# THE USE OF ONLINE EDUCATIONAL GAME APPLICATIONS IN TEACHING ENGLISH GRAMMAR AT BINH TRI 2 PRIMARY SCHOOL

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| ARTICLE INFO | ABSTRACT |
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| | This study investigates the use of online educational game applications in teaching English grammar at Binh Tri 2 Primary School. The participants of the study were 64 fifth grade students and six teachers. A mixed-method design was used in this study to collect quantitative data via questionnaire for students and qualitative data via semi-structured interview for English teachers. The findings revealed that students and teachers reported a lot of effects when using online educational game applications in their English grammar instruction. On the other hand, it was found that English teachers and students encountered some difficulties when employing the applications. Based on the findings, recommendations for students and instructors have been given. The study has the potential to contribute to the existing literature in the field and offers several practical recommendations for the use of online educational game applications in their English grammar instruction. |

# SỬ DỤNG ỨNG DỤNG TRÒ CHƠI GIÁO DỤC TRỰC TUYẾN TRONG VIỆC DẠY NGỮ PHÁP TIẾNG ANH TẠI TRƯỜNG TIỂU HỌC BÌNH TRỊ 2

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| THÔNG TIN BÀI BÁO | TÓM TẮT |
|---|---|
| | Bài viết này nghiên cứu việc sử dụng ứng dụng trò chơi giáo dục trực tuyến trong việc dạy ngữ pháp tiếng Anh tại trường Tiểu học Bình Trị 2. Người tham gia nghiên cứu này gồm 64 học sinh lớp năm và 6 giáo viên tiếng Anh. Nghiên cứu này sử dụng thiết kế nghiên cứu tổng hợp để thu thập dữ liệu định lượng từ bảng câu hỏi khảo sát cho học sinh và dữ liệu định tính từ phỏng vấn bán cấu trúc cho giáo viên. Theo như kết quả, học sinh và giáo viên cho rằng việc sử dụng ứng dụng trò chơi giáo dục trực tuyến thật sự hiệu quả trong việc dạy học ngữ pháp tiếng Anh. Bên cạnh đó, học sinh và giáo viên đã đối mặt với nhiều thách thức khi sử dụng các ứng dụng này. Dựa vào kết quả phân tích, các đề xuất dành cho học sinh và giáo viên được trình bày. Nghiên cứu này có những đóng góp về mặt lý thuyết cũng như thực tiễn trong lĩnh vực sử dụng các ứng dụng trò chơi giáo dục trực tuyến trong việc dạy ngữ pháp tiếng Anh. |

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## 1. Introduction

Learning English early can greatly benefit children's long-term study. Sari [1] suggests four reasons for studying English at the early age. First, it provides students with the opportunity to acquire language knowledge horn their language skills when their brain is not yet overloaded with so many things like an adult learner. Second, studying English contributes to memory improvement which helps kids to memorize vocabulary better. Third, studying English can help children develop their creativity. It means students can apply various ways to express their ideas. Finally, learning English at the early age boosts students' confidence. Students gradually enhance their confidence by being encouraged to speak a new language in daily activities.

In the context of Vietnam, the teaching of English to primary school students has been a great concern of the Ministry of Education and Training (MOET) [2]. The MOET has placed teaching English as one of the top priorities in education. According to Decision No. 2658 issued on 23rd July 2018 by the MOET, English would be an optional subject for grades 1 and 2 with a focus on introducing basic English knowledge; in addition, from grade 3, English would become compulsory, and it would follow the principles of the ten-year English programs. The Decision suggested that English is a compulsory subject in the school curriculum, and that the design and development of the program requires hard work and cooperation of educators and experts.

According to Djurayeva, Ayatov, and Shegay [3], many teachers usually spend plenty of time figuring out various methods and techniques to implement to help these young learners acquire basic knowledge. It is widely recognized that English grammar is truly hard to learn for both native and non-native English speakers. There are countless complexities, standards, and exceptions which cause instructors to resort to different techniques to help learners to memorize and practice using the grammar points in communication.

