



## EFL Sophomores' Perspectives on the Application of Computer-Assisted Games in Grammar Classes

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### ABSTRACT

#### Keywords:

Computer Assisted Games, grammar, perspectives

The integration of computer-assisted games in teaching English has become a current trend in second language teaching. However, research concerning students' perspectives on the application of computer-assisted games in grammar classes remains limited. Consequently, this study was conducted to explore how 70 EFL sophomores at Van Lang University perceive the use of computer-assisted games in grammar lessons. A mixed-methods approach, combining quantitative analysis from an online survey and qualitative insights from a semi-structured interview, was utilized to collect data. The results revealed that EFL students have a favorable voice towards the implementation of computer-assisted games in grammar classes, emphasizing the benefits of enhancing students' understanding, learning motivation, and language competence.

### Introduction

Grammar is a set of rules that structure how words and phrases are used in a language. It governs the arrangement of words, the agreement between subjects and verbs, and the use of tenses. Chomsky (1981) introduced the concept of "universal grammar," proposing that grammar was not only a general theory of language but also an essential part of every language's structure. Having the same mindset, Greenbaum (1982) asserted that grammar served as a theory describing language or as a framework for analyzing a specific language. Similarly, Chomsky (1982) also affirmed that grammar was a unique set of principles that governed distinct structural rules for each language.

The importance of grammar in language learning has been discussed in the existing literature. Jespersen (2013) claimed that grammar was a key component of any language system that provided the foundational structures for communication. Loewen et al. (2009) emphasized the significance of grammar in improving students' language skills. In particular, grammar was perceived as the backbone of language learning, which helped learners to express themselves clearly and accurately. Therefore, learning grammar was often for the goal of effective communication.

Despite its importance, learning grammar has been reported to be significantly challenging for many learners. Haudeck's research, cited in Sani (2016), concluded that students often struggled to understand grammatical rules, which caused anxiety and discomfort. Consistently, Yunita (2013) strengthened the discussion with a statement that students viewed grammar lessons as tedious, especially when taught through deductive methods with mechanical exercises, repetitive routine, and a non-interactive learning atmosphere. As a result, learners found grammar lessons frustrating.

When comparing the aforesaid issue to the actual environment at Van Lang University, through the author's observation, more than 70% of students who had previously attended grammar classes showed their marked reluctance in grammar lectures, with the majority of the reason being that the learning that occurs is frequently highly theoretical. As a result, selecting an effective grammar teaching technique is critical. One promising solution is the integration of technology into grammar instruction. Reportedly, the existing literature review demonstrates several studies discussing the effectiveness of computer-assisted games (CAGs) in grammar classes. Nevertheless, the discussion about students' perspectives on the use of CAGs in grammar classes remains scarce, and there hasn't been any paper addressing this issue in the Vietnamese context. Therefore, this study was conducted to bridge a gap in contemporary literature. The study investigated EFL sophomores' views on the implementation of CAGs in grammar classes, focusing on the beneficial effects of CAGs in learning grammar and concerns raised over their use.

## Literature review

### *Definitions of Grammar in language learning*

The ongoing literature review defines grammar in different ways. Grammar was considered a system of meaningful structures and patterns guided by specific pragmatic constraints (Larsen-Freeman, 2001). Having the same mindset, Thornbury (1999) defined grammar as a description of the rules for generating sentences, including an analysis of the meanings that these forms communicate. Clarifying the definition of grammar, Debata (2013) emphasized that grammar was the study of word combinations in a given language, likening English grammar to the foundation of a house that supported its expansion. Chomsky (1981) added another aspect to the definition of grammar by using the term "universal grammar," which meant a set of principles shared by both languages and a mechanism that only worked with specific inputs, distinguishing it from the linguistic qualities inherent to the human mind.

Reportedly, the significance of grammar in language learning has been discussed by several educators. Kohli (2007) illustrated grammar's importance using the analogy of two drivers: one with basic driving knowledge and the other with both driving and mechanical expertise. The second driver, like a grammarian, could troubleshoot problems confidently, underscoring the role of grammar in effective language use. O'Hare (1973) strengthened the idea by claiming that grammar governed word types and sentence structures that were essential for clear expression. Sharing the same perspective, Smith and Hillocks (1991) noted that proper grammar was crucial for minimizing misunderstandings. Furthermore, Jespersen (2013) stated that the grammar of each language constitutes its system, with each of its elements standing in a specific connection and depending on all of those aspects.

### *Students' difficulties in learning grammar*

Grammar is perceived as an essential component of learning English. Nevertheless, there are numerous difficulties that students encounter while trying to understand the implications of

grammar lessons in an ESL or EFL setting. Previous research by Alsied, S. M., Ibrahim, N. W., and Pathan, M. M. (2018) revealed that grammar can be a tough subject for most English learners. Consistently, educators affirmed that the inherent complexity of grammar structures and the influence of students' native language caused problems in learning grammar. Specifically, students claimed that some grammatical points were hard to master due to their complicated syntactic constituents, while the habit of using their first language frequently led to errors and misunderstandings in applying English grammatical rules. The study of Haudeck in Sani (2016) discussed the same notion with the confirmation that many students found it challenging to internalize grammar principles. Students were terrified of making mistakes in grammar; therefore, they tended to avoid them. Nguyen (2020) highlighted that mastering and using English grammar posed a significant challenge. She explained that individuals believed mastering grammar was useless because the speaker would eventually start to ignore it.

Several studies pointed out that the traditional teaching approach was the root of difficulties in learning grammar. Yunita (2013) asserted that English grammar was still viewed as a difficult subject since grammar lessons were still carried out using the conventional approach. Having the same notion, Mahdi (2018) noted that traditional teaching methods made grammar learning more challenging, and students' performance was unsatisfactory. Nisha (2024) strengthened the notion when explaining that outdated teaching methodologies like the grammar-translation method were less impactful in increasing students' understanding and motivation. In the same vein, Guner (2017) claimed that traditional grammar teaching methods focusing on rule-based understanding affected students' psychology negatively and made them bored or frightened during grammar lessons.

### *Computer-Assisted Language Learning*

#### *What is Computer-Assisted Language Learning?*

The significance of computers in English language learning and teaching is best understood in Computer-Assisted Language Learning (CALL), a method that applies technology to the study of languages (Januszewski & Molenda, 2008). Chapelle (2001, pp. 27–43) categorized CALL as one of six computer-related sub-disciplines, including educational technology, computer-supported collaborative learning (CSCL), artificial intelligence, computational linguistics, corpus linguistics, and computer-assisted assessment. The application of computer-aided learning principles to the context of language learning is known as "computer-aided language learning." Huizhong (1985) defined CALL as when a computer is utilized as a teaching tool to enhance learning by assisting students in better comprehending the learning content. This means that CALL lessons can be taught using tutorials, exercises, practice tools, and simulations.

Simply expressed, CALL is described as an approach to language teaching and learning in which computer technology is employed to help with the presentation, reinforcement, and assessment of material (Hubbard & Levy, 2016). Learning takes place, and an important interactive component is frequently included. CALL, as defined in this study, refers to the use of multimedia CD-ROMs that incorporate text, image, audio, and video files to teach English as a second language.

#### *Computer-assisted games (CAGs)*

The popularity of CALL in language learning and teaching results in the trend of using computer-assisted games (CAGs) in educational contexts. Thus, CAGs emerged as a new, popular term that was defined diversely. Basically, Ural (2009) considered computer-assisted games as a type of game developed by modifying entertaining and stimulating computer games

to enhance educational quality. Squire (2003) added a notion to the definition when claiming that entertaining and motivating factors were components of CAGs, displayed on technological platforms that were designed to facilitate the learning of course content.

### *The application of CALL in language learning and teaching*

The effect of CALL on language learning and teaching has been the subject of numerous studies across the globe. The research by Ahmadi (2018) demonstrated the features and advantages of technologies in some areas that instructors should be conscious of when helping students improve their English proficiency. Supporting this claim, Laurillard (2009) and Shafaei (2012) emphasized the effectiveness of CALL in enhancing the learning environment and students' learning outcomes. In the same vein, Almekhlafi (2007) conducted research on the efficacy of CALL in an EFL context. The findings demonstrated that CALL contributed significantly to students' achievement. The use of computers in the presentation of the subject, the caliber of the course materials, and their rapid accessibility for consultation and revision were outstanding factors contributing to the effectiveness of CALL in language learning and teaching.

