Research Article

The impact of gamified learning using Quizizz on ESL learners' grammar achievement

Anh Tuan Pham [1*]

 0000-0002-6977-582X

[1] FPT University, Can Tho, VIETNAM
* Corresponding author: anhpt66@fe.edu.vn

ARTICLE INFO	ABSTRACT
	This study aims to examine the impact of gamified learning using Quizizz on English as a second language (ESL) learners' grammar achievement. The pre-/post-test control group design was applied to research 63 English-majored freshmen. 20 multiple-choice quizzes were designed based on grammar points included in the basic grammar course over a 10-week intervention period. There were 33 students from the experimental group doing the quizzes on Quizizz, while 30 participants from the control group did the same quizzes on paper. The findings indicate that although students from the two groups both improved their marks on the post-test compared to the pre-test, students from the treatment group got significantly higher scores than those from the control group on the achievement test. However, educators are supported to consider using this gamified learning platform as a supportive tool besides choosing the appropriate instructional content to optimize the quality of their teaching. **Keywords:** assignments, gamification, Quizizz, grammar, ESL

INTRODUCTION

Grammar has played an essential role in learning English. Grammar, the structural foundation, defines types of words, word groups, and rules to produce correct and meaningful sentences. However, English as a foreign language (EFL) learners in many Vietnamese schools appear to face a lot of problems with grammatical knowledge (Hanh & Chau, 2021). They have common errors in many areas of English grammar as tenses and aspects, the copula *be*, adverb positions, and adjective phrases (Dao, 2008). Besides, there is a great difference between Vietnamese and English grammatical characteristics (Tang, 2007). Vietnamese grammar mainly includes word order and the usage of function words rather than bound morphemes (Nguyen, 1997). That can be a big obstacle for Vietnamese learners to master English grammar. Therefore, applying updated methods to help learners get more engaged in learning activities and improve their achievement has always been important to enhance the quality of teaching and learning grammar since students play an active role in their learning process (Thirusanku & Melor, 2014).

Recently, gamification has been applied in various areas of teaching and learning English because of its great benefits. It was used to motivate learners and enhance their engagement in learning (Bal, 2019; Hanus & Fox, 2015; Jackson & McNamara, 2013; Mchucha et al., 2017; Torrado Cespón & Díaz Lage, 2022). In addition, gamified learning has been proven in some studies to have a positive influence on vocabulary learning (Katemba & Sinuhaji, 2021; Kijpoonphol & Phumchanin, 2018; Pham, 2022a; Waluyo & Brucol, 2021). Regarding grammar, many English as a second language (ESL) students were in favor of the usage of gamified learning because of its benefits in motivation and better comprehension of English grammar concepts (Rafiqah et al., 2019). Gamified learning through tools such as Kahoot!, Socrative, and PowerPoint Challenge Game was also found to be effective for ESL students (Hashim et al., 2019). In Vietnam, several studies have reported that being well-equipped for using gamified learning and holding positive attitudes toward it make learners more ready to join online gamified webs (Le, 2021; Pham, 2022b). However, a few studies have been
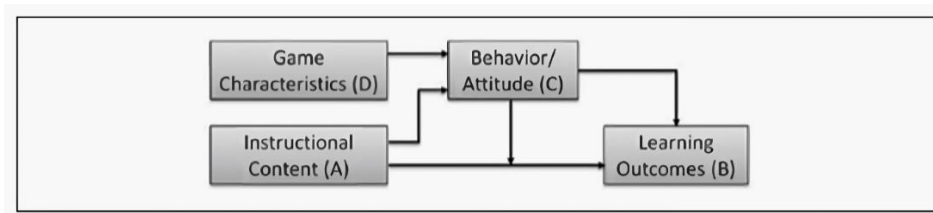
Figure 1. Theory of gamified learning (Landers, 2015)

found on using Quizizz on English-majored learners' grammar achievement in higher education. Therefore, this study aims to fill this gap by finding out empirical evidence to test the following hypothesis: doing assignments on Quizizz can improve English-majored learners' grammar achievement.