Prensky [4] states that one of the most innovative advances of the present era is the cell phone which has greatly influenced our life. It is not simply a tool merely served for communication, rather it is like an amazingly helpful personal computer (PC) that suits students' pockets and is always attached to them most of the time and can be utilized in any sort of learning. A cell phone also helps students learn language knowledge and skills in grammar with the guidance from their instructors.

Prawira and Mukhaiyar [5] conducted a study on using an online quiz application to teach grammar. Instructors should take advantage of the improvement of science and innovation to create an appealing and agreeable learning framework experience. As well as creating a friendly studying environment, instructors can utilize mobile as a medium to assess students' understanding to figure out how to further develop learning results. The two researchers involved Kahoot as a test gamification in the training system to help students in understanding language. Kahoot is selected as a procedure to instruct Grammar because it can change the conventional teaching of a sentence structure into a significant, open, fun, and pleasant instructing method.

Fadhilawati [6] investigated the use of an online educational game application called Quizizz in teaching grammar to learners. In the research, the author believed that Quizzz is an educational program that has extraordinary highlights such as images, music, symbols, and subjects that can inspire the learners and assist their learning and test taking. Moreover, the teacher can check the learners' quiz results and download them as a guideline to provide recommendations to the young learners.

Susilo et al. [7] conducted a study on using Blooket to enhance students' Chinese vocabulary mastery. In their research, the authors indicated elements that affected students' results with the implementation of Blooket. The app helps students to understand and memorize vocabulary more quickly than usual. Students like to interact with this kind of system rather than only use PowerPoint. Due to various game modes, students are motivated to learn and join the lessons to get the highest score. Blooket also supports distance learning to gain knowledge while having fun interactions. Student participants in this study revealed that the more tasks they did, the more Chinese words they could remember.

The drawbacks of using Quizizz for English learning were presented [8]. First, due to the availability for all kinds of people, spelling mistakes can be inspected. These mistakes lead users to choose incorrect answers. Second, like Kahoot, Quizizz app needs stable Internet connection. Because of the low speed of Internet connections, students find it hard to join the game or move to the next questions. Third, it was suggested that various games look alike as game creators are not creative enough to make the question challenging enough. This drives higher-level students to feel unsatisfied. Finally, Quizizz might generate anger among students. Although it is good for students to be competitive, a strong desire to become the champion can make them lose their temper.

It can be seen that not many students are interested in English grammar since they do not master principles of English grammar learning. In many cases, no matter what English teachers explain, students reveal their boredom and often forget the lessons after a few days. Although students are well informed about the tests, they produce idleness in lessons revision [9]. Although using technology in teaching English grammar has been proven to be helpful in improving students' master and practice of grammar points, and flexible to students of various demands [10], not many studies have analyzed the implementation of technology and online educational games in teaching English grammar to elementary school students in the context of primary schools in Vietnam. This study which examines the application of some educational games in teaching English grammar at a specific primary school in Vietnam is an attempt to fill the research gap.

The study aimed to investigate the use of online educational game applications (OEGA) in teaching English grammar to primary school students. To achieve the research aim, the research was conducted to address the following questions:

1. How effective is the use of online educational game applications in teaching English grammar to young learners at Binh Tri 2 Primary School?

2. What are the challenges English teachers and students face when using online educational game applications in teaching English grammar to primary school students at Binh Tri 2?

## 2. Methodology

To address the research questions, the research used mixed-method design which is a combination of quantitative and qualitative research methods, which helped bring some insights into how the use of Kahoot, Quizizz and Blooket is effective in teaching English grammar to students at Binh Tri 2 Primary School.

Creswell J. W. and Creswell J. D. [11] said that mixed-method research deals with both qualitative and quantitative data and reduces the limitations of both qualitative and quantitative designs. In this study, this method was chosen because the data obtained via research instruments involved qualitative and quantitative designs.