### *The application of CALL and CAGs in teaching grammar*

With the introduction of networked computers and, in particular, the internet, learners are increasingly being asked to develop and perform their computer-based activities. Many instructors are switching from standalone workstations to increasingly networked PCs as a result of the expanding availability of Internet connectivity (Debski, 2000; Warschauer & Kern, 2000). Young (2011) implemented CALL in his grammar classes. With the application of Google and the Web-as-corpus approach, his students improved their understanding and produced better writing works. Similarly, Kilickaya and Krajla (2012) applied CALL in grammar lessons, implementing a Web-based comic strip creation site. The findings demonstrated that students were more engaged in grammar classes and their reading and writing skills were improved. On a similar note, Mohamad (2009) studied the effects of the Internet-based grammar instructions in grammar classes to confirm the positive impacts of CALL in teaching grammar. She claimed that applying CALL in teaching grammar increased students' engagement and improved their testing results. Jensen and Sandlin (1992) asserted the same conclusion that students who used CALL significantly improved their exam results as well as the quality of their coursework. The research by Tu (2022) demonstrated the same findings with the conclusion that implementing educational technology in grammar classes provided students with various exercises and online tests for self-learning and self-training. Consequently, it enhanced students' learning performance.

Similarly, the ongoing literature review has discussed the implementation of CAGs in teaching grammar. A great number of teachers have employed CAGs to facilitate students' learning processes and reinforce particular grammatical aspects. Deesri (2002) posited that these games enhance learners' ability to practice grammar in a communicative way. Emphasizing the notion, Can and Cagiltay (2006) noted the efficacy of CAGs in arousing students' attention to grammatical points and providing them with opportunities to practice grammar communicatively. Mohamad and Amin (2009) added another idea to the discussion when highlighting that CAGs facilitated the learning process and created a motivating and interesting learning atmosphere in which students could understand complicated grammatical concepts. Supporting this claim, Whitton (2007) explained that CAGs created a system that motivates students to keep practicing a structure, which typically bores them after many repetitions.

### *Related studies*

Reportedly, Razak, Connolly, Baxter, Hainey, and Wilson (2012) asserted that learners' enjoyment of using computer games for education motivated educators to employ CALL in their language teaching. Therefore, investigating students' attitude towards the application of CALL in the classroom is a prerequisite. Ayres (2002) conducted a study to investigate students' attitudes towards the use of CALL in English classes. The findings concluded that students had a positive voice on implementing CALL in English lessons and confirmed their increased motivation for English learning.

In the same vein, Almekhlafi (2006) carried out quantitative research with the participation of eighty-three elementary-prep school students, who were divided into controlled and experimental groups to discover the effects of CALL in an EFL context. With the data obtained through pretest, posttest, and survey, the study emphasized positive impacts of CALL in enhancing students' learning outcomes. Additionally, the findings displayed that students voiced agreement on the use of CALL in classes.

Conversely, another conclusion on students' perceptions towards the use of CALL concerned educators. In a study conducted in 2009, Jarvis and Szymczyk (2009) discussed how students perceive learning grammar with web-based materials compared with book-based ones. The findings highlighted that students supported paper materials since they were easier to access compared to online materials. Furthermore, students felt reluctant to use web-based resources due to their low technological literacy.

Generally, there have been a lot of studies on various grammar teaching methods as well as the application of technology in grammar classes. However, research on CAGs in the grammar study program is limited. The issue that discusses students' perspectives towards the implementation of CAGs in grammar lessons is even scarcer. Therefore, this study was conducted to discover how students perceive the use of CAGs in grammar classes. The findings provide deep insight into the impacts of CAGs on learning and equip EFL teachers with a specific reference for implementing CALL in language teaching. In addition, the research encourages teachers to utilize technology to innovate their teaching methods.

### *Research Questions*

To fulfill the mentioned purposes, the study focuses on these research questions:

Research Question 1: What are EFL sophomores' attitudes towards grammar learning?

Research Question 2: How do second-year English majors experience the implementation of computer-assisted games in grammar classes?

Research Question 3: How do second-year English majors perceive the application of computer-assisted games in grammar classes?

## **Methods**

### *Pedagogical Setting & Participants*

The research was conducted at Van Lang University, which was established in 1995 and has attained numerous educational milestones, earning recognition as a prominent private university in Vietnam.

The convenient sampling method was chosen for this study because it was the most practical and simple way to gather data quickly (Douglas, 2022). The study was carried out during the



second semester of the school year 2023-2024 with the participation of seventy EFL sophomores at Van Lang University. The participants had to enrol in Grammar 1 and Grammar 2 courses for the first two years to ensure quality in their grammar competence. Seventy students participating in the research were asked to complete an online questionnaire. Consequently, based on the outcomes of the courses Grammar 1 and Grammar 2, and in accordance with the purposive sampling method, which allows the author to deliberately select participants who have specific characteristics or experience relevant to the research questions (Ahmad & Wilkins, 2024), ten students were chosen to participate in the structured interview. Ten interviewees, of whom three achieved excellent, four had good, two got mediocre, and one had poor scores, were asked to share their attitudes towards grammar learning, their experience with CAGs in grammar classes, and their perspectives on the benefits and concerns regarding the use of CAGs in grammar lessons.

### *Design of the Study*

The research employed a mixed-method approach, collecting qualitative and quantitative data to answer the research questions. This paradigm proved to mitigate or eliminate some of the distinct disadvantages of each method while allowing the strengths to complement each other (Byrne, J., and Humble, Asia M., 2007). The research used an online questionnaire that was posted on the fan page of K27 on the Facebook platform to collect the quantitative data, while the qualitative data was obtained through a structured interview. The combination of these methods was proposed to gather valid and reliable data to discover EFL sophomores' perspectives towards the impacts of CAGs on their grammar learning and their suggestions for a favorable application of CAGs in grammar classes.

### *Data collection & analysis*

#### *Questionnaire*

The questionnaire consists of 30 questions, divided into two main sections. The first one gathers demographic details such as gender, age, and grammar competence. The second section with 27 questions split into three parts: Part A with 11 questions (questions 1-11) examines students' attitudes toward grammar learning; Part B having 5 questions (questions 12-16) investigates sophomores' experience with the implementation of CAGs in grammar classes, and Part C consisting of 11 questions (questions 17-27) discovers participants' perspectives on the application of CAGs in grammar lessons.

The online survey was designed on Google Forms and uploaded to the Facebook page of Group K27. It took the participants approximately 5 minutes to complete. In an attempt to maintain the confidentiality of the collected data, participants may choose to use pseudonyms or omit their identities when responding. The questionnaire items were adapted from Kayan and Aydin (2023), who had previously validated these questions.

The online questionnaire with 27 items included five multiple-choice questions and twenty-two five-point Likert Scale questions in which the participants were asked to select one of the following options, ranging from totally disagree (1) to totally agree (5). The collected data was analyzed with the Statistical Package for the Social Sciences 26 (SPSS 26) and the results were presented as specific numbers and percentages (%).

The researcher employed Cronbach's Alpha to assess the reliability of the data collected from the online questionnaire, ensuring the consistency of responses.

Table 1.  
Cronbach's Alpha (N=70)

<b>Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha based on Standardized items	N of items
.910	.925	22

<b>Variables</b>	<b>Cronbach's Alpha</b>	<b>N of items</b>
Participants' attitudes toward grammar learning	.882	11
Participants' perspectives on CAGs	.812	11

As shown in Table 1, the Cronbach's Alpha is .910, which exceeds the benchmark value of .7, which confirms the consistency of participant responses across the 22 questions. Specifically, the Cronbach's Alpha for the variable of participants' attitudes toward grammar learning, through 11 items, is .882. Similarly, the variable of participants' opinions on the CAGs with 11 items has a Cronbach's Alpha of .812. In conclusion, these Cronbach's Alpha results confirm that the questionnaire items were highly reliable for practical research ( $0.6 < \text{Cronbach's Alpha} < 1$ ).

### *Interviews*

Qualitative data were collected through structured interviews with 10 students selected based on their average scores in two courses, Grammar 1 and Grammar 2. Specifically, three students who achieved excellent scores, four with good scores, two with mediocre scores, and one with poor scores answered seven questions. They joined a 10-minute online interview via Microsoft Teams to share their attitudes toward grammar learning, their experiences with CAGs in grammar classes, and their views on the benefits and concerns of using CAGs in grammar lessons. The interviews were conducted in Vietnamese, the native language of the participants and the researcher, to ensure clear communication and avoid misunderstandings. The responses were later translated into English for analysis.

The qualitative data from the interviews were interpreted using thematic analysis, which involved open and axial coding (Ary, Jacobs & Sorensen, 2010). Particularly, open coding was employed to identify key patterns in the participants' opinions on grammar learning, their experience with the use of CAGs in grammar lessons, and their perspectives on the implementation of CAGs in grammar instruction. Consequently, axial coding was then applied to link these patterns, develop themes, and draw broader conclusions on these subjects.