LITERATURE REVIEW

Theory of Gamified Learning

The hypothesis of this study was based on the theory of gamified learning. **Figure 1** shows the foundation of the gamified learning theory, which includes two processes by which game characteristics can affect learners' learning outcomes (Landers, 2015). The first one is called mediating process. The game characteristics influence learners' behaviors that moderate instructional content. In this case, better instructional content can improve learners' achievement. However, if the fantasy (a game characteristic) is incorporated, learners' engagement (attitude) would be enhanced. That strengthens the relationship between learning outcomes and instructional content. The latter is the moderating process in which the relationship between the game characteristics and students' learning outcomes is mediated by their behaviors or attitudes. Accordingly, in the current study, the summary of the percentage of the correct answers at the end of each quiz (a game characteristic) is supposed to encourage students to retry the quiz many times (behavior) to get higher scores (learning outcomes).

Elements of the Gamification Process

According to McGonigal (2011), four traits that define the gamification process include a goal, rules, a feedback system, and voluntary participation. The goal is the outcome that players are expected to achieve. In an educational setting, a clear and achievable goal is essential because it orients students' participation during the activity. The rules set the guidelines on how to achieve the goal as well as limitations on the gameplay. This provides learners the directions which help them to work creatively to complete the tasks. Feedback systems enable players to keep track of their progress and encourage them to continue to play. In fact, appropriate and timely feedback and providing learners enough time to react to that feedback play a crucial role in gamification. Voluntary participation refers to the participant's acceptance of a set of rules and providing the appropriate challenges that ensure a balance between fun and stress for the players. In other words, this feature concerns learners' sense of agency in their study and the suitable assignments that meet their needs.

Gamification and Game-based Learning

Gamification is defined as the application of game elements in non-game contexts (Deterding et al., 2011). Some examples of game elements are levels of difficulty, point systems, badges, leaderboards, quests, social graphs, avatars, or certificates (Zainuddin et al., 2020). Gamification has been highlighted to have benefits in enhancing engagement and solving problems (Kapp et al., 2014; Zichermann & Cunningham, 2011). Gamification does not directly enhance learners' knowledge and skills. Instead, the improvement of learners' knowledge and skills can be the result of positive changes in learning behaviors, commitment, and engagement in learning activities.

Game-based learning refers to the achievement of defined learning outcomes through game content and play. It enhances learning by providing learners with a sense of achievement by solving problems and challenges (Qian & Clark, 2016). It is based on a fully-fledged game, commonly named a serious game.

Grammar and Quizizz

According to Greenbaum (1996), grammar is sometimes defined as syntax which is how phrases, clauses, and sentences are combined. Also, it may include descriptions of other aspects of language such as morphology, word formation, phonetics, phonology, orthography, vocabulary, semantics, and pragmatics. Within the scope of this study, the term grammar is used as a synonym for syntax. It can be categorized into two types: descriptive grammar and prescriptive grammar. Descriptive grammar objectively depicts the rules of the language while prescriptive grammar emphasizes on the evaluation of what is correct or incorrect, guides usage, and phenomena happening in standard and non-standard English usage.

Quizizz, a free gamified online-based quiz tool, allows learners to practice through quizzes on computers, smartphones, and tablets. It can create a multiplayer game, which is an exciting activity for learners (Mei et al., 2018), especially from attractive visual features (Brinton, 2001). Teachers can create, edit, and use already-created quizzes and lessons available on its web page. They can assign the quizzes as homework or live sessions by giving students a link or a game code. Many types of questions can be used to design the quizzes: multiple choice, fill-in-the-blank, open-ended, poll, matching, and reordering. Besides, teachers can include audio or video files, and images in the questions. Besides, Quizizz is an easy-to-use tool for learners. Students can use their email accounts on Google, accounts from Microsoft or their personal emails to log into the platform and do the quizzes.

Some popular features of Quizizz promote learners' engagement. One of the main features of Quizizz related to the current study is customizing feedback for students. It is considered to be a very useful element to enhance participation and motivate students (Flores, 2015). After each question, students can see feedback on whether they have got the correct answers or not and funny memes. Moreover, the point system is another feature that motivates learners. With the live sessions, while doing the quizzes, students can get bonus points when they play at a faster speed. Besides, power-ups are designed to increase students' engagement and participation with many types such as 2X (players can get twice the points for a correct answer), power play (players can get 50% more points in 20 seconds), and double Jeopardy (players can double the points if they choose the correct answer but lose it all if they choose the wrong one), and so on. In this study, at the end of the quiz, a leaderboard of students will be shown for self-review and self-evaluation. Hence, students can retry the quiz again as many times as they want to get more correct answers. Another important feature is that teachers can set up a specific deadline for an assignment in order for all students to complete the assignment before it is due. Otherwise, they will not be allowed to do the assignment. Other interesting features are the meme feedback and music options. Teachers can choose to enable or switch them off to make the assignments more appealing to learners.

