



The Efficacy of An Interactive Game-Based Learning Platform in Language Teaching

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Abstract

The advancement of technology has spread to the field of education, resulting in the creation of applications that are used as teaching aids. The interactive game-based platform, such as *Quizizz*, is one of the online resources that are used in the teaching and learning process. The purpose of this study was to determine whether such a learning platform may prove its effectiveness and serve as an alternative for traditional methods to teach English grammar rules, particularly the active/passive structures and the basic tenses (e.g. the simple present, present continuous, and simple past). 95 general English students from two non-English departments at Bunda Mulia University participated in this study. To evaluate the students' grammar skills, two instruments were used: pre- and post-tests. During the treatment, *Quizizz* was utilized as a tool to facilitate better understanding, in addition to the prior explanation of the grammar rules. The study reveals that *Quizizz* was a poor instrument for teaching grammar rules because of the fall in scores. To put it differently, fun games like *Quizizz* may not be suitable for teaching grammar rules, even though they seem entertaining, captivating, competitive, and engaging.

Keywords: *effectiveness, game-based learning platform, language teaching*

INTRODUCTION

Technological advancements have extended into the education sector, ensuring that education keeps pace with the development of applications that can be utilized as learning tools (Kim & Kim, 2018). Similarly, Alexopoulos et al. (2020) claims that technology is evolving not only in the industrial sector but also in education. This is supported by Thao, et. All (2021) who states that the use of online learning platforms demonstrates how technology supports educational activities. Herman, et al. (2022) supports that technology that is currently available should be used in education for both teaching and learning processes, and it has a beneficial impact on education (Turan et al., 2018).

Nowadays, English is used all over the world as an official language. According to Turan and Akdag-Cimen (2020), it has become more significant and well-known worldwide. The fact that learning English becomes imperative, a teacher is supposed to teach students the proper way, so that they can acquire the language. The principles and procedures of teaching English have changed somewhat as a result of the language's rapid development as a communication tool (Ur, 2021).

Grammar is one of the linguistic components that language learners find challenging. Despite grammar being important in language learning, many learners still prefer to concentrate more on learning vocabulary rather than linguistic norms. Vocabulary

undoubtedly plays an important role in a language; However, rules also serve to prevent misunderstandings over the intended meaning. When teaching grammar, it has long been a standard procedure for most lecturers to teach language rules using the deductive method, which begins with the presentation of the targeted grammar rules and ends with a ton of practice, so that students can gain as much understanding as possible.

A lot of educators, in both formal and informal settings, use educational resources such as student books in their lessons. Others might make use of real resources, such as films, periodicals, newspaper articles, etc., in order to comprehend the practical uses of the language better. A teacher must constantly find a method to encourage learning, no matter what the circumstances. Nonetheless, Murniati (2012) asserted that a teacher's ability to effectively communicate the subject matter is in fact the key to a successful teaching method. Additionally, according to Nugroho (2020), a teaching method that works for one study does not necessarily mean that it will also be effective for all EFL learners.

Many learners disregard grammatical rules when learning a language, because they view grammar as unnecessary and tiresome. McDonough, Shaw & Masuhara (2012) stated that in studies of language learner preferences, many students report a preference for learning vocabulary, as it is perceived as more immediately useful and less abstract than grammar rules. Therefore, this study aims to explore a different approach to teaching and learning that is believed to be enjoyable, engaging, and effective. Games in language learning is one of the teaching techniques when teaching a language. According to Sigurðardóttir (2010), the best method for motivating pupils to participate actively in class is through games.

Games are utilized in language instruction since they are frequently thought to be beneficial for increasing vocabulary. Numerous studies demonstrate the contribution that these tools provide to learners' increased vocabulary. Nevertheless, there is not much proof that games help people learn grammar. Klopfer, Osterweil, & Salen (2009) stated that games do not necessary connect to academic connect to academic standards, but they clearly involve a diverse set of intellectual skills from problem-solving to creativity.

In order to do so, the application of engaging web-based applications, such as *kahoot!*, *Quizizz*, *Blooket*, etc. are used to seek the answer to the question of whether such games may help give a good understanding of specific grammar rules. This study, however, only examines whether or not an interactive game-based learning platform, specifically *Quizizz*, the platform the researcher often make use of, may enhance students' understanding of certain grammar rules successfully. *Quizizz* is one of learning platforms that are designed to engage students in activities and make in-class exercises interactive and fun.