## **Results/Findings**

### *Results of the online questionnaire*

The quantitative data from the online questionnaire were analyzed using descriptive statistics in SPSS 26, focusing on the mean, minimum, maximum, frequency, percentages, and standard deviation. The results were organized under the following headings: Demographic information, Participants' attitude on grammar learning, Participants' experiences, and Participants' Perspectives.

### *Demographic information*

**Table 2.**

Demographic data on participants' genders and ages (SPSS 26)

<b>Genders</b>	Male	<b>Frequency</b>	<b>Percentages</b>
	Female	20	28.6%
		50	71.4%
<b>Ages</b>	19	60	85.7%
	20-22	8	11.4%
	Over 22	2	2.9%

The results in Table 2 demonstrate the participants' genders and ages. Reportedly, the majority of the respondents were female (N = 50), while the number of males was 20, comprising 28.6% of the sample. Additionally, the data revealed that most participants were young learners who had fresh perspectives and diverse viewpoints that could provide deep insights for the study. Specifically, more than 80% of the respondents (N=60) were 19 years old, compared to nearly 3% who were over 22. The ages of 20 and 22 were 8 students, contributing 11.4% to the sample.

**Table 3.**

Demographic data on participants' grammar competence (SPSS 26)

<b>Average scores of Grammar 1 and Grammar 2</b>		<b>Frequency</b>	<b>Percentages</b>
	9 – 10	10	14.3%
	7 – 8.9	35	50%
	5 – 6.9	20	28.6%
	Under 5	5	7.1%

The findings in Table 3 indicate that a majority of participants had a high competence in grammar. Specifically, 64.3% of students scored between 7 and 10, which showed that they had an above-average level of proficiency. Within this group, 14.3% achieved the highest scores (9–10), while 50% fell within the 7–8.9 range. Meanwhile, 28.6% of the participants were moderately proficient with scores between 5 and 6.9, and only 7.1% of the samples needed additional support when getting below 5.

### *Research Question 1: What are EFL sophomores' attitudes towards grammar learning?*

The gathered data examined how the participants perceive grammar learning in their curriculum, represented in two aspects: the roles of grammar and the purposes of learning grammar.



**Table 4.**

Participants' opinions on the roles of grammar

Items	Questionnaire	N	Mean	SD
1	I believe that mastering grammar is crucial in learning English	70	3.55	1.146
2	I believe that learning grammar is useful for future work.	70	3.6	1.142
3	I believe that understanding grammar is necessary for effective communication	70	3.25	.967
4	I feel that grammar is a fascinating topic in school.	70	3.05	.999
5	I have a hard time remembering grammatical structures.	70	4.15	.813

As shown in Table 4, the participants showed their moderate agreement with the idea claiming the importance of grammar in learning English (Mean = 3.55) and their future work (M=3.6), with 20% and 30%, respectively. Similarly, the sophomores expressed their neutral notion of the role of grammar in communication with a mean score of 3.25. Notably, the respondents neutrally claimed that grammar was an interesting subject. Conversely, most of the sophomores (70%) expressed their strong agreement with the idea that it was challenging to remember grammar rules (M=4.15).

**Table 5.**

Participants' purposes of learning grammar

Items	Questionnaire	N	Mean	SD
6	I study grammar as it is compulsory in the curriculum	70	3.94	0.948
7	I study grammar to enhance my reading comprehension.	70	3.86	0.910
8	I study grammar to strengthen my listening abilities.	70	3.51	1.016
9	I study grammar because of future career requirements.	70	3.92	0.894
10	I study grammar out of personal curiosity.	70	3.27	1.040
11	I study grammar to employ appropriate and adaptable sentence structures when speaking and writing in English.	70	4.07	0.824

In terms of the participants' purposes for learning grammar, the results in Table 5 reveal that the mean scores mostly fall within the range of moderate to high agreement (M=3.51 – 4.07). This indicates that there are various motivations for learning grammar. Specifically, the students asserted that they tried their best to study grammar because grammar governed how sentences were constructed. Thus, knowing grammar could produce grammatically correct sentences in both speaking and writing (M=4.07). They also affirmed that they were motivated to learn grammar since mastering grammar helped them comprehend reading texts more easily (M=3.86) and understand English conversations better (M=3.51). Therefore, they perceived grammar as a compulsory component of the curriculum (M=3.94). In addition, more than 70%

of the participants agreed that they studied grammar to prepare for future career requirements ( $M=3.97$ ). However, the respondents expressed their neutral notion of studying grammar just to satisfy their curiosity ( $M=3.50$ ).

*Research Question 2: How do second-year English majors experience the implementation of computer-assisted games in grammar classes?*

The collected data explored how the participants experienced the use of CAGs in grammar classes across four main dimensions: the frequency, the kinds of games, the organization, and the purpose of teachers.

**Table 6.**

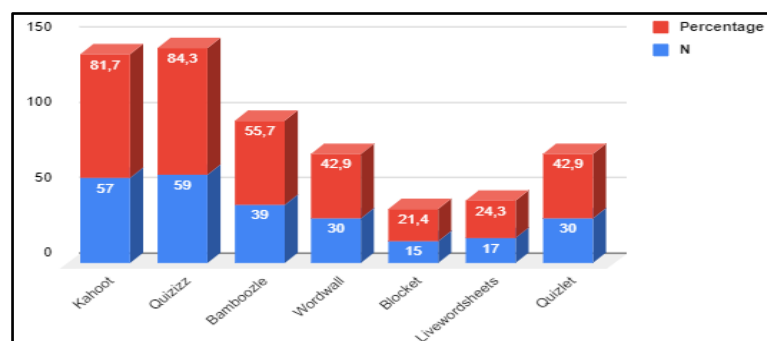
Descriptive statistics of the frequency of CAGs in grammar classes

Item	Questionnaire	Courses	Frequency	Percentages
12	How often does your teacher implement CAGs in grammar lessons?	Every lesson in the syllabus	8	11.4%
		Most of the lessons in the syllabus	18	25.7%
		Some lessons in the syllabus	31	44.3%
		One or two lessons in the syllabus	13	18.6%

The results in Table 6 highlight that all participants have experience participating in CAGs in grammar lessons. Reportedly, nearly 40% of the students asserted that they often played CAGs when learning grammar. In particular, more than 10% of the sophomores confirmed that their teachers organized CAGs in every lesson in the syllabus, and more than 25% noted they had experience playing CAGs in most of the lessons of the course. Nearly 45% of the respondents reported that their teachers conducted CAGs in some grammar lessons, compared to over 18% who only had one or two times playing CAGs in grammar classes.

**Figure 1.**

Kinds of CAG applied in grammar classes



The bar chart presents a diversity of CAGs implemented in grammar classes. As shown in Figure 1, Kahoot and Quizizz were the most frequently used and preferred platforms, with 81.7% and 84.3%, respectively. With 55.7% of responses, Bamboozle was the third most popular game, followed by Wordwall and Quizlet (42.9%). Conversely, slightly over 24% of the participants played Liveworksheets, and more than 20% knew about Blocket. Overall, the diversity in the game types suggests the variation in teacher preference, classroom context, student learning style, and accessibility to certain platforms.

**Table 7.**

Descriptive statistics of the organization of CAGs in grammar classes

Item	Question	Organization	Frequency	Percentages
14	How does your teacher conduct CAGs in grammar classes?	Group work	4	5.7%
		Pair work	16	22.9%
		Individual work	50	71.4%

The collected data in Table 7 reveal that individual work is the most common way teachers conduct CAGs in grammar classes (71.4%). This suggests a strong preference for using CAGs as tools for independent grammar practice rather than collaborative tasks. Meanwhile, nearly 23% of the students indicated that their teachers focused on peer collaboration when organizing CAGs in pair work. In contrast, only 5.7% reported experiencing CAGs in group settings. Generally, the findings noted that CAGs are predominantly used in a way that emphasizes individual practice rather than larger collaborative learning.