The participants of this study were 64 fifth grade students and six teachers of English at Binh Tri 2 Primary School. Among these six teachers, two were directly in the teaching of grammar lessons to fifth grade students with the support of the three educational apps and the four others observed their lessons.

Questionnaire and semi-structured interview were used in the study to gather both students and teachers' feedback to the use of the three online educational apps in the teaching and learning of English grammar at Binh Tri 2 School. The questionnaire deals with quantitative data while the semi-structured interview deals with qualitative data. To plan for the analysis procedure, the questionnaire was coded and the quantitative information from them was determined by utilizing Statistics Package for the Social Sciences (SPSS) version 20.0 to figure out the worth and compute the means (M) as well as the standard deviation. In terms of the effects, the items were based on the format of the ABC Model of Attitudes introduced in [8]. The contents of the items included three components, which are affective, behavioral, and cognitive. The researcher also included items which deals with drawbacks of implementing game apps in teaching English grammar for English teachers,. Firstly, all the six teachers' names were coded as T1 to T6.

Secondly, based on the recorded data, the researcher noted down the teachers' replies. Lastly, the teachers' replies were reworded into complete sentences.

## 3. Findings and discussions

### 3.1. Findings of questionnaire

**Table 1.** *The overall statistics results of the affective factor*

| No. | Affective | N = 64 | |
|---|---|---|---|
| | | M | SD |
| 1 | I felt motivated when playing the games | 4.33 | 0.83 |
| 2 | I was not scared of losing the games | 3.87 | 1.24 |
| 3 | I felt more confident when I chose the correct answers | 4.14 | 0.94 |
| 4 | I felt easy to join the games. | 3.84 | 0.94 |
| 5 | I wanted to learn English grammar via the apps. | 4.22 | 0.91 |

Table 1 figures *affective* factor which demonstrates students' feeling of using the game apps. It can be seen that most of the students feel motivated when playing the games (item 1: M = 4.33, SD = 0.83). Furthermore, the students' experiences through online educational game applications are positive because they want to learn English grammar via the apps (item 5: M = 4.22, SD = 0.91) and are more confident after choosing the correct answers (item 3: M = 4.14; SD = 0.94). *I felt easy to join the games* (item 4: M = 3.84; SD = 0.94) seemed to be the least positive among the five factors.

**Table 2.** *The overall statistics results of the behavioral factor*

| No. | Behavioural | N = 64 | |
|---|---|---|---|
| | | M | SD |
| 6 | I usually volunteered to answer questions. | 3.45 | 1.20 |
| 7 | I worked with my friends to win the games. | 4.05 | 0.96 |
| 8 | I studied hard to win the games. | 3.83 | 1.09 |
| 9 | I learned from my mistakes. | 4.33 | 0.79 |
| 10 | I quickly gave my answers. | 3.72 | 1.14 |

Table 2 reveals statistics on the *behavioral factor* describing what the students do during English grammar lessons with help of the game apps. Most of the students agreed that they gained improvement from mistakes (item 9: M = 4.33; SD = 0.79). Furthermore, to win the games, students tend to work in teams (item 7: M = 4.05; SD = 0.96). Volunteering to answer questions (item 6: M = 3.45; SD = 1.20) is the least positive report among the factors. Finally, some students study hard to win the game (item 8: M = 3.83; SD = 1.09), and they quickly give answers during the games (item 10: M = 3.72; SD = 1.14).

