

The Effect of Game Based Learning Platform on Students Achievement in Autonomous Learning Context: Evidence from EFL Classroom in Pesantren

Devi Nur Aini¹, Slamet Setiawan², Syafi'ul Anam³

^{1,2,3} State University of Surabaya, Surabaya

¹ IAI Al-Khoziny, Sidoarjo

*Corresponding email:*devi.21012@mhs.unesa.ac.id

ABSTRACT

Abstract. In post pandemic situation, many institutions applied autonomous learning approach in the teaching and learning process. Game has been proved as one of the effective way in improving students mastery of english proficiency. On the other hand, english is a foreign language in indonesia. Many students got difficulty in mastering english subject, they lacked of motivation in learning. Many times, they got bored with the situation in the classroom. The students also depend on the teacher and lecturer when they learn English. To overcome the problem, this study aims to examine the effectiveness of some of the game-based learning platform, in improving students english achievement and their perception toward it. A total of 42 undergraduate students in semester 1 were involved in the study. A one-group pre-test post-test research design was employed with an intervention and autonomous program that spanned 6 weeks. The results was analyzed using non parametric test. The findings showed that game based learning platform that was implemented in the class with the "Quizziz" platform had significant impact in improving students' English achievement.

Keywords: game-based learning platform, autonomous learning, students' achievement

First Receive:

08 November 2023

Revised:

08 January 2023

Accepted:

06 March 2023

Final Proof Received:

10 May 2023

Published:

01 June 2023

How to cite (in APA style):

Nuraini, Devi., Setiawan, Slamet., & Anam, Syafi'ul. (2023). The Effect of Game Based Learning Platform on Students Achievement in Autonomous Learning Context: Evidence from EFL Classroom in Pesantren. *ELITE Journal*, 5 (2), 333-340.

INTRODUCTION

For the whole of the year 2020, started from march 2020 due to the effect of COVID 19, Many Schools and Institution all around the world had to employ online learning. The process of teaching and learning has been done through online setting by using multimodal platform. The students got boredom in facing online class. Some of the technological innovation then were used; the teachers used game based learning platform to avoid students boredom.

Meanwhile, research conducted at the Primary level in which the English teacher became the focused of the participant. The findings of the study show that the teacher used some game- based platforms, such as Kahoot!, Quizizz, ESL Games Plus, and Duolingo because they are rich in visuals and easy to play. The use of game based learning should use

Available online at <https://www.elitejournal.org/index.php/ELITE>

a structured schedule consisted of instruction, presentation, and reflection to help the students to engage with the materials being learned. The way of the use of game based learning by following a structured schedule has also promoted fun and interesting learning. The use of GBL was also exposed to engage and to motivate the students in learning English. The educators believes that when the students feel challenged as well as having fun during the learning, the level of interest increases. The students' achievements have also increased when the teacher uses GBL in the classroom. In summary, the use of GBL has successfully increased the students' interest in learning English (Ghazy et al., 2021).

The use of educational applications (apps) has been proven to be able to improve students' critical thinking and helps them to make evaluative decisions to solve problems. There is a need for the teacher to understand how learners develop higher order thinking skills and soft skills in a designed context (e.g., Barab et al., 2009; Squire, 2006). The aim of fostering 21st century competencies provides a meaningful direction for game-based learning in schools. Instead of providing *contents*, games may be designed to provide rich and meaningful *contexts* for developing higher order thinking and social skills (Thomas & Brown, 2011). For example, a game may pose a challenge (such as investigating the mysterious death of a game character by a lake) that requires the players to collect and interpret data, identify evidence, and develop hypotheses collaboratively in order to solve the mystery (Squire & Jan, 2007). Likewise, the finding shows that most of these students are developing their interpersonal skills as they collaborate in teams and work in tandem with their peers, during their formative activities. These findings suggest that practitioners in education ought to consider taking an iterative approach as they identify what, where, when and how digital games are (or are not) consistent with the courses' learning outcomes and curriculum program (Camilleri & Camilleri, 2017)

There has been many critics and suggestion that we need to employ autonomous learning. After the pandemic situation, the students used to learn by themselves. Indirectly, it trained the students to be independent learner. They need to set the objective of the learning in the beginning, they also need to know their selves better. After knowing the objective, they will be able to select the learning material that is suitable with their need. Some schools conducted autonomous learning. By the use of quizziz, the students are trained to select the exercise suit to their level, then if they can finish the first task, they can continue to the next level. This kind of situation can encourage them to learn more thoroughly to get the better score. Moreover, practical reasons, for instance the increased access to education and resource management, are mentioned for its implementation. In order to examine whether the expectation of improved education is met, we need to conduct meta-analyses. It is revealed that use of QUIZZIZ in autonomous learning context is more effective than traditional learning. In addition, students got attracted in it. In conclusion, autonomous learning is equal, or might even better, than traditional learning (Spanjers et al., 2015).