**Table 8.**

Descriptive statistics of the duration of CAGs in grammar classes

Item	Question	Duration	Frequency	Percentages
15	How long does the game last in each session?	Between 5 and 7 minutes	32	45.7%
		Between 7 and 10 minutes	24	34.3%
		Between 10 and 15 minutes	9	12.9%
		Over 15 minutes	5	7.1%

As displayed in Table 8, a majority of the sophomores (80%) claimed that the duration of CAGs in each session lasted under 10 minutes. Particularly, more than 45% of the students reported that the time for playing games in grammar class was between 5 and 7 minutes, while the longer duration of 7 and 10 minutes was organized in the class of 24 respondents, contributing to 34.3% of the sample. This indicates that the duration of each session is appropriate and in harmony with the organization of individual work. The duration between 10 and 15 minutes was rare, with just nearly 13% of the participants reporting. The other 5 students confirmed that the game lasted over 15 minutes, composing 7.1% of the total responses. As a whole, the duration of CAGs in each session was less than 10 minutes, which was well-matched with the purpose of focusing on individual practice.

**Table 9.**

Descriptive statistics of the objectives of conducting CAGs in grammar classes

Item	Question	Duration	Frequency	Percentages
16	What is the objective of employing CAGs in grammar classes?	Teachers use it as a lead-in activity to introduce a new lesson.	25	35.7%
		Teachers utilize it to help students practice new grammatical structures and concepts.	48	68.6%
		Teachers use it as a reviewing activity to help students remember structures that they have learned.	41	58.6%

The data in Table 9 highlights the various purposes for which teachers employ CAGs in grammar classes. The most commonly reported objective was to help students practice new grammatical structures and concepts (68.6%). The purpose of using CAGs as a reviewing activity came second with 41 responses, consisting of 58.6 % of the total sample. There were also 25 students asserting that their teachers used CAGs as a lead-in activity to attract students' interest and introduce the lesson. In general, teachers employed CAGs in grammar classes to support students' comprehension, retention, and learning motivation.

*Research Question 3: How do second-year English majors perceive the application of computer-assisted games in grammar classes?*

The quantitative data gathered from the questionnaire regarding participants' opinions on the implementation of CAGs in grammar classes were divided into two main aspects. The first one explores the participants' views on the benefits of CAGs for learning grammar, while the second investigates difficulties students may encounter when playing CAGs in grammar classes.

**Table 10.**

Descriptive statistics on the sophomores' perspectives on the benefits of CAGs in learning grammar

Items	Questionnaire	N	Mean	SD
17	CAGs make grammar lessons more interesting	70	4.03	.0851
18	I can understand grammatical structures deeply, thanks to playing CAGs	70	3.97	0.894
19	I can remember the grammatical structures longer, thanks to playing CAGs	70	3.86	0.976
20	CAGs provide opportunities in which I can apply grammatical structures in speaking or writing	70	3.93	0.801
21	CAGs enable me to be more engaged in grammar classes	70	4.03	0.803
22	CAGs increase my motivation for learning grammar	70	4.12	0.822

The results in Table 10 demonstrate that the sophomores hold a positive perspective toward the

use of CAGs in grammar lessons. With the range of mean scores from 3.86 to 4.12, the participants expressed their high agreement with the benefits of these games in grammar learning. Specifically, nearly 80% of the respondents acknowledged that CAGs made grammar lessons more interesting ( $M=4.03$ ) and increased their engagement in grammar classes ( $M=4.03$ ). Consequently, most participants (more than 80%) asserted that the employment of CAGs motivated them to learn grammar ( $M=4.12$ ). Additionally, the students were in favor of the roles of CAGs in grammar learning. In particular, the sophomores noticed that CAGs were beneficial in helping them understand the structures deeply ( $M=3.97$ ), remember the structures longer ( $M=3.86$ ), and provide opportunities to practice new structures in speaking or writing ( $M=3.93$ ).

**Table 11.**

Descriptive statistics on the sophomores' perspectives towards the concerns about the use of CAGs in grammar classes

Items	Questionnaire	N	Mean	SD
23	I get bored when teachers apply CAGs too much in grammar classes.	70	2.47	1.135
24	I am easily distracted by CAGs in grammar classes	70	2.83	1.106
25	I feel stressed when competing with my friend through CAGs	70	2.56	1.129
26	I feel that CAGs take up too much class time that could be used for other learning activities.	70	2.20	1.091
27	I feel that CAGs do not provide enough opportunities to practice grammar rules.	70	2.26	1.034

The results presented in Table 11 indicate that the participants do not perceive CAGs as a significant concern in grammar classes. With a mean score of 2.20, the sophomores disagreed with the idea that CAGs were time-consuming. They also expressed their disagreements with the statement devaluing the role of CAGs in grammar practice ( $M=2.26$ ). Additionally, most of the students asserted that excessive use of CAGs was not widely seen as a boredom factor and the competition in CAGs was not a source of stress, with mean scores of 2.47 and 2.56, respectively. However, the respondents were neutral regarding the notion of the distraction caused by CAGs ( $M=2.83$ ), indicating that there was slightly more concern about this issue.

### *Results of the structured interview*

*Question 1: How important do you think grammar is in learning English? Why?*

The responses from the 10 interviewees revealed diverse perspectives on the role of grammar in English learning. The findings were consistent with the questionnaire results, which indicate that most participants acknowledge the importance of grammar. Specifically, seven interviewees strongly emphasized the significance of grammar in English learning. They asserted that mastering grammar contributed to effective communication, proper academic writing, and professional language use.

*"We couldn't produce meaningful sentences correctly unless we learned grammar. Sentences followed grammar rules strictly." (Participant 1)*

*"Understanding grammar helps me improve both speaking and writing, making my communication more precise." (Participant 2)*

*"It's vital to learn grammar since grammar helps us construct correct sentences in both speaking and writing skills." (Participant 3)*

*"We can produce clear messages unless we know grammar. I think grammar governs how you build up correct sentences." (Participant 4)*

*"Mastering grammar helps me be confident in speaking and writing in formal contexts." (Participant 5)*

*"I can have effective communication with other people when I understand grammar completely." (Participant 6)*

*"Academic writing heavily relies on grammar. Your ideas might not be clearly communicated if you don't employ the proper sentence patterns or tenses." (Participant 7)*

The other two students recognized the usefulness of grammar but felt that other language skills, such as speaking and writing, were more important.

*"I prior other skills like speaking or writing to grammar. For me, these skills are more important since you cannot express your ideas clearly if these skills are bad." (Participant 8)*

*"I think the purpose of learning a foreign language is to communicate effectively. So, I focus on developing my listening and speaking skills." (Participant 9)*

Conversely, the remaining 10% of the interviewees found grammar challenging and less essential compared to other language skills.

*"It's difficult for me to study grammar since it is really complicated. I don't think grammar is as important as other skills like speaking or listening." (Participant 10)*

#### *Question 2: What challenges do you face when learning grammar?*

Regarding the difficulties of learning grammar, the majority of the interviewees (70%) reported that remembering complex rules was the biggest challenge. They explained that grammar consists of numerous rules and exceptions, which makes it hard to remember and apply structures accurately.

*"I feel tired of numerous rules of grammar although I know grammar is the backbone of English. I feel hard to apply grammar properly in speaking or writing, despite I can do thousands of exercises correctly." (Participants 1, 2)*

*"I have problems when learning tenses in English. I have to remember and distinguish typical features of different tenses, which were confusing most of the time. This affects my fluency." (Participants 3, 4)*

*"English grammar has thousands of rules, which made me overwhelmed. Some structures were really confusing." (Participant 5)*

*"Sometimes, I get lost in a forest of rules. Some of them are really difficult to understand since they do not exist in my native language." (Participants 6, 7)*

Another common difficulty mentioned by half of the interviewees was the proper application of grammar rules in both speaking and writing. Although students were able to do grammatical exercises perfectly, they found it challenging to apply these rules in real-life situations. Many struggled to produce language fluently without consciously thinking about grammar rules. This was reported to hinder their natural speaking and writing flow.



*"I am confident in completing grammar exercises correctly. However, I can't stop myself from thinking about grammar rules when speaking with others. This slows down my speech."* (Participants 4, 5)

*"Mastering grammar rules does not mean that you can apply them properly in speaking or writing. I have no difficulty in doing grammatical exercise correctly. However, I feel it hard to apply these rules in writing. I spent a lot of time deciding which structure is suitable for my writing work."* (Participants 6, 7)

*"Grammatical exercises are easy to complete perfectly. However, using appropriate structure when speaking is a struggle. I am not confident to do that."* (Participant 8)

Two interviewed students stated that staying engaged and motivated during grammar lessons was a significant challenge. Some students asserted that doing mechanical exercises frequently made grammar classes boring and repetitive, which demotivated them to learn grammar and made it harder to absorb the knowledge.

