more feedback from the teacher, compared to those in traditional classes when communicative tasks were rarely organized due to the time constraint. Similar findings were reported in the study of Al-Harbi and Alshumaimeri (2014) and Jones et al. (2013), who found that students successfully applied grammatical rules learned in the flipped classroom in productive skills (speaking and writing). This study highlighted a beneficial aspect of the flipped classroom approach in teaching grammar – more time for the Production stage. The study conducted by Le (2011) pointed out that when teachers chose the PPP model to teach grammar in their face-to-face classrooms, the activities were restricted into low order thinking level with lectures and drills; however, in this study, the combination of PPP model and the flipped classroom has allowed the teacher to upgrade the in-class tasks to higher levels (analysis, comparison) in the Bloom's taxonomy.

Regarding students' attitudes toward the experience, this study found that the flipped classroom approach generated mixed feelings among students. On the one hand, the new approach brings much enjoyment to students' learning, aligning with findings of Havwini and Wu (2019) and Al-Naabi (2020), who also noted positive attitudes toward flipped classrooms. On the other hand, some students were reluctant and preferred traditional teaching methods to the flipped experience. This finding aligns with Havwini and Wu (2019) and Li and Li (2022), who

reported that a few students preferred conventional teacher-led lessons. The study of Tran (2024) also pointed out that students may present a level of unwillingness towards blended learning experiences and preferred traditional classroom setting.

Many students were well aware of the benefits associated with this type of learning, including more in-class time for interactive activities, greater flexibility and convenience in learning, and a higher level of autonomy. The study of Saidah (2019) reported similar findings when participants in his study became more independent and were willing to share with friends in discussions or play an active role in learning (Al-Harbi & Alshumaimeri, 2016). The flipped classroom approach has eliminated the passive role of students, and promoted a student-centered classroom. This finding was confirmed in many previous studies, including Herreid and Schiller (2013), Jeong (2015), Saidah (2019), Havwini and Wu (2019), and Abdullah et al. (2019). The study also pointed out that students had more freedom to adopt suitable learning styles in the flipped classroom, as shown in the research of Khodabandeh (2020). One novel report in students' responses to this research was the recognition of the easy access to the platform, which greatly facilitates learning to some extent. Moreover, by dividing the uploaded videos into chunks, the research solved the problem of lengthy videos mentioned by Al-Naabi (2020).

There is limited evidence on the challenges that students may encounter in a flipped classroom. Numerous previous studies tended to focus on the benefits and have not addressed any of students' perspectives on the difficulties encountered. The challenges perceived by students in this study included concentration and inconsistent video quality. In the study by Havwini and Wu (2020), students considered social media to be an unimportant part of learning, which served as a significant distraction during the time spent learning at home in this study. However, none of the preceding research addressed the issue of students' concentration in flipped classrooms, which is heavily influenced by the presence of surrounding digital devices. Additionally, a previous study by Harrison et al (2016) highlighted that the low volume of videos, which negatively impacted students' experiences, was another issue. The poor-quality recorded lectures might hinder students' learning satisfaction (Li & Li, 2022; Baig & Yadegaridehknordi, 2023). The instability of the platform also caused significant damage to the experience. This echoed the results found in Nguyen and Nguyen's (2022) and Khoiriyah's (2021) who claimed the major problem when flipping a class was unstable Internet accessibility. These inconveniences may discourage students from completing the videos, leading to a loss of motivation (Al-Naabi, 2020).

As regards materials, the employment of various types of online learning sources, including quizzes, handouts, etc., was perceived as useful. The study by Nguyen, T. T. (2021) highlighted that students are most satisfied with the online learning experience when they are provided with a diverse range of materials. The findings of the current research supported this view, highlighting that materials should be an aspect worth cultivating carefully in any blended course. Furthermore, the present study confirmed the intrinsic motivation of students when they finish tasks at home. The finding here aligns with the results of Lee and Hassell (2022), which reported that students exhibited good levels of motivation after experiencing the flipped approach. Afraid of being left behind, students tried to complete all the videos and quizzes before coming to class. However, this intrinsic motivation can only be enhanced if there is students' autonomy (Ryan & Deci, 2000a) and self-determination for out-of-class work (Abeysekera & Dawson, 2014).