Effects of Quizizz on Grammar Competence

There have been several studies related to the influence of using Quizizz on learners' grammar competence. A study on 14 learners in grade eleven from a senior high school in Bandung showed a significant improvement in learners' grammar competence through self-assessment after 10 weeks of using Quizizz. Also, this study revealed the process by which students do their self-assessment by using prompts from Quizizz: doing the first quiz–getting feedback–reviewing–replaying the quiz–doing the next quiz (Rahayu & Purnawarman, 2019). Another research was conducted on 65 students in English language education Undiksha using the post-test-only control group design. The findings stated that 33 students from the experimental group who used mobile assisted language learning (MALL) strategy through Quizizz in seven meetings had significantly better scores on grammar tests than the control group who were studied with the conventional strategies (Dewi et al., 2020). To improve university students' achievement in studying relative pronouns, a study on 24 learners with an intermediate English grammar course using an action research design reported an improvement in participants' achievement related to relative pronouns after studying materials and evaluation by using Quizizz. In addition, learners showed positive attitudes toward applying Quizizz in studying and evaluating relative pronouns (Fadhilawati, 2021). The results from those studies demonstrated the positive impact of using Quizizz in teaching grammar on learners' knowledge and attitudes.

METHODOLOGY

Participants and Context

The samples were 63 first-year ESL students (25 male and 38 female students). All participants were from 18 to 19 years old. The participants had at least seven years of studying English from their general education program. 33 students from English class B (13 male and 20 female students) were in the experimental group while the other 30 students from English class D (12 male and 18 female students) belonged to the control group. The instructor who taught grammar subject was the same in classes B and D.

During the first year at university, ESL students had three semesters and this study was carried out in the second semester of the school year. During 10 weeks, students had two English basic grammar classes every week for 90 minutes per class. According to the syllabus for the English basic grammar subject, there were seven units: tenses (simple present, present continuous, present perfect, simple past, past continuous, past perfect, and simple future), modal verbs, passive voice, conditional and wish sentences, articles and nouns (countable and uncountable nouns and a/an/the/some/any), pronouns (personal pronouns, possessive adjectives, possessive pronouns, and reflexive pronouns), and comparison (equality, comparative adjectives, double comparison, and superlative adjectives).

Instruments

In this study, the pre-/post-test control group design was adopted to measure the impact of using Quizizz on learners' grammar competence. There was a test used as a pre- and a post-test to measure learners' grammar competence in experimental and control groups before and after the treatment. That was a multiple-choice item test based on the syllabus for the English basic grammar subject by the researcher. Before being used for data collection, the test was sent out to two English teachers to check for accuracy and clarity. Then, it was piloted on 50 students who had similar backgrounds to the participants in the current study. However, 15 students did not fully finish the test. Therefore, there were 35 results from 35 students recorded. The satisfaction test consisted of 40 items and the value for Cronbach's alpha for the test was α=.89. The items in the test covered grammar points: tenses (10 items), modal verbs (seven items), passive voice (four items), conditional sentences (three items), wishes clauses (two items), articles and nouns (three items), pronouns (four items), comparatives (three items), superlatives (two items), double comparisons (two items). The total mark on the test was 10.0. With each correct answer, students got .25 points and 0 points for any wrong ones.

Data Collection Procedure and Analysis

During week 1 of the semester, the course introduction and requirements were introduced to the participants. Also, a pre-test was given to both groups in week 1 on Azota (https://azota.vn/de-thi/paznrf). Azota is a technology software that helps teachers to assign assignments, create exam questions, and grade online/offline exams quickly. It is developed and available on Android, iOS, and Windows. It also has a user-friendly display. Thanks to its advantages, Azota has been used officially in many schools to conduct online tests. Therefore, students had been more familiar with this software. **Figure 2** shows a screenshot of a part of a test taken from Azota.