Based on the researcher preliminary observation in some of the schools and institution, the students still got boredom and lack of motivation in online learning. They do not show positive attitude in online learning. Therefore, the researcher need to use game based learning platform as one of the way to avoid students boredom and train their autonomous learning. Likewise, the use of game based learning platform has proven to be effective to improve students english proficiency. Similarly, the findings of the study indicated that Kahoot! is a suitable teaching tool for the current learners, and the educators may explore the possibilities which Kahoot! has to offer with other grammatical components

(Idris et al., 2020). Many of the study of the use of game based learning has been done in online setting by using different game based learning platform such as *Kahoot*; on the other hand this study conducted in autonomous learning context. This study employed *Quizziz* to be implemented in the teaching and learning process. This study aims to investigate the effect of use game based learning platform” Quizziz” on the students achievement in English language classroom. The focus is the effect of the use toward higher students in university. This study also explored the use of Quizziz in autonomous learning setting.

Quizziz as Game Based Learning Platform

Quizziz is one of the game based learning platform. Some of the game based learning platform used extensively in higher education in recently are Quizziz, Socrative, Kahoot. It enables students to participate in interactive class activities using their mobile devices to improve learning experiences. Quizziz is a game-based learning platform, which brings multiplayer activities to classrooms and makes in- class exercises interactive and fun. By the use of Quizziz, students can do in-class exercises on their electronic devices. Quizziz also has characteristics like avatars, themes, memes and music, which are entertaining in the learning process. Quizziz will also allow students to compete each other and motivates them to be engaged in the learning process. In the end of the exercise the students who take the quiz will get the result directly in the form of ranking on the leaderboard. The educator can monitor the process and download the report when the quiz is finished to evaluate students’ performance. This platform can stimulate the learners’ interest and improve students’ engagement (Irwansyah & Izzati, 2021)

Rationale and Views for Game-based Learning in Education

Games are often functioned to help people learn for three reasons: motivation, content mastery, as well as *higher order thinking and social skills*. In the 1980s, MIT professor Thomas Malone (1981) maintained that games *motivate* players with elements of challenge, fantasy and curiosity. His study contributes to what makes games fun rather than what makes them educational. recently, the fun learning deals with the use of games remains a major point of interest, attracting researchers and educators to utilize games *in* learning context. However, we cannot make sure whether the learners really learn when they are having fun with the activity.

Likewise, the different reasons for using games for learning, the views on what counts as game-based learning are equally diverse. These views are critical due to the reasons that they focus on how game-based learning is conceptualized for learning process in schools. The dominant perspective considers game-based learning *as a learning approach driven by game technologies* (e.g., Gee, 2003; Prensky, 2003). It questions how games, such as a commercial off-the-shelf game, can help teenage or adult to learn. This perspective states that learning take places mostly as a result of game play. Therefore, learning occurs when players can play a game at their own way, even outside of school. Through self-initiated game play, learners develop higher order thinking skills and even social skills autonomously.

The second opinion considers game-based learning as the learning approach refers to *not only by game technologies, but also by pedagogies*. Learning does not occur only within a game, but also through the activities designed around a game. Many institution believes this view of game-based learning. On the other hand, opposing the first view, learners (instead of

players) often learn to play with teacher's guidance – much like how students learn with textbooks.

The third one considers game-based learning as more of a *pedagogical/learning innovation informed by game design principles*. This consideration functions game as mechanics and game-design thinking to design the environments of the learning. Role-playing, achievement, competition and reward system are the game features usually used to “gamify” the learning situation such as online communities (e.g., Kapp, 2012).

METHOD

This research employed a pre-experimental method (one-group pre-test–post- test design). The data were collected exclusively from a comparison of pre-test and post-test data. The study was conducted in Islamic institute. Convenient sampling was considered based on the information of researchers on the population of interest, the availability the sample and the objectives of the study. It involved manipulating an independent variable without random assignment of conditions or condition orders to participants.

The sample of this study consisted of 42 undergraduate students in the first semester without any control group. All of them are undergraduate students in the first semester. The data were analyzed quantitatively because the purpose of this research was to measure the effect of game based learning platform *on* students' achievement. The pre-test was administered at the beginning of the study. The final score in the post-test would indicate the learning progress. Similarly, the questionnaire were administered to ascertain the effect of game based learning on students' perception. Game based learning platform was one of the instrument used for this research and was given before and after the application of game based learning platform.