Conclusion

From the data collected, this study confirms the positive impacts of the flipped classroom method on students' grammar performance. In addition, from students' responses, this learning experience appears to be exciting, interesting, and less boring than the usual classes that they take part in. Findings from the current study indicate that this approach provides learners with more time to practice grammar in communicative tasks, which suggests that it may help address the issue of limited in-class time for production stage in PPP model. Other benefits of flipped classrooms, including the convenience of learning time, the flexibility in learning styles, and enhanced students' autonomy, are also reported by students. On the other hand, some challenges when learning in flipped classrooms listed by students are related to technology, concentration level, and frustration when not getting immediate interaction with teachers. If these problems are solved, the learning experience will become remarkably better and more enjoyable for students.

The findings of this research suggest some implications and recommendations for teachers when applying the flipped classroom approach to teach grammar to high school students as follows:

Firstly, videos need to be produced or chosen carefully, considering their appropriate length and sound quality. According to Snowball (2014), videos used for lectures should have decent audio quality and visibility. Videos should be of appropriate length, ranging from five to under ten minutes with interactive questions in between to make sure that students follow the flow of lessons. If the video covers a complex grammar point, it can be divided into short chunks and inserted into practice drills. These micro-videos should be short and focused, with each video concentrating on a single topic to support clear understanding of the instructional goals (Wei & Peng, 2025). High-quality audio and visuals are crucial, as poor sound or unclear slides can hinder comprehension. To address the issue related to audio volume, all pre-lesson videos should be recorded with quality microphones and checked by different devices before publishing. Subtitles and transcripts can be added to ensure comprehension. Additionally, teachers are encouraged to employ visuals, such as highlighted text, animations, or charts to illustrate rules and examples of grammar points. High-quality audio and well-designed visuals can help lesson extrinsic cognitive load (Mayer, 2021). To increase diversity and maintain student engagement, future lessons should be incorporated with various presentation styles, such as animations, voiceovers with real-life examples, or teacher-student dialogues.

Ready-made videos can be convenient; however, the content must be checked carefully to be aligned with the lesson. Self-recorded videos, on the other hand, can be made to focus on the lesson but are time-consuming. Therefore, the act of preparing videos should be flexible and based on current conditions.

Secondly, online practice tasks should be varied in many forms, such as quizzes, mini-tests, or flashcards, to motivate students. Students should be provided with clear instructions and explanations for their active role in watching videos and completing tasks, and should be encouraged to remove all distractions, such as mobile phones, to fully focus on the lesson. Regarding the issues of time management and concentration, guided worksheets or videowatching checklists that include key points and short reflection prompts can be provided to promote active engagement. To help students stay attentive, some pause-and-think questions or comprehension quizzes can be embedded throughout the videos. Regular checks with specific deadlines and estimated viewing time are required to ensure that in-time reminders can be sent to students if they have not finished the prerequisite materials before in-class time. Class disciplines must be kept strictly to maintain students' continuous learning despite difficulties.

Additionally, students need to be equipped with instructions on various learning strategies so that they can choose the most effective way to learn with videos. Students should be allowed to take notes while listening to the videos, try to explain grammar points in their own words, or replay the videos multiple times until they fully understand the content.

Furthermore, considering the differences in high school conditions across various regions in Vietnam, the flipped classroom approach can be adapted accordingly. In resource-limited environments where access to technology and internet connection is a challenge, educators can adapt the model using locally available tools, printed materials, or setting up community-based learning centers equipped with basic devices (Lo & Hew, 2017). The teachers there can utilize offline videos in the in-Class flip model, allowing students to watch videos directly in class, rather than asking them to do so at home. Special training, along with ongoing support, is necessary for teachers to align flipped learning with the national curriculum and local student needs (Zainuddin & Halili, 2016). Additionally, while this study placed a focus on grammar instruction for tenth graders, the flipped classroom model also offers great potential for other year groups. For lower secondary students (from grade 6 to grade 9), flipped classrooms may employ simpler instructions with shorter and more engaging videos to maintain attention. Gamified activities are also encouraged in the classes for this year group. In contrast, for older students in high schools, pre-lesson videos should offer deeper grammatical content due to the need to prepare for high-stakes exams. By being more disciplined and motivated to learn, these students can be given more peer review, mock tests, and discussions during online class time. The employment of a flipped approach in different year groups can foster learners' autonomy, maximize instructional time, and promote more opportunities to develop suitable activities for each year group within class time. Finally, to compensate for the lack of teachers' immediate responses, a discussion forum should be opened and maintained so that students can receive elaborations from their peers before bringing issues to class. In this way, students can both obtain instant responses and retain the information for a longer period. The use of technology allows students to connect with peers and enhance their participation in in-class activities afterward (Nguyen, T. T. H., 2021)

