

Mobile game-based learning platform and its effects: evidence from an ESL classroom in Vietnam

Hua Nhu Ngoc, Wa Thai Nhu Phuong*

**Faculty of Foreign Languages, Tay Do University*

Received: 11/11/2024; Accepted: 18/11/2024; Published: 28/11/2024

Abstract: *This study aimed to find out the effectiveness of Kahoot and Quizizz, mobile game-based learning platforms, on students' academic achievement and engagement. In addition, the study also investigated students' perceptions towards using these platforms in grammar learning. The participants were the English-majored freshmen at Tay Do University. For the instruments, the researcher used pre-tests and post-tests to assess students' academic achievement, and classroom observations to examine students' engagement. Questionnaires and interviews were also employed to explore students' perceptions towards utilizing these platforms for grammar instruction. The study revealed improvements in student grammar knowledge, increased engagement, and positive perceptions towards learning grammar with Kahoot and Quizizz.*

Keywords: *Kahoot, Quizlet, mobile game-based learning platforms, academic achievement, engagement*

1. Introduction

The world has seen enormous changes since the introduction of the smartphone. With smartphones, we can now learn English on many different platforms with diverse resources. Mobile game-based learning platforms are revolutionizing education by transforming smartphones and tablets into engaging classrooms. These apps integrate core learning concepts into interactive games, fostering a fun and stimulating atmosphere. Mobile learning games can be designed to target specific subjects, allowing students to practice skills and reinforce knowledge in bite-sized bursts. Furthermore, these platforms can provide immediate feedback and track progress, enabling personalized learning experiences. The accessibility and portability of mobile games also breaks down geographical barriers, allowing students to learn anytime, anywhere. While not a replacement for traditional teaching methods, mobile game-based learning offers a powerful tool to enhance student engagement and improve learning outcomes.

This study set out to gain a better understanding of the role of mobile game-based platforms in English language teaching and learning. Specifically, the current study attempted to assess the potential of game-based learning platforms including Kahoot and Quizizz in helping students improve and master their grammatical knowledge. This study aimed to answer the following research questions:

- RQ1. Do Kahoot and Quizizz affect the students'

academic achievement in learning grammar?

- RQ2. Does the use of Kahoot and Quizizz influence students' engagement?

- RQ3. What are the students' perceptions of the Kahoot and Quizizz's efficacy in learning grammar?

2. Literature review

Kahoot is a free game-based learning platform in which the instructor can create their own questions on the website or look for pre-existing games that they can modify. To participate in Kahoot games, students use their own gadgets such as laptops or smartphones. Students use their devices to select the colored shape on the shared screen that corresponds with their answer choice displayed on a huge screen. The tasks are colorful, quick-paced, and have lively music playing. By accurately and promptly responding to the timed questions on their devices, students receive points. They can play in groups or alone, and they can have more fun by coming up with creative nicknames. In the classroom, Kahoot fosters competition as well. Students are motivated to see their names at the top of the scoreboard, which increased their focus during lectures and related discussions.

In addition to Kahoot, Quizizz is an entertaining platform for multiplayer games that allows students to control the speed at which they play games. Students can answer questions at their own pace and check their answers at the end of the quiz by using the answer-pace feature, which appears

on each student's screen. The coupling of online quizzes with instructional activities and teaching methodologies is found to be beneficial in the studies on online quizzes as a teaching and assessment tool. It supports students' appreciation of quizzes, academic achievement, learning motivation, effort, and engagement in activities.

3. Research methodology

3.1. Participants

The targeted participants in this study were the English-majored freshmen at Tay Do University. The participants were divided into two groups: the control group and the experimental group. During the research, the control group attended the traditional grammar classes in which they were lectured, guided and corrected the exercises in the course book. On the other hand, the students in the experimental group were asked to access the two game-based learning platforms - Kahoot and Quizizz - to practice and review the lesson in at least 60 minutes every week. The students in both two groups were taught with the same syllabus by the same lecturer.

3.2. Instruments

3.2.1. English grammar pre-test and post-test

To answer the first research question regarding students' academic achievement, a pre-test and a post-test were designed. The structure of the tests contained 40 items in the form of multiple choice (15 items), fill in the blanks (15 items), and correct the errors (10 items). To inspect the face and content validity of the items, five EFL professors were invited to evaluate the quality of the items. Based on their comments, some items were revised.

3.2.2. Observation

The researcher used observation checklist, video recording, and photographs of teaching and learning process. The engagement was also evaluated by tracking the students' activity within the platforms. The observation checklist consisted of 7 aspects which the researchers should check during the classroom observation: positive body language, consistent attention span, verbal participation, student confidence, fun and excitement, the interaction between group members and the interaction between different groups. For each aspect, there were five levels of engagement: very high, high, medium, low and very low.

3.2.3. Questionnaire

To investigate the learners' perceptions toward the game-based learning platforms - Kahoot and Quizizz, the researcher designed and utilized a questionnaire comprising 20 close-ended items (five-point Likert scale). The questionnaire involved five sections as following: (a) demographic information, (b) the students' positive attitudes and experience with Kahoot and Quizizz (five items), (c) motivation towards English language learning (five items), (d) perceived concentration (five items), and (e) perceived cooperative learning (five items). The questionnaire was piloted with 30 participants for the reliability and validity.