*"Grammar classes are tedious with mechanical practice. I easily lose my interest and attention in grammar periods. I think grammar should be taught differently, where students can join interactive activities and practice grammar in contexts."* (Participant 9)

*"As for me, grammar lessons are just memorizing thousands of rules and then doing controlled practice. It's not useful in learning English. I prefer practicing listening or speaking more than learning grammar."* (Participant 10)

Another noted difficulty in learning grammar, reported by 40% of the interviewees, was confusion over certain concepts caused by the differences between English and their native language. They explained that some grammatical structures in English do not exist in their native language; as a result, these rules confused them most of the time.

*"I find it hard to learn about English tenses. There are no tenses in Vietnamese. So, it is a nightmare to distinguish the past tense from the present perfect or the present perfect continuous and the present perfect."* (Participant 10)

*"In Vietnamese, there is no rule on the agreement between subjects and verbs in sentences. But in English, the subject-verb agreement is one of the key components. This difference makes me confused, and I easily make mistakes with these exercises."* (Participants 6, 7)

*"We do not use auxiliary verbs in negative and interrogative sentences in Vietnamese, which is completely different from English. So it is difficult for me to remember the correct auxiliary verbs for different subjects and tenses."* (Participant 8)

### *Question 3: What motivates you to study grammar?*

In terms of motivations for learning grammar, most interviewees (80%) stated that grammar is essential for improving communication skills. They emphasized that learning grammar helped them produce grammatically correct sentences, especially in writing and speaking, and gave them more confidence in expressing themselves in English.

*"I am motivated to learn grammar since grammar governs how sentences are constructed. Knowing grammar gives me confidence to write grammatically and semantically correct sentences in my essays."* (Participants 1, 2)

*"My motivation for learning grammar is that knowing grammar helps me avoid making*

*silly mistakes that cause misunderstanding during communication. Moreover, using correct grammar builds up a professional image, especially when I'm giving a presentation.” (Participants 4, 5,6)*

*“Learning grammar is a prerequisite in language learning. I major in English, so mastering grammar is a must to develop other language skills.” (Participants 3, 7, 8)*

Around 60% of interviewees were motivated by academic and career-related goals. They shared that grammar was a fundamental part of the English curriculum and that doing well in grammar enhanced their grades. Some also linked grammar to future job prospects, especially in roles requiring high-level communication or English proficiency tests.

*“Grammar courses are required in my university curriculum. So, I have to pass them if I want to graduate. Moreover, I know that grammar is the foundation of language learning, which shows my professional performance in the future workplace.” (Participants 3, 4)*

*“To get a good job in my area, I need to get a high score in the IELTS or TOEFL exams. And in these tests, grammar is an important part. Mastering grammar helps me get good scores in these exams, and my career prospects is, of course, better.” (Participants 5, 6)*

*“Producing grammatically correct sentences in communication proves that you have good English proficiency. This provides you with opportunities to apply for a job in the language area.” (Participants 7, 8)*

There were four students who acknowledged that their motivation for learning grammar was the improvement of reading and listening skills. They pointed out that understanding grammar made it easier to comprehend complex texts and follow spoken English more accurately.

*“There are different types of sentences in English concluding simple, complex, compound, and compound-complex. This makes reading long texts challenging if I do not know grammar.” (Participants 1, 6)*

*“Some listening exercises require learners to guess the words to fill in the blanks. Knowing grammar helps me narrow down the choices and easily to complete the exercise.” (Participants 2, 3)*

Curiosity and personal interest in language learning motivated two participants to learn grammar. They explained that discovering differences in English and Vietnamese grammar was fascinating.

*“I want to explore the differences in English and Vietnamese grammar. This curiosity motivates me to learn grammar. Sometimes, I discover many interesting points when comparing these two languages.” (Participants 7,8)*

*Question 4: How often does your teacher use Computer-Assisted Games (CAGs) in grammar lessons?*

The responses from the interviews demonstrated that CAGs were widely used in grammar classes. Five interviewees reported that their teachers frequently conducted CAGs when teaching grammar, using them as a regular activity in teaching steps.

*“My teacher conducts CAGs in almost every lesson in the course. Usually, the games are organized in practice sessions. It's a regular part of our class.” (Participants 1, 2)*

*“We usually play CAGs in grammar classes. The teacher often conducts these games to help us review the previous lessons. I feel excited to play the games and get a*

*bonus.” (Participant 3)*

*“Most of the lessons in the syllabus are explained with the use of CAGs. The teachers frequently use these games to clarify grammar structures.” (Participants 4, 5)*

Four students stated that their teachers conduct CAGs in some lessons in the syllabus, especially when they were confronted with complicated structures or when their teachers intended to break the monotony of traditional exercises. They noted that while CAGs were engaging, they were not a daily occurrence and were often used selectively for certain topics or review sessions.

*“My teacher sometimes implements CAGs in grammar class. He conducts these games when the lessons are quite complex.” (Participant 6)*

*“CAGs aren't a common feature in my grammar class. Sometimes, we play a game, particularly before a test, but usually, we stick to textbook exercises.” (Participant 7)*

*“Sometimes, my teacher holds CAGs in several grammar lessons. She often gets us to practice traditional exercises. Games are conducted only when we feel bored and hard to follow the lessons.” (Participants 8, 9)*

One interviewee admitted that his teacher used CAGs only in one or two lessons in the course. He emphasized that the grammar lessons were mainly structured around lectures, worksheets, and traditional exercises.

*“My teacher only holds CAGs in one or two grammar lessons in the syllabus. He often teaches grammar in a traditional way with worksheets, mechanical exercises, and handouts.” (Participant 10)*

*Question 5: How does your teacher conduct CAGs in grammar classes?*

With the question investigating how CAGs were conducted in grammar classes, the majority of the interviewees (70%) shared that these activities were mainly conducted individually, often through platforms like Kahoot or Quizizz. These two platforms were favored for their user-friendly interface and real-time feedback. Additionally, the students noted that these games typically lasted under 10 minutes, usually used as a reviewing activity.

*“My teacher often conducts Kahoot or Quizizz in grammar classes to practice new structures. Each session lasts from 5 to 7 minutes, and our class plays the game individually to compete with each other.” (Participant 1)*

*“My teacher uses Kahoot as a reviewing activity in grammar classes. The game usually has 10-15 questions and lasts around 6 minutes. We play Kahoot individually, and the top three students gain bonuses.” (Participants 2, 3)*

*“My teacher frequently organizes games for individual practice, like Kahoot or Quizizz. To gain a bonus, I have to be focused and answer questions quickly and correctly. There is no discussion with other classmates since each question is about 20 seconds, and we only play Kahoot for around 7 minutes.” (Participants 4, 5)*

*“We usually play Kahoot or Quizizz in grammar classes to get familiar with new structures. I compete with my classmates to be the top three students to get a bonus. So there is no discussion, and the game lasts around 7 minutes.” (Participants 6, 7)*

Meanwhile, 20% of the interviewees mentioned pair work, especially for more interactive games like Bamboozle or Wordwall, which were used to reinforce grammar structures in context. The time for playing CAGs, therefore, lasted longer than individual sessions.

*“Sometimes, my teacher conducts CAGs in pairs, especially when we are confronted with difficult questions. The game like Wordwall or Bamboozle lasts longer, around 10 to 12 minutes.” (Participant 8)*

*“Occasionally, my teacher asks our class to work in pairs and complete questions in Bamboozle. These questions require us to discuss the answers with partners, then submit them correctly. The time for each session usually lasts more than 12 minutes.” (Participant 9)*

Out of 10 students, one interviewee stated experiencing group work, typically for longer game sessions that involved problem-solving or grammar races.

*“I remember my teacher conducted a long reviewing session with Bamboozle to prepare us for the midterm test. We had to discuss in groups and complete the game in 15 minutes.” (Participant 10)*

*Question 6: In your opinion, how could CAGs benefit students in learning grammar?*

Discussing the benefits of CAGs in learning grammar, a significant number of interviewees (80%) emphasized that CAGs made grammar lessons more enjoyable and engaging. They asserted that the interaction during these games kept them interested and focused during lessons. They stated that the learning activities were not mechanical practice with worksheets, paper, or coursebooks. Instead, the use of CAGs with smartphones or computers enabled them to learn grammar innovatively and made grammar practice more exciting.