Research on how web-based applications like *Quizizz* are perceived was conducted by Sodiq, Mahfud, and Adi (2021). Finding out how teachers and students felt about using the *Quizizz* web application as a learning tool was the aim of this study. This study employed a qualitative methodology. There was a total of 26 participants in this study, including both teachers and students. Interviews and questionnaires were used to obtain the data. The findings indicate that the interviews and the students' opinions of the "*Quizizz*" web application as a learning tool were both favourable.

Additionally, Tanihardjo (2022) investigated the efficacy of interactive quiz-based games for online grammar instruction. In his study, he compared the effectiveness of gamification using game-based learning platform like *Quizizz* and a traditional method for teaching specific grammar rules, namely prepositions and adjective comparisons. Students from the non-English departments participated, and they were divided into two groups: the experimental group and the control group. While the experimental group used quiz-based

games for the drilling practice, the control group used a more conventional method, such as a practice book. The study demonstrated that engaging activities, which appeared to be entertaining, fascinating, competitive, and thrilling, did not produce the desired outcome. However, the old method proved to be more effective in teaching grammar rules, even though it resulted in a negligible improvement in scores. Such an unexpected result shows that games, which some people believe are the best method to learn a language due to their entertaining and engaging activities, may not always be the best approach to teach all the language parts.

THEORETICAL FRAMEWORK

According to Hadfield (1996), "a game is an activity with rules, a goal, and an element of fun." Additionally, he stated that the goal of games is to facilitate successful communication rather than precise language use. To put it another way, the essential feature of games is the message. Furthermore, he mentioned that games fall into two categories: cooperative and competitive. In the former, players must cooperate to reach a common objective, while in the latter, they must race to be the first to reach the goal. According to Rodgers, who was cited by Danesi (1987), good games include five fundamental qualities. They ought to be engaging, competitive, goal-defined, guided by rules, and have an ending. In conclusion, games should have the five qualities listed above in order to help students advance in their language acquisition.

There are three main reasons why educators are interested in using games as teaching methods, according to Garris, Ahlers, and Driskell (2002). First of all, learning through games fits in nicely with the new educational philosophy that emphasizes student participation in their own education, as opposed to the old teacher-centered paradigm. Second, there is some evidence to suggest that games can improve users' comprehension and learning of difficult subjects. Last but not least, games have the ability to greatly engage players, which may boost their motivation to study.

Games should be employed in the classroom for eight reasons, according to Sigurðardóttir (2010). To begin with, games make the classroom a fun place. Second, games foster a positive and pleasant environment in the classroom. Then, it is simple to use games to recreate different real-life scenarios. Furthermore, a range of scenarios that games can offer allow students to gain experience, maintain an open mind, and voluntarily participate. In the classroom, games also help students to feel more confident and emotionally connected. Furthermore, games can be utilized to teach a range of subjects to a diverse student body. Finally, games allow students to play in their spare time.

According to Nugroho, et al. (2019), the use of technology in the form of gamification during the learning process can be used for positive activities, like creating creative and fun learning to support student achievement. However, they also added that game-based learning platform like *Quizizz* may also create negative impact. In other words, game-based learning media may not only work effectively, but also entail the risk of failure. In order for the games to work as expected, they need to be designed effectively and developed in accordance with the learning objectives.

RESEARCH METHODOLOGY

In the past, teachers used to frequently teach grammar rules to students using practice books. However, since grammar rules are quite challenging to learn, the researcher would like

to find out whether technology, specifically an interactive game-based learning platform, like *Quizizz* can support educational activities and be effective in language teaching.

The study's participants were first-semester General English students at Bunda Mulia University from two non-English departments. The four skills—speaking, listening, reading, and writing—are taught to the students in the General English course. However, this study just focuses on grammar, which is a component of the writing skill.

The researcher employed pre- and post-tests to gauge the students' comprehension of active and passive constructions, as well as grammatical rules of the tenses, including the simple present, present continuous, and simple past. A pre-test was used to assess the students' prior knowledge, and a post-test was used to measure their comprehension.

95 students from two distinct non-English departments at Bunda Mulia University participated in this study. The researcher used a Google form to measure the students' grammar competence. A pre-test consisting 20 questions and a post-test consisting 15 questions in the forms of multiple choices questions were administered. All of the test items were relevant to the topics that are the focus of this investigation, despite the fact that the quantity of questions varied. Prior to determining which tense was appropriate in each question, the students were supposed to comprehend the context. Next, they had to determine if active or passive constructions were required for the situations.

In the treatment process, in order to adequately explain grammatical rules of topics discussed, the researcher first used Power Point slides during the treatment. Following the discussion, the researcher administered drilling practices using *Quizizz*. Both multiple-choice and fill-in-the-blank questions were used in the practice, along with the correct answers for each one so that students may learn from their mistakes.