**Table 3.** *The overall statistics results of the cognitive factor*

| No. | Cognitive | N = 64 | |
|---|---|---|---|
| | | M | SD |
| 11 | The games helped me to understand lessons better. | 4.25 | 0.83 |
| 12 | The games helped me to remember lessons better. | 3.98 | 1.14 |
| 13 | The games helped me to improve vocabulary. | 4.17 | 0.86 |
| 14 | The games helped me to improve reading. | 4.14 | 0.88 |
| 15 | The games helped me to improve writing. | 3.92 | 0.98 |

Table 3 presents the data of the *cognitive factor* showing what benefits students gained after using online educational game applications in learning English grammar. As illustrated from the table, the most positive statement is *"the games helped me to understand lessons better"* (item 11: M = 4.25; SD = 0.83). The improvement of writing thanks to online educational game applications is the least positive (item 15: M = 3.92; SD = 0.98) and the improvement of remember lessons is the second least positive (item 12: M = 3.98; SD = 1.14). The other improvements in vocabulary (item 13: M = 4.17; SD = 0.86) and reading (item 14: M = 4.14; SD = 0.88) also received a high positive.

**Table 4.** *The overall statistics results of the challenges of using OEGA in teaching English grammar*

| No. | Challenges | N = 64 | |
|---|---|---|---|
| | | M | SD |
| 1 | The classroom did not have a screen or a projector. | 2.13 | 1.25 |
| 2 | The signal of Internet connection was weak. | 2.44 | 1.25 |
| 3 | My teacher was not good at using the apps. | 1.86 | 1.08 |
| 4 | The apps were not easy to use. | 1.95 | 1.16 |
| 5 | It took time to join the games. | 2.03 | 1.11 |
| 6 | The time for choosing the answers was short. | 2.23 | 1.15 |
| 7 | There were some mistakes in the questions and the answers. | 2.33 | 1.19 |
| 8 | The levels of questions were not challenging enough for me. | 2.27 | 1.16 |
| 9 | Using personal devices is not encouraged at school. | 3.28 | 1.36 |
| 10 | I cannot afford to have personal devices. | 3.23 | 1.05 |

Table 4 presents the data on the challenges that the student participants faced when using online educational game applications in English grammar lessons. The data in the table clearly shows that the most crucial challenges is "*using personal devices is not encouraged at school*" (item 9: M = 3.28; SD = 1.36) and the second most crucial one is "*I cannot afford to have personal devices*" (item 10: M = 3.23; SD = 1.05). It is demonstrated that the two factors "*my teacher was not good at using the apps*" (item 3: M = 1.86; SD = 1.08) and "*the apps were not easy to use*" (item 4: M = 1.95; SD = 1.16)) are considered the least challenging to the students. Furthermore, weak signal of Internet connection (item 2: M = 2.44; SD = 1.28) and the presence of some mistakes in the questions and the answers (item 7: M = 2.33; SD = 1.19) hinder students from effective English grammar study through online educational game applications.

### 3.2. Findings of semi-structured interview

The teachers' responses revealed that the games easily involved and motivated students in the lessons. Below are their specific responses.

"*Most of my students **felt excited** about the games on **Quizizz**. They **tend to volunteer more frequently** than usual.*" (T2, T6)

Regarding the consequence of using OEGA, all the teachers agreed that students' understanding and remembering slightly improved.

"*They tried to participate in the games and **learned from their mistakes**. They tended to **have fewer mistakes** later because the questions were repeated in Blooket and the questions helped students **remember the rules better**.*" (T1, T3)

There were 3 teachers who reported that they witnessed the gradual improvement in vocabulary in their students who found out and remembered new words faster.

"*Although my students didn't fully understand the directions, they **could guess the meaning** because the direction repeated many times.*" (T3, T5, T6)

Although the teacher participants reported a lot of effects of OEGA, employing OEGA in teaching English grammar has its downsides. Regarding the school facilities, the teachers mentioned the shortage of equipment:

"*Some classrooms **do not have a screen or a projector**. Luckily, the exercises on Blooket does not require those things because my students had their devices.*" (T2, T3, T5)

The questions in the game apps are manually created. Therefore, the creators may have make errors. The teachers accepted mistakes and used them for checking.