*“With the implementation of CAGs in grammar classes, the learning atmosphere is unthreatening. Now, we can practice new structures or review previous lessons in a fun way. This reduces stress and tiredness in grammar classes.” (Participants 1, 3)*

*“I like a competitive atmosphere when playing CAGs in grammar classes. I’m really excited to answer quizzes in these games quickly and correctly to be the winner. This motivates me to learn and remember grammar rules.” (Participants 2, 4)*

*“Instead of doing mechanical exercises to practice new structures, my class can now play CAGs to be familiar with new lessons. The practice sessions are more exciting, especially when we have to remember grammar rules, answer questions correctly, become the winner, and gain a bonus.” (Participants 5, 6)*

*“Playing CAGs sharpens my memory. I remember structures better through answering different questions that demonstrate clearly how to use rules.” (Participants 7, 8)*

Another idea emphasized the effectiveness of CAGs in helping students remember the grammar rules more effectively. Seventy percent of the interviewees asserted that repeated exposure through games reinforces their learning and makes it easier to recall grammatical structures in different contexts. They pointed out that the immediate feedback in CAGs was crucial to their learning. Instead of waiting for the teacher to check their work, they could instantly see the correct answers and understand their mistakes. This immediate correction process made learning more efficient and reduced the risk of repeatedly making the same errors.

*“When I complete questions in CAGs like Kahoot or Quizizz, I explore new structures through different examples. This demonstrates clearly how they are used, which helps me remember the rules longer.” (Participants 3, 4)*

*“The answers to questions in CAGs are automatically shown after I complete each one. So, I can check whether I’m correct or not immediately. This helps me gain experience and learn from my mistakes.” (Participant 5)*

*“There are various activities offered by CAGs like multiple choice, matching or fill-in-the-blank. Each of them is suitable for practicing specific aspects of grammar rules. I can practice new structures in different formats and know how to use them correctly.”* (Participants 6, 7)

*“Mechanical exercises and traditional routine in grammar classes demotivate me to learn grammar. CAGs are conducted in my class and get me engaged in different stages of the lessons. I’m excited to compete with other classmates and check how much I understand new lesson through answering questions quickly and see the scores.”* (Participants 8, 9)

Five out of ten interviewees asserted that CAGs helped them grasp grammar concepts more thoroughly by providing clear examples and immediate feedback. Unlike traditional lectures that primarily focus on rules and theory, CAGs offer students opportunities to interact with the rules in various ways with visual elements and color-coded answers. These interactive elements help enhance comprehension and allow students to experiment with grammar structures in an unthreatening learning environment.

*“CAGs demonstrate different contexts of using grammatical structures. So, I can see how grammar rules govern sentences clearly. Playing Wordwall or Bamboozle is a good way to get familiar with new structures.”* (Participants 1, 2)

*“My teacher conducts different kinds of CAGs in grammar classes, each of which is used to help our class understand certain grammar structures. These games provide me with opportunities to practice new lessons in an innovative way.”* (Participants 3, 4, 5)

The other idea mentioned by 40% of the participants was the practical and valuable practice that CAGs created for writing and speaking. They explained that instead of understanding grammar rules in isolation or just recognizing them in tests or worksheets, now they could use grammar actively through the discussion with partners to justify their grammatical choices for different speaking or writing tasks.

*“To complete the quiz, sometimes we have to construct sentences using the structure we’ve learned. The game makes the practice section vivid and more interesting.”* (Participants 1, 2)

*“To be the winner of the game, I have to discuss the answers with my partner. Discussion help us understand grammatical points clearly and remember them longer.”* (Participants 3, 4)

*Question 7: What may be potential concerns over the use of CAGs in grammar classes?*

Although most of the interviewees perceived CAGs as a useful factor enhancing their grammar learning experience, a small portion of the sample raised concerns over minor issues regarding excessive use, distractions, and stress.

Two interviewees expressed their boredom when CAGs were conducted too frequently with the same kinds of games. These students stated that games were interesting but playing the same type too frequently was tedious and mechanical.

*“I lose my excitement when my teacher holds the same type of CAGs frequently in grammar classes. Repetition makes me bored and feel games less special.”* (Participant 1)

*“The combination of CAGs and other learning activities is better than just having games so much. I played the same game over and over, which made the lesson quite*

*repetitive.” (Participant 2)*

Another concern was distraction during games. Two students raised the notion that when playing CAGs, they just paid attention to answering questions quickly and did not think carefully about content or grammar structures. Additionally, noises from their classmates and the competitive atmosphere distracted them and enabled them to neglect the main focus of the lessons.

*“Trying to be the first one answering questions makes me lose my focus on the content of lessons. Sometimes, I do quizzes quickly and do not read the content carefully.” (Participant 3)*

*“The atmosphere is exciting but also noisy. This distracts me and makes me lose my concentration on the lessons.” (Participant 4)*

Feeling stressed when competing with classmates during games was reported by two participants. They noted that the competitive atmosphere rushed them, causing panic and tiredness. Therefore, they often made silly mistakes and felt embarrassed when their scores were shown on the listing board.

*“Competitive atmosphere makes me stressed. I have to rush every time to be the winner or to get a bonus from my teacher.” (Participant 9)*

*“I feel stressed when the teacher shows the board of each game. If I get a low score, I lose my confidence and feel really embarrassed.” (Participant 10)*

## Discussion

### *Research Question 1: What are EFL sophomores' attitudes towards grammar learning?*

The study investigated EFL sophomores' attitudes toward grammar learning by exploring their opinions on the role of grammar in language learning and their motivation for learning it. The findings emphasized that most of the participants perceived the importance of grammar

in English learning ( $M = 3.55$ ) and its relevance to their future careers ( $M = 3.6$ ). Interviews confirmed this view. Seven out of 10 interviewees acknowledged that grammar plays a vital role in communication, writing accuracy, and the use of professional language. This trend aligned with the results of previous studies by Borg and Burns (2008), who found that learners perceived grammar as fundamental to language learning.

One of the most striking findings was that over 70% of students reported difficulty in remembering grammatical structures ( $M = 4.15$ ). Through the interviews, they explained that the diverse structures with irregularities and the differences between English and their native language caused the problem. In addition, traditional teaching methods with mechanical exercises made it challenging to absorb grammatical structures. The findings confirmed the conclusions of different studies. The research by Celce-Murcia (2001) stated that grammar retention caused challenges, especially in contexts where it was taught abstractly or without meaningful application.

In terms of learning purposes, the data indicated that students were highly motivated to learn grammar with a strong belief that learning grammar would instruct them to produce accurate and appropriate sentence structures ( $M = 4.07$ ). They also asserted that learning grammar helped enhance their reading and listening skills ( $M = 3.86$ ). The results of the structured interview reinforced these points. Eighty percent of the interviewees stressed the value of



grammar in forming precise and well-structured sentences, especially in academic or workplace contexts. Moreover, they reported that grammar courses were compulsory components of their university curriculum, and having a brilliant performance in grammar learning could contribute to improving their academic outcomes. These findings were in line with Ellis (2006), who emphasized that mastering grammar could provide students with better opportunities to be successful in career related to language.

Generally, the mixed methods utilizing an online survey and structured interview collected reliable data on students' attitudes towards grammar learning. Reportedly, EFL sophomores perceived grammar as a vital factor for academic performance and future career development. Regardless, it was challenging to remember and apply grammar properly in communication. These findings proposed that an innovative grammar instruction was a prerequisite.

*Research Question 2: How do second-year English majors experience the implementation of computer-assisted games in grammar classes?*

The gathered data examined participants' experiences with the implementation of CAGs in grammar lessons, focusing on four key aspects: the frequency of CAGs in grammar classes, the types of games implemented, the organization, and the instructional purposes behind their use. The results of the recent study concluded that all participants had opportunities to play CAGs in grammar classes. Nearly 40% of the students reported that their teachers frequently employed CAGs in grammar lessons. The other 45% of the sophomores stated that their teacher utilized CAGs in several lessons during the course. Through the interviews, the participants explained reasons for the frequency of CAGs. Half of the interviewees affirmed that their teacher regularly integrated CAGs into grammar lessons, treating them as a central instructional method rather than occasional or supplementary tools. The other interviewed students asserted that their teachers incorporated CAGs into specific lessons within the syllabus, particularly when tackling complex grammar structures or aiming to add variety to routine exercises.

Regarding the types of CAGs conducted in grammar classes, more than 80% of the participants noted that Quizizz and Kahoot emerged as the most commonly used and favored tools, followed by Bamboozle with over 55%. More than 40% of the students played Wordwall and Quizlet in their grammar classes, while only 20% had encountered Blocket.