The intervention length will be done in 6 weeks, which was equivalent to 6 contact hours. Here, the intervention length was sufficient because the students would not have an opportunity to memorize or try to remember the exact questions and answers in the pre-test. Any outcomes made between the two tests are likely due to the influence of the use game based learning platform.

Research Procedure

The research flow is shown in Table 1.

Table 1: Research flow

	Pre-Test	Game Based Learning Platform	Post-Test
Respondent	X	Y	Z

Data Analysis

A statistical analysis will be executed by recording the scores of the participants' in both tests on the statistical software, IBM SPSS Statistics Version 16. The paired sample t-test was used to describe the difference in the mean before and after the use of game based learning platform. The result from the data will be crucial in verifying the effectiveness of game based

learning platform in reinforcing the students' perception and achievement in learning english language.

FINDINGS

Result and Discussion

The pretest was conducted in the third meeting of English Language course 1. Therefore, it was conducted before the students got any treatment using game based learning platform. The students were asked to do the grammar test on 5 tenses. There were 20 questions to be done by the students. Table 2 shows the summary of the pretest and posttest result.

Table 2. The Descriptive Statistic Result of *Quizizz* as the game based learning

		English pretest score	English posttest score
N	Valid	42	42
	Missing	0	0
Mean		65.0238	87.0952
Std. Error of Mean		3.16714	2.40663
Median		58.0000	90.0000
Mode		42.00 ^a	100.00
Std. Deviation		20.52540	15.59676
Variance		421.292	243.259
Range		67.00	70.00
Minimum		33.00	30.00
Maximum		100.00	100.00

a. Multiple modes exist. The smallest value is shown

From the table 1 above, it can be seen that the minimum score on the pretest was 33 and the maximum score was 100. The average score for 1 student was 65.02. The posttest was conducted after the students got the treatment using game based learning platform. The lesson for the posttest was also 5 Tenses. However, there were 20 questions to be answered by the students. Meanwhile, based on the table the minimum score in the posttest was 30 while the maximum score was 100. The average score of 42 students was 87.095. There were some differences on the result of the pretest and posttest although both test were followed by 42 students.

Before the treatment given the students' mean score was 65.02. Then, data on the students' mean score of students' achievement after the treatment was 87.1. Conducting pre-test and post-test allowed for comparison between the students' achievement before and after the treatment given. Both the pre-test and the post-test were given in different day. The pre-test was given on September 29th, meanwhile the post-test was given on October 27th 2021. Furthermore, the researcher also conducted different test, yet the test items evaluated the same indicators. The figure above compared the pre-test and posttest result. The pre-test result was 65.02 whereas on the post-test result was 87.095 . Based on this comparison the

students' result of the pre-test and post-test were different. In another words, the students gained the lower score on the pre-test and the higher score on the post-test. Therefore, it could be concluded that the treatments which were given affected the students' score. After the researcher gained the students' score on the pre-test and the posttest, then turned to analyze the students' different mean score of both tests. The following is the result of normality test.

Table 3. The Result of Normality Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
english_pretestscore	.158	42	.010	.926	42	.010
english_posttestscore	.225	42	.000	.806	42	.000

a. Lilliefors Significance Correction

Based on the result of the normality test, the data were normally distributed if the significant value is greater than the level of significant .05. Table 3 demonstrates the result of Kolmogorov-Smirnov and Shapiro-Wilk tests by using SPSS 16.0. The result of the normality test in posttest was lower than the significant value of .05. Therefore, it can be concluded that the data was not normally distributed. Since the normality assumption was not full filled, the data should be analyzed using non parametric statistics. The researcher then used Wilcoxon signed rank test. The result of the computation by using spss 16 is as follow shown in the table 4

Table 4. Wilcoxon signed rank test

Test Statistics^b

	english_posttestscore - english_pretestscore
Z	-5.218 ^a
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Based on the table above, the significant value was 0.000 with the degree of freedom 0.5. Meanwhile the result shows that the significant value in the table was smaller than the degree of freedom ($0.000 < 0.05$) it meant that H_a was accepted and the H_o was rejected. Dealing with the research question whether the use of game based learning platform in the blended learning can affect the student' achievement. The null hypotheses which stated the use of game based learning platform do not affect the student achievement in learning English language was rejected. It can be concluded that the alternative hypotheses was accepted stated that the use of game based learning platform can reinforce the student achievement in learning English language.