Quizizz provides a report that shows the number of players, their accuracy, completion rate, points and scores, average time spent answering each question, and other information. The application calculates scores based on more than just the quantity of right answers; it also considers factors like how long it takes to complete the game. In the treatment process, the researcher made use of the grades generated by that particular application to see the students' understanding and performances.

At one point, some of the students were unable to maintain a strong internet connection while joining *Quizizz* during the treatment. They were consequently disconnected during the game. Additionally, due to the game's restriction on the maximum number of players, some of them were also unable to engage in gameplay from the start. This study's participants, however, were those who successfully completed all of the questions in the game, and the Google form tests.

Following the collection of all test results data collected, the researcher made a comparison between the pre- and post-test outcomes. In the process of analysis, the researcher first reviewed and examined the data from the findings in order to explain whether using an interactive game-based platform, namely *Quizizz*, had an effect on scores.

FINDINGS AND DISCUSSION

The researcher employed paired sample t-test and compared the results to determine the difference between the pre-test and post-test results, and determine the effectiveness of the interactive game-based learning platform, namely *Quizizz*, that is indicated by the students' scores.

Table 1*Paired Samples Statistics*

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest_Score	73.80	95	16.164	1.658
	Posttest_Score	72.12	95	17.516	1.797

The findings of the Paired Samples Statistics indicate that, out of 95 students, the pre- and post-test scores using *Quizizz* were 73.80 and 72.12, respectively. According to the table, the pre-test average score was higher than the post-test average score. In other words, the results of the post-test experienced a drop.

Table 2*Paired Samples Test*

		Paired Differences		t	df	Sig. (2-tailed)
		95% Confidence Interval of the Difference				
		Std. Error	Mean	Lower	Upper	
		Mean	Deviation	Mean	Lower	Upper
Pair 1	Pretest_Score - Posttest_Score	1.684	21.711	2.227	-2.738	6.107
				.756	94	.451

According to the results of pair 1's Paired Sample Test (pre- and post-test scores), with $df = 94$, the t-score for 5% significance is 1.986, and for 1% significance, it is 2.629. With $t = 0.756 < 1.986$ and $t = 0.756 < 2.629$, the null hypothesis is accepted and it demonstrates that the use of interactive game-based learning platforms such as *Quizizz* for a drilling practice was ineffective in teaching the grammar rules of basic tenses (the simple present, present continuous, and past tenses) and active and passive constructions. In other words, interactive games had no effect on students' grammar scores.

A 1.68-point difference in the post-test score was evident from the Paired Samples Statistics table. With the score of the post-test being lower than the pre-test, the outcome demonstrates that using *Quizizz*, an interactive learning platform based on games, to raise students' grammar scores was completely unsuccessful.

The study reveals that the student apparently performed poorly on the post-test, even though the activities were entertaining and the students were heavily engaged and highly motived in the process of the treatment. In other words, *Quizizz* may not be the right tool for

teaching grammar principles, even though the overall results of the drilling practice also demonstrate positive influence. In fact, this study's findings were comparable to those of Tanihardjo's (2022), which demonstrated that teaching grammatical rules using engaging quiz-based game, specifically, adjective comparisons and prepositions, did not effectively accomplish its goals.

It has been proposed by Sigurðardóttir (2010) that the best way to get students involved in class is through games. Yet, the post-test results revealed contradicting findings. Despite the pleasant classroom environment and the group's apparent enjoyment of the activities, not everyone benefits from this interactive game-based platform.

CONCLUSION AND SUGGESTION

Both teachers and students may find games entertaining when teaching and learning a language. To help students better understand the subjects covered, instructors have been looking for and implementing innovative and engaging teaching methods for many years. The study's findings, however, indicate that while interactive game-based platforms, such as *Quizizz* and the likes may appear fun, captivating, competitive, engaging and have other positive traits, they may not be appropriate for teaching grammatical rules. Such evidence supported Hadfield's (1996) assertion that games prioritize effective communication over linguistic accuracy.

This study shows that the effects of interactive games are not always favorable. However, there are undoubtedly other potential reasons why employing these kinds of games to teach grammatical principles was ineffective, like many games focus on engagement and entertainment rather than teaching grammar structures, or the participants can sometimes become too focused on entertainment value and not enough on educational outcomes, etc. It is probably a good idea to teach grammar rules using an outdated teaching method and also apply different tools that might suit the students' needs. All in all, the study's findings lead the researcher to recommend that future research employ game-based platforms for vocabulary instruction.

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