The types of CAGs employed in grammar lessons were in line with the organization and duration of games conducted in each session. A majority of the sophomores (70%) asserted that CAGs were commonly implemented through individual activities and lasted under 10 minutes, indicating a tendency to utilize CAGs for personal grammar practice. Approximately 23% of students shared that their teachers occasionally used pair work to encourage peer collaboration during CAG activities. The interviews strengthened the results of the questionnaire. Seven out of ten interviewees affirmed that Kahoot and Quizizz were the two friendly platforms that lasted under 10 minutes, keeping them engaged in grammar periods. The other two students stated that CAGs, such as Bamboozle or Wordwall, were conducted for pairwork, especially when the questions were more challenging and students needed to discuss with their partners. Group work was rarely organized with CAGs. Only one student reported that a session of 15 minutes was held for discussion among group members to review lessons before the midterm test through Bamboozle.

The findings of the study revealed that the most popular instructional purpose behind teachers' use of CAGs in grammar lessons was to provide students with opportunities to practice newly introduced grammar rules and structures (68.6%). The purpose of using CAGs as a review tool was also the common one in grammar classes of nearly 60% of the participants. The

participants explained that frequent exposure through games significantly enhanced their learning and helped them recall grammatical structures easily in various contexts. The findings match with the results of the research by Mohamad and Amin (2009), who asserted that a motivating and engaging learning environment created by CAGs enabled students to grasp complex grammatical concepts more effectively. Another aim of employing CAGs in grammar classes, which was reported by more than 35% of sophomores, was to introduce the new lesson. This point was supported by the research of Can and Cagiltay (2006), who noted the effectiveness of CAGs in arousing students' attention to grammar lessons.

*Research Question 3: How do second-year English majors perceive the application of computer-assisted games in grammar classes?*

The results of the present study concluded that EFL sophomores at Van Lang University had a positive attitude toward the application of CAGs in grammar classes. Most of the participants acknowledged the substantial benefits of these games in learning grammar. More than 80% of the sophomores affirmed that CAGs increased their motivation for learning grammar ( $M=4.12$ ), made grammar lessons more interesting ( $M=4.03$ ), and got them more engaged in grammar classes ( $M=4.03$ ). The answers from the interviews clarified these findings of the questionnaire. Eight out of ten interviewees asserted that the interactive format of CAGs maintained their attention and increased their participation in grammar classes. Instead of doing mechanical exercises and getting information through a large amount of paper like worksheets, handouts, or coursebooks, students now absorb grammar innovatively with the operation of computers or smartphones through an unthreatening learning atmosphere of games. These findings aligned with the conclusions of different studies. The research conducted by Mohamad and Amin (2009) highlighted that CAGs enhanced the learning process by creating an engaging and motivating environment where students can grasp complex grammar concepts. Similarly, Whitton (2007) noted that CAGs excited grammar learning, changing a tedious routine into interesting practice.

Moreover, the research found that the majority of the participants asserted that CAGs were beneficial in facilitating the students' learning process. The sophomores recognized that CAGs helped deepen their understanding of grammatical structures ( $M = 3.97$ ), enhanced their long-term retention of these structures ( $M = 3.86$ ), and offered chances to apply them in speaking or writing activities ( $M = 3.93$ ). An in-depth analysis of interviews confirms these findings. The participants explained that exposure to different examples demonstrated with visual elements and diverse color-coded answers in CAGs helped them to understand grammar structures easily. Furthermore, immediate feedback in CAGs helped them constantly recognize their mistakes and recall the lessons longer. These findings were consistent with the ideas discussed in Deesri's (2002) study, which stated that these games enhance learners' ability to practice grammar communicatively. The findings also supported the theory proposed by Mohamad and Amin (2009), as these authors asserted that CAGs helped students understand complex concepts via an enjoyable and interactive learning atmosphere.

The result of the current study revealed that EFL sophomores at Van Lang University did not perceive CAGs as a significant concern in grammar classes. Most of the participants disagreed with the ideas of considering CAGs as time-consuming ( $M=2.20$ ), as a source of stress ( $M=2.47$ ), or as a cause of boredom ( $M=2.56$ ). The responses from the interview supported these findings. They stated that playing CAGs saved time in understanding lessons, released stress from theories, and aroused their interest in learning. The results support the idea stated by Nutta (1998), who affirmed that using CAGs in the classroom is an effective way to teach the grammar of a second language.

## Conclusion

The study exploring how EFL sophomores at Van Lang University perceive the implementation of CAGs in grammar classes utilized a mixed method with a combination of an online survey and structured interviews. These research methods gather data to answer the questions on students' attitudes towards grammar learning, their experience of CAGs in grammar classes, and their perspectives on the use of CAGs in grammar lessons.

The findings revealed that most of the participants acknowledged the substantial importance of grammar in language learning. They also stated that they were motivated to learn grammar since it played a vital role in enhancing communicative competence, increasing their academic scores, and being professional in their future careers. However, the second-year students admitted that it was challenging to remember and apply grammatical structures properly due to the complexity of these structures and traditional teaching methods.

Regarding the implementation of CAGs in grammar classes, all participants had opportunities to play these games during the course, and 50% of them stated that their teachers frequently conducted CAGs in most of the lessons of the course. According to the results, the participants reported that Kahoot and Quizziz were the most popular ones since they were user-friendly and easy to integrate. Moreover, most of the sophomores asserted that each session of CAGs lasted around 10 minutes, and they usually completed the questions individually. This setup promotes focused practice and quick reviews rather than collaborative learning. Concerning the objectives of holding CAGs, a majority of the students noted that their teachers organized these games as a practice activity, helping them get familiar with new structures. Additionally, CAGs were held as reviewing sessions, making them remember the previous lessons. The purpose of using CAGs as a lead-in activity to introduce new lessons and arouse students' interest was also reported.

The findings from the online survey and structured interviews concluded that EFL sophomores have a positive attitude towards the implementation of CAGs in grammar classes. The students claimed that CAGs were beneficial to increasing their motivation for learning grammar by making lessons more exciting and getting them more engaged in classes. Moreover, EFL students at Van Lang University perceived CAGs as a helpful factor that could facilitate their learning process. They asserted that playing CAGs made them understand lessons easily and remember structures longer thanks to practical applications. These insights suggest that incorporating CAGs more frequently and strategically could enhance students' grammar learning experience.

Overall, EFL sophomores did not perceive CAGs as a major concern in learning grammar. However, there were minor worries on specific issues like overuse, distraction, or stress from competition. These findings suggest that while CAGs are perceived as a useful method to facilitate students' learning process, an effective and proper way to integrate these games, combined with other instructional methods, should be taken into consideration to address the above minor issues.

## Limitation

Although this study offers meaningful insights into the use of Computer-Assisted Games (CAGs) for grammar instruction, it has certain limitations. To begin with, the sample size was relatively small and limited to only one educational institution, which may limit the extent to which the results can be applied to other settings. Moreover, differences in students' levels of technological proficiency may have influenced their perceptions of CAGs regardless of the games' instructional value.

### Implication

Based on the results of data collection and analysis, the use of Computer-Assisted Games (CAGs) in grammar instruction appears to be an effective method for enhancing learners' access to grammatical content. This approach is likely to increase student motivation, improve engagement, and enhance the practical application of grammar in real-life contexts. For language educators, the study supports the adoption of game-based tools to promote learner-centered instruction and address varying proficiency levels. Curriculum developers are advised to align CAGs with instructional objectives and incorporate them strategically across lessons. Moreover, the results highlight the need for professional development in educational technology to facilitate the effective use of CAGs in classroom settings.

### Recommendation for further research

The current study provides useful insights into the employment of CAGs in grammar classes. However, further research should examine the long-term impact of these games on students' performance with the use of a pretest and posttest. Additionally, a study on the most effective kind of CAGs in grammar classes is also valued to conduct. Future research may also explore how to implement CAGs properly and effectively in grammar classes, providing valuable suggestions for teachers who tend to apply innovative approaches to teaching grammar.

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### References

- Ahmad, M., & Wilkins, S. (2024). Purposive sampling in qualitative research: A framework for the entire journey. *Quality & Quantity*. <https://doi.org/10.1007/s11135-024-02022-5>
- Ahmadi, D., & Reza, M. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115-125.
- Almekhlafi, A. G. (2006). The effect of computer-assisted language learning (CALL) on United Arab Emirates English as a foreign language (EFL) students' achievement and attitude. *Journal of Interactive Learning Research*, 17(2), 121–142.
- Al-Qomoul M., “The Effect of Using an Instructional Software Program of English Language Functions on the Basic Stage Students’ Achievements,” *Ph.D. Thesis*, Amman Arab University for Graduate Studies, 2005.
- Alsied, S. M., Ibrahim, N. W., & Pathan, M. M. (2018). The Use of Grammar Learning Strategies by Libyan EFL Learners at Sebha University. *ASIAN TEFL*, 3(1), 37-51.
- Ayres, R. (2002). Learner attitudes towards the use of CALL. *Computer Assisted Language Learning*, 15(3), 241–249. <https://doi.org/10.1076/call.15.3.241.8189>
- Belal, A. R. (2011). Students’ Perceptions of Computer Assisted Learning: an empirical study. *International Journal of Management in Education*, 5(1), 63-78.
- Can, G., & Cagiltay, K. (2006). Turkish prospective teachers’ experience with educational software. *Educational Technology & Society*, 9(1), 76–83.