3.2.4. Interview

For the interview session, which was recorded, the researcher decided to conduct a semi-structured interview where the students were asked with a set of prepared interview questions and the researcher followed their answers up with further questions to explore their responses. The interview questions focused on students' feelings and experiences while playing the games with Kahoot and Quizizz in person and in groups. Additionally, the participants were also asked what were the advantages and disadvantages of playing these digital games in the classroom, especially how the tools influenced on their engagement, motivation, concentration and learning.

3.3. Procedure

In the first stage, the participants were randomly split into two equal groups: one for the experiment group and another for the control group. Then, the students in both two groups were asked to take a pretest consisting of a 40-item grammar test created by the researcher. After the pre-test, the instruction treatment was done by the researcher who was the instructor of the courses in both the experimental and control groups.

As part of their schedule, the English – majored freshmen were supposed to take the English grammar 1 course. The book *Understanding and Using English Grammar* (Azar and Hagen, 2009) was utilized for both groups. The exercises for practice were designed based on the course book and relevant materials. The students in the control group received regular traditional instruction in class. In contrast, the students in the experimental group practiced English grammar via two game-based learning platforms Kahoot and Quizizz. Moreover,

the students could ask the instructor questions and received feedback during the time they used Kahoot and Quizizz for practicing and reviewing the lesson. The researcher used observation checklist, took photographs and noted down when necessary to support the study. To avoid any inconsistency during the treatment, the students in the experimental group were asked not to share the information with their counterparts in the control group.

At the end of the semester, after the instruction had been completed, a post-test was conducted to inspect the students' achievements in both the control and experimental groups and investigated the effectiveness of the program. The average score of pre- and posttest for each student was finally considered. Furthermore, to enrich the data, the students in the experimental group were asked to take part in an interview and completed a questionnaire in which they shared their perception of Kahoot and Quizizz in learning grammar. The questionnaire was conducted via a google platform.

4. Summary of the results

The present study investigated the impact of Kahoot and Quizizz on students' academic achievement, engagement, and perception towards grammar learning. By analyzing these factors, the study made a significant contribution to the field of educational technology and grammar teaching.

4.1. Academic achievement

Students using Quizizz and Kahoot had better grammar learning results than the conventionally educated control group. The features implemented in this system, including leaderboards, scores and instant feedback inspired students and encouraged active learning. Better application of grammar rules and retention of knowledge was also a result of interacting on Kahoot and Quizizz every week. Research showed a positive association between academic achievement and gaming.

4.2. Engagement

The results showed a significant increase in student interest in teaching grammar using Quizizz and Kahoot. Grammar exercises became engaging and entertaining activities thanks to the interactive aspects of these platforms, including time constraints, avatars, and multimedia content. When learning becomes interesting, students paid attention and were more engaged in the learning process.

4.3. Perceptions

The investigation into student perceptions towards learning grammar with Kahoot and Quizizz provided valuable feedback for teachers. The students reported a more positive attitude towards grammar learning due to the interactive and stimulating nature of Kahoot and Quizizz. Therefore, it was obvious that these platforms provided a welcome change of pace for students who found traditional grammar education boring and less engaging.

5. Conclusions

In summary, the present study provided important insights into the effectiveness of Kahoot and Quizizz in language acquisition. The results provided educators with guidance on how to use these platforms strategically to improve students' performance, engagement, and the overall learning process. In addition, this study also helped create more interesting and useful grammar learning resources for learners of all ages.

References

- [1]. All, A., Patricia, E., Castellar, N., & Looy, J. Van. (2014). Measuring Effectiveness in Digital Game-Based Learning: A Methodological Review. *International Journal of Serious Games*, 1(2), 3–20. <https://doi.org/10.17083/IJSG.V1I2.18>
- [2]. Biggs, J., & Tang, C. (2011). *Teaching for Quality Learning at University Fourth Edition* The Society for Research into Higher Education (4th ed.). McGraw-Hill. www.openup.co.uk
- [3]. Dellos, R. (2015). Kahoot! A Digital Game Resource for Learning. *International Journal of Instructional Technology and Distance Learning*, 12(4), 49-52.
- [4]. Kolb, D. (2014). *Experiential learning: Experience as the source of learning and development*. FT press. url: <http://www.learningfromexperience.com/images/uploads/process-of-experiential-learning.pdf>
- [5]. Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students' perception of Kahoot!'s influence on teaching and learning. *Research and Practice in Technology Enhanced Learning*, 13(1). <https://doi.org/10.1186/s41039-018-0078-8>
- [6]. Sabandar, G., Supit, N., & Suryana, E. (2018). Kahoot!: Bring the Fun Into the Classroom! *Indonesian Journal of Informatics Education*, 2(2), 127–134. <https://doi.org/10.20961/IJIE.V2I2>.