"*Some of the answers in Kahoot **weren't appropriate**. However, I **tried to explain** the exceptions.*" (T4, T6)

All the teachers admitted that personal device availability badly affected their performance.

"*Almost students' families **cannot afford a mobile phone** for learning.*"

### 3.3. Discussion

It has been shown that the teachers and the students agree with the effects of using online educational game applications. Thanks to the game apps, English grammar lessons become meaningful and fun. Participating in the activities and the games generates a friendly learning environment. The students show enhancement in understanding and remembering the lessons better. With help of the game apps, students improve not only English grammar, but also overall English.

The students and the teachers face many challenges in using the game apps. All the participants acknowledge the discouragement of using mobile phones at school because mobile phones may distract the learning process. Spelling mistakes may prevent the students from choosing correct answers and the teachers need to spend more time for explanations. Unstable Internet connection makes the students and teacher struggle to run the game apps. Simple questions may repeat continuously, which leaves some students unsatisfied.

The findings from the questionnaire indicate that the students gain several benefits from using online educational game applications (OEGA) in English grammar lessons. For the *affective* factor, OEGA are flexible learning tools which fit students' demands and enable them to have interesting and meaningful lessons. Concerning the *behavioral* factor, the students report on what they do in classes with help from OEGA. Most of the students can recognize their mistakes. To win the game, the students try to study harder and tend to work in a team. Regarding the *cognitive* factor, thanks to OEGA, students do not only remember the lessons, but they also recognize their improvement in reading and vocabulary. Nevertheless, students encounter difficulties in using OEGA. The students are discouraged from using mobile phones at school and not many of them have mobile phones. Students find it hard to use OEGA because of weak signal of Internet connection and the mistakes in the questions of the game apps. While some students are unsatisfied with simple questions, other students struggle with time limit which makes them worried.

According to findings from the interview, all the teachers agree that teaching with OEGA truly engages their students. Using OEGA costs the teachers less time to explain and provide feedback. Some teachers consider OEGA an extra source of exercises. Concerning how the students improve, using OEGA in teaching English grammar helps student understand and remember the lessons better because the students learn from mistakes and have good performance in the next lessons. Some teachers recognize students' enhancement in vocabulary when their students deal with new words and unfamiliar words. The teachers also witness their students' improvement in reading, which is demonstrated by the ability to analyze the sentences and identifying important key words. However, the teachers face many challenges of using OEGA. All the teachers experience the shortage of equipment in some classrooms. Some teachers are not good at running game apps and they need time to get used to. The teacher often discovers mistakes in the items of the game apps. They also realize that some items are inappropriate and do not match lesson objectives. Finally, the teachers find it hard to implement OEGA in teaching because the use of mobile phones is not encouraged at school.

## 4. Conclusion

### 4.1. Implications

Although a teacher's assistance is vital, students must encourage themselves to enhance further. Teachers should find more interesting ways while instructing grammar lessons. A quiz game to motivate students to discover the usage of grammar rules by themselves is always better than passively sitting and listening. In this case, teachers should learn how to organize game activities well in the classroom. Choosing games should be carefully considered. The type of games should be appropriate for pedagogical purposes only. Based on the findings, some suitable features can be identified: The game should be a quiz format. Being available for multiple

participants is necessary in order to create competitive motivation. The game should be limited in time to motivate high concentration. Last but not least, the game is recommended to include scoring system so that students can compete and achieve goals better.

### 4.2. Recommendations for future research

There should be improvement in methodology. First, future research into the topic should involve more participants from other grades which can enable the generalization of findings. The students can be in fourth and fifth grade due to their competence of using personal devices such as mobile phones and tablets. It is possible to invite more teachers and experts to join the research. Their ideas and suggestions can be highly helpful for both theoretical and practical aspects. Second, the use of more research instruments will result in more reliable data. Focus groups of students for interviews combined with questionnaires help to get the necessary information. Furthermore, the T-test method can also be applied to collect the statistics of students' outcomes.

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