In order to know how great the effect of game based learning platform toward the students' achievement, we need to calculate the effect size. The value obtained from the computation of the effect size was 0.22. Based on the table of specification of the effect size, the influence was categorized as modest effect.

With the result of the hypothesis testing above, we can conclude that the students have significantly better English score achievement after being taught using game based learning platform. The use of Quizziz as game based learning platform is effective to reinforce the students' English achievement.

The study attempt to investigate the effectiveness of Quizziz as one of the game based learning to improve the student score in english language. two variables were involved in this study, independent and dependent variables. The independent variable is QUIZZIZ as game based learning platform while the dependent variable is students' achievement in english language learning. This research employed pre experimental research as its design. Before conducting the treatment that was taught the students using game based learning platform "Quizziz" as the learning media, a pretest was administered. The mean score of the pretest was 65.02. After conducting the treatment, a posttest was administered and the mean score in the pretest was 87.09. The mean score in the posttest increased 22. points better than the pretest.

with the result of the hypothesis testing, the comparison of posttest and pretest score shows that the students have significantly better achievement after being taught using Quizziz as game based learning platform. The result of this research therefore shows that Quizziz can be used as the media in teaching english especiall in autonomous learning context.

CONCLUSION

Recently, in the post pandemic situation. The mode of teaching and learning In the context of the present study quizziz has been indicated to have a positive effect on student achievement, in which a significant difference exists between the mark of the students before and after the learning session on english lesson, the implementation of the game based learning platform invite us to discuss some feedbacks and implications. The findings showed that game based learning can enhance the students achievement in learning English language; the students experienced the game based learning platform in the autonomous learning context. Even though we cannot generalize the result to the whole population. The game based learning platform offer motivated insight to the students to avoid boredom in the classroom.

Based on the result and discussion, the following are some recommendations are for research in the future. It serves as the preliminary point for the next study, especially higher students with larger sample size. Besides, the next study may include a control group to empower the finding of the study. Some of the preparation should be done also in order to implement the game based learning platform. The learner should be familiar with the online platform, they can be given some practice before deals with the platform used. The second requirement is secure and stable connection. The educators may establish and create a conducive environment in teaching and learning process. Some of the rules need to be set out as the guidance for the learner. The cooperation between the learner and the educator need to be well established. The educator serves as the facilitator for the learner. They provide and construct the material and the quiz to assess the learner. In the future, the game

based learning platform might be used in daily class, the educator and learner need to be ready for any possibility.

REFERENCES

- Barab, S. A., Scott, B., Siyahhan, S., Goldstone, R., Ingram-Goble, A., Zuiker, S. J., & Gee, J. P. (2007). *Good video games and good learning*. New York, NY: Peter Lang.
- Kapp, K. (2012). *The gamification of learning and instruction: game-based methods and strategies for training and education*. San Francisco, CA: Pfeiffer.
- Malone, T. (1981). What makes computer games fun? *Byte*, 6(12), 258–277
- Prensky, M. (2003). Digital game-based learning. *Computers in Entertainment*, 1(1), 21–21.
- Squire, K. (2006). From content to context: Videogames as designed experience. *Educational researcher*, 35(8), 19–29.
- Thomas, D., & Brown, J. S. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change*. Lexington, KY: CreateSpace.
- Camilleri, M. A., & Camilleri, A. C. (2017). The students' perceptions of digital game-based learning. *Proceedings of the 11th European Conference on Games Based Learning, ECGBL 2017*, 56–62.
- Ghazy, A., Wajdi, M., Sada, C., & Ikhsanudin, I. (2021). The use of game-based learning in English class. *Journal of Applied Studies in Language*, 5(1), 67–78. <https://doi.org/10.31940/jasl.v5i1.2400>
- Idris, M. I., Mohd Said, N. E., & Tan, K. H. (2020). Game-based learning platform and its effects on present tense mastery: Evidence from an ESL classroom. *International Journal of Learning, Teaching and Educational Research*, 19(5), 13–26. <https://doi.org/10.26803/ijlter.19.5.2>
- Irwansyah, R., & Izzati, M. (2021). Implementing Quizizz as Game Based Learning and Assessment in the English Classroom. *TEFLA Journal (Teaching English as ...)*, 3(1), 13–18. <https://journal.umbjm.ac.id/index.php/TEFLA/article/view/756>
- Spanjers, I. A. E., Könings, K. D., Leppink, J., Verstegen, D. M. L., de Jong, N., Czabanowska, K., & van Merriënboer, J. J. G. (2015). The promised land of blended learning: Quizzes as a moderator. *Educational Research Review*, 15, 59–74. <https://doi.org/10.1016/j.edurev.2015.05.001>