Limitations of the study

Despite the positive findings related to the impacts of this learning approach, the study has certain limitations that should be acknowledged. Firstly, with only 48 students participating in the research, the sample size is relatively small; therefore, it cannot be said to represent the whole population. Secondly, the sample mainly included 10th graders from similar backgrounds, which may limit the generalizability of the findings. Future studies should involve a larger, more diverse sample across different grades and schools. The 10-week intervention may also have been too short to detect long-term cognitive changes; extended duration and follow-up assessments are recommended. Since the study was conducted in a single institution with specific contextual factors (e.g., emphasis on test-based learning, high English proficiency), results may not be widely applicable. Additionally, purposive sampling based on pre-test scores and reliance on multiple-choice questions limited the assessment to recall-level grammar knowledge. Future research should use more comprehensive tools that evaluate grammar in productive or communicative contexts.

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Biodata

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APPENDICES APPENDIX 1 TEST ITEMS IN THE PRE-TEST

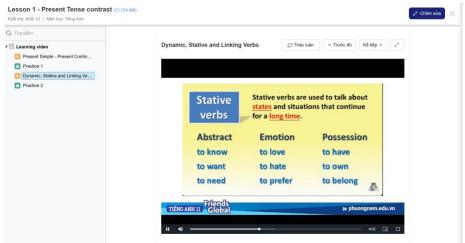
Part 1: Choose the correct answer for each blank. Multiple choice questions

	Multiple choice questions			
1.	I usually coffee	in the morning, but today	I tea because I	have a sore throat.
	a. drink/ am drinking		c. drink/ drink	d. drink/ will drink
2.	Look! It outside	le!		
	a rains	h raining	c. is raining	d. has rained
3.	She confident	in her presentation now.		
	a. is appearing	b. appears	c. appear	d. appeared
4.	a. is appearing The flowers	wonderful.		
	a. smell	b. are smelling	c. have been smelling	d. smelt
5.	Three years ago, Janet But	rns herself slidi	ng into depression.	
	a. has felt	b. feels	c. felt	
6.	Bats for several	years, responsible for infe	ecting seven of every 10 p	eople who develop
	the disease.			
	a. have been	b. had been	c. were	d. are
7.	Each year, about 55, 000 p	people an emerg	gency series of rabies shots	s, because they
	think they have been expo	sed.		
	a. have received The investigation is ongoing	b. received	c. had received	d. receive
8.	The investigation is ongoing	ng and we pres	umptions about the cause	of death.
	a. won't make	b. didn't not make	c. hadn't made	d. hasn't made
9.	The U.S now _	the worst measle	es outbreak since the disea	se was declared
	eliminated in the U.S. in 2			
	a. has/ experienced	-		d. is/ experiencing
10.	If I the job of m	y dreams, I would be very	/ happy.	
	a. had		c. will have	d. would have
11.	Will you be angry if I	your pocket dictionary	?	
	a. stole	b. have stolen	c. were to steal	d. steal
12.	In one year's time, she	for this company to	or 15 years.	
	a. will be working		b. will have been workin	g
	c. will work		d. has worked	
13.	While Iat the bu			
1.4	a. was waiting			d. were waiting
14.	I can't come to class next	morning a too	oth taken out.	1 7 1 1 1 1 1
	a. I'm having	b. I have	c. I'll have	d. I didn't have
	A short paragraph	1 1 1:11:	1. 6 1.11 1.337.1	1 11 11
	Baking cookies with Gran			
	cozy kitchen, the air thick			
	through each step, from creations	eaming the butter and suga	ir to sprinkling the perfect	amount of chocolate
	chips.	ally living on my oven E	Poleina howayan (15)	trialsian than I
	Now, years later, I'm fina			
	anticipated. Grandma alw			
	(16) on her for gradition.	uldance, and without it, i	Tell 1081. But I'll detellin	med to carry on her
		17) racinas an m	y oven. Thorologatill a lone	r way to go but I'm
	With some practice, I'm (confident that someday, I	(18) viithout her	y Owll. There's sull a long	g way to go, but I III
	longided cookies hold a sn	cial sweetness a reminde	r of the love and laughter t	hat filled Grandma's
	lopsided cookies hold a spekitchen.	cciai sweemess, a teiminde	i of the love and laughter t	mai mitu Ofanuina S
15	a. proved	b. is proving	c. has proven	d. proving
	a. use to rely	b. didn't use to rely	c. used to relied	d. used to rely
	a. getting used to navigating		b. used to navigate	a. used to fery
1/.	c. getting used to havigate		o. used to navigate	