- Chappelle, C. A. (2001). *Computer applications in second language acquisition: Foundations for teaching, testing and research*. Cambridge University Press.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- Creswell, J. W., Clark, V. L. P., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 209-240). Thousand Oaks, CA: Sage.
- Debata, P. K. (2013). The Importance of Grammar in English Language Teaching Reassessment. *Language in India*, 13(5), 482-486.
- Douglas, H. (2022). Sampling techniques for qualitative research. In M. R. Islam, N. A. Khan, & R. Baikady (Eds.), *Principles of social research methodology* (pp. [insert page range if available]). Springer. [https://doi.org/10.1007/978-981-19-5441-2\\_29](https://doi.org/10.1007/978-981-19-5441-2_29)
- Greenbaum, S. (1982). What is grammar and why teach it? In S. Greenbaum (Ed.), *The teaching of grammar* (pp. 5–19). London: Longman.
- Guner, K. (2017). Effects of a Programmed Turkish Grammar Instruction on Students' Language Skills. *Eurasia Journal of Mathematics, Science and Technology Education* 13(11), 7539-7547. DOI:10.12973/ejmste/78609
- Haudeck (as cited in Sani, H. K., 2016). *Senior high school students' perceptions towards grammar* (Unpublished master's thesis). Universitas Kristen Satya Wacana, Indonesia.
- Hubbard, P., & Levy, M. (2016). Theory in computer-assisted language learning research and practice. In F. Farr & L. Murray (Eds.), *The Routledge handbook of language learning and technology* (pp. 24–38). Routledge. <https://doi.org/10.4324/9781315657899>
- Huizhong, Y. (1985). The use of computers in English teaching and research in China. In R. Quirk & H. G. Widdowson (Eds.), *English in the world* (pp. 86–100). Cambridge University Press.
- Januszewski, A., & Molenda, M. (Eds.). (2008). *Educational technology: A definition with commentary*. New York: Lawrence Erlbaum Associates
- Jarvis, H., & Szymczyk, M. (2009). Student views on learning grammar with web- and book-based materials. *ELT Journal*, 64(1), 32–44. <https://doi.org/10.1093/elt/ccp006>
- Jensen, E., & Sandlin, J. A. (1992). Active learning and the brain: Implications for teaching. In E. Jensen (Ed.), *Brain-based learning* (pp. 67–80). San Diego, CA: Turning Point Publishing.
- Jespersen, O. (2013). *Essentials of English grammar*. Routledge.
- Kayan, A., & Aydin, İ. S. (2023). The effect of computer-assisted educational games on teaching grammar. *Journal of Educational Technology & Society*, 26(1), 45-58.
- Kılıçkaya, F., & Krajka, J. (2012). Can the use of web-based comic strip creation tool facilitate EFL learners' grammar and sentence writing? *British Journal of Educational Technology*, 43(6), 161–165. <https://doi.org/10.1111/j.1467-8535.2012.01298.x>
- Kohli, A. L. (2007). *Techniques of teaching English*. Dhanpat Rai Publishing Company.
- Larsen-Freeman, D. (2001). Teaching Grammar. In M. Celce-Murcia (ed.), *Teaching English as a Second or Foreign Language* (3rd ed., pp. 251-66). Boston, MA: Thomson/ Heinle.



- Laurillard, D. (2009). The pedagogical challenges to collaborative technologies. *Computer-Supported Collaborative Learning*, 4(1), 5–20.
- Loewen, S., Li, S., Fei, F., Thompson, A., Nakatsukasa, K., Ahn, S., & Chen, X. (2009). Second Language Learners' Beliefs About Grammar Instruction and Error Correction. *The Modern Language Journal*, 93(1), 91-104.
- Mahdi, H. S. (2018). Effectiveness of mobile devices on vocabulary learning: A meta-analysis. *Journal of Educational Computing Research*, 56(1), 134–154. <https://doi.org/10.1177/0735633117698826>
- Mohamad, F. (2009). Internet-based Grammar Instruction in the ESL Classroom. *International Journal of Pedagogies & Learning*, 5(2), 34–48. <https://doi.org/10.5172/ijpl.5.2.34>
- Mohamad, F., & Amin, M. (2009). The effectiveness of customized courseware in teaching grammar. *Proceedings of the 2nd International Conference of Teaching and Learning (ICTL 2009)*. INTI University College, Malaysia.
- Naba'h, A. A., Hussain, J., Al-Omari, A., & Shdeifat, S. (2009). The Effect of Computer Assisted Language Learning in Teaching English Grammar on the Achievement of Secondary Students in Jordan. *Int. Arab J. Inf. Technol.*, 6(4), 431-439.
- Nguyen, H. N. (2020). Teaching English Sounds to Vietnamese Secondary School Students: From Theories to Applications Using Learner-centered Methods. *International Journal of Language Instruction*, 2(1), 16–29. <https://doi.org/10.54855/ijli.23212>
- Nisha, P. R. (2024). Comparing grammar translation method (GTM) and communicative language teaching (CLT) in EFL context: A qualitative literature review. *FOSTER Journal of English Language Teaching*, 5(1), 40–48. <https://doi.org/10.24256/foster-jelt.v5i1.159>
- Nutta, J. (1999). Is computer-based grammar instruction as effective as teacher-directed grammar instruction for teaching L2 structures?. *CALICO journal*, 16(1), 49-62. <https://doi.org/10.1558/cj.v16i1.49-62>
- O'Hare F (1973). *Sentence-Combining: Improving Student Writing Without Formal Grammar Instruction*. Urbana, IL: National Council of Teachers of English.
- Rao, R. K. (2014). Enhancing student's grammar by using games: A practical classroom experience. *International Journal of Academic Research*, 1(3), 13-23.
- Razak, A. A., Connolly, T., Baxter, G., Hainey, T., & Wilson, A. (2012, October). The Use of Games-Based Learning at Primary Education Level within The Curriculum for Excellence: A Combined Result of Two Regional Teacher Surveys. In *Proc. of the 6th Europe. Conf. on Games Based Learning* (pp. 401-409).
- Sani, H. K. (2016). *Senior High School Students' Perceptions Towards Grammar* (Doctoral dissertation, Program Studi Pendidikan Bahasa Inggris FBS-UKSW).
- Shafaei, A. (2012). Computer-assisted learning: a helpful approach in learning English. *Frontiers of language and teaching*, 3, 108-115.
- Smith, M. W., & Hillocks, G. (1991). Grammar and usage. In J. Flood, J. M. Jensen, D. Lapp, & J. R. Squire (Eds.), *Handbook of research on teaching the English language arts* (pp. 591–603). New York, NY: Macmillan.



- Squire, K. (2003). Video games in education. *International Journal of Intelligent Simulations and Gaming*, 2(1), 49–62.
- Thornbury, Scott. (1999). *How to Teach Grammar*. Essex: Pearson Education Limited.
- Tu, T. H. P. (2022). The effects of using education technology tools on learning grammar in secondary schools. *International Journal of Language Instruction*, 1(1), 41–52.  
<https://doi.org/10.54855/ijli.22115>
- Ural, M. N. (2009). *Eğitsel bilgisayar oyunlarının eğlendirici ve motive edici özelliklerinin akademik başarıya ve motivasyona etkisi* [The effect of entertaining and motivational properties of educational games on academic achievement and motivation] (Doctoral dissertation). Anadolu University, Educational Sciences Institute, Eskişehir, Turkey.
- Warschauer, M., & Kern, R. (2000). *Network-based language teaching: Concepts and practice*. Cambridge University Press.
- Whitton, N. (2007). Motivation and computer game-based learning. In *Proceedings of the Australian Society for Computers in Learning in Tertiary Education (ASCILITE)*.
- Young, B. R. (2011). The grammar voyeur: Using Google to teach English grammar to advanced undergraduates. *American Speech*, 86(2), 247–258.  
<https://doi.org/10.1215/00031283-1337046>
- Yunita, W., Emzir, E., & Mayuni, I. (2018). Needs Analysis for English Grammar Learning Model from Students' Perspectives. *English Review: Journal of English Education*, 6(2), 85–94. <https://doi.org/10.25134/erjee.v6i2.1258>

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