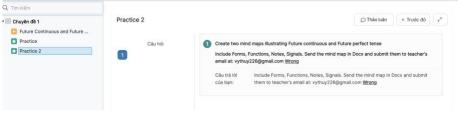
18.	a. will be used to bakec. will be used to baking	b. will be use to baking		
	c. will be used to baking	d. get used to baking		
	Multiple choice questions			
19.	The rain for hour	s, causing floods in the lo	w-lying areas.	
	a. has been pouring	b. has poured	c. poured	d. is pouring
20.	You have revised a lot. I'm	sure that you	the exam.	
	a. might pass	b. won't pass	c. will pass	d. could pass
21.	That be Jane in th			1
				d. might not
22.	a. will By 2040, we only a ate	processed food.		C
	a. ate	b. will be eating	c. eat	d. will have eaten
23.	a. ate That's girl I've ev	ver met.		
	a. the smartest	b. the smarter	c. smarter	d. smartest
24.	Jane is not her bro	other.		
	a. more intelligent as		c. so intelligent as	d. so intelligent
	that		8	J
25.	Of the two sisters, Linda			
	Of the two sisters, Linda _ a. is beautiful	b. the most beautiful	c. is more beautiful	d. is so beautiful as
26.	My neighbor is driving me	mad! It seems that	it is at night. he pl	avs his music.
	a. the less late – the more l	oud	b. the less late – less	<i>j</i> =
	a. the less late – the more l c. the more late – the more	louder	d. the later – the louder	
27.	I wish I a car. I'm	tired of catching the bus t	o work every day.	
	a. had had	b. had	c. have	d. will have
28.	Unless she			
20.	a. don't know	h. knew	c knows	d. would know
29	Laura can't take part in the			
_,.			part in the singing contes	
			articipate in the singing co	
			to take part in the singing of	
			articipate in the singing co	
30.	I regret not booking the sea	_		
_			b. If only I booked the	e seats in advance.
	c. I wish I have booked the			
31.	The last time she went out		•	
_	a. She hadn't gone out with			him two years ago
	c. She hasn't gone out			
	years	,	8	
32.	The carready for hi	m by the time he comes to	omorrow.	
	a. will be	b. will have been		d. are going to be
33.	They in France, bu			88
	a. are living/ visit	b. live/visit	c. living/ visiting	d. live/ are visiting
Par	t 2: In each space, put a/a			
	It has been announced that			s been (35)
	rise in (36) numb	per of people unemployed	d. rather than the fall that	had been predicted.
	(37) rise was blan			
	couldn't come at a worse tin			
	over the way the present cr	risis is being handled. MP	s are increasingly voicing	fears that despite the
	recent devaluation of the po	ound and cuts in interest ra	ates, the government still e	xpects (39)
	recovery of the economy to			1 ()
	, stonomy w		Grammar for PET (Hasher	ni & Thomas. 2006)
		1	(,)

APPENDIX 2 EXAMPLES OF PRE-LESSON VIDEOS AND EXERCISES

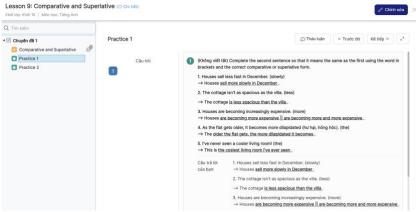
Pre-lesson video 1: Lesson 1 Present Tense Contrast



Practice on lesson 8: Future continuous and Future perfect



Practice on lesson 9: Comparative and Superlative



Practice on lesson 10: Imaginary situations