All students took the test in class. All questions and answers were set up to be shuffled. Students were not allowed to exit their screens, talk to their friends, or use any other electric devices and textbooks during test time. The intervention was applied for 10 weeks. During the course, besides the required content as mentioned in the syllabus, students were required to finish two assignments a week and the post-test in the last week. Completing assignments was recorded as one of the criteria for participation marking at the end of the semester. Each assignment that included 15-20 multiple-choice questions was designed to review and allow learners to practice the target grammar points. Multiple-choice questions were used in all of the assignments because they were indicated to encourage students in an attempt to improve themselves by doing the tasks many times, not just trying to guess the correct answers (Fuhrman, 1996; Lee et al., 2012). There were two copies of each assignment. One was loaded on Quizizz (https://quizizz.com) and the other was printed on paper. **Table 1** briefly describes the content of the assignments.
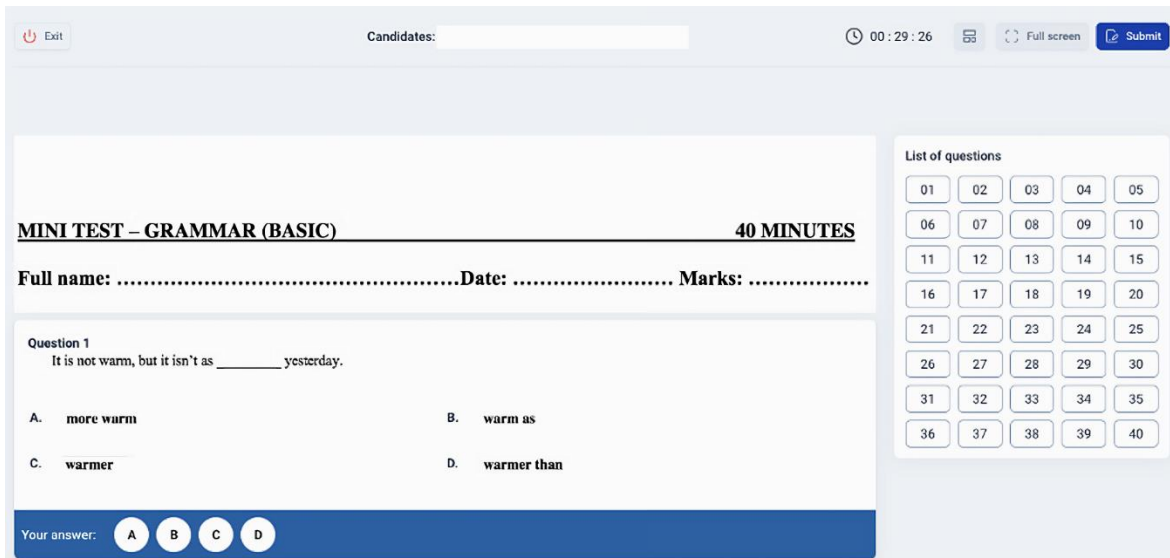
Figure 2. A screenshot of a part of a test taken on Azota (Source: Author)

Table 1. Description of the assignments

Week	Assignments	Grammar points	Number of questions
1	Assignment 1	Simple present–present continuous–present perfect	20 multiple-choice questions
	Assignment 2	Simple past–past continuous–past perfect	20 multiple-choice questions
2	Assignment 3	Simple future–be going to	15 multiple-choice questions
	Assignment 4	Review tenses	20 multiple choice questions
3	Assignment 5	Can/could/may/might+verb	15 multiple-choice questions
	Assignment 6	Could/should+have+V3/ed	15 multiple-choice questions
4	Assignment 7	Must not/cannot/need not+verb	15 multiple-choice questions
	Assignment 8	Should/had better+verb	15 multiple-choice questions
5	Assignment 9	Passive voice in tenses	20 multiple-choice questions
	Assignment 10	Impersonal passive causative passive	15 multiple-choice questions
6	Assignment 11	Conditional sentences	15 multiple-choice questions
	Assignment 12	Wish	15 multiple-choice questions
7	Assignment 13	Countable /uncountable nouns	15 multiple-choice questions
	Assignment 14	A/an/the/some/any	15 multiple-choice questions
8	Assignment 15	Personal pronouns/possessive adjectives	20 multiple choice questions
	Assignment 16	Possessive pronouns/reflexive pronouns	15 multiple-choice questions
9	Assignment 17	Equality comparisons	15 multiple choice questions
	Assignment 18	Comparative adjectives	15 multiple-choice questions
10	Assignment 19	Double comparison	15 multiple choice questions
	Assignment 20	Superlative adjectives	15 multiple choice questions

Figure 3 shows a screenshot of a part taken from the quiz about the grammar point "a, an, some, any".

For the treatment group, students were allowed to do the assignments on Quizizz as many times as they wanted until they felt satisfied with their answers. The correct answers were shown during the quizzes. Similarly, students from the control group were encouraged to do the same assignments in print as many times as possible until they believed that the answers were right. In the following class, the teacher gave the answer keys and asked students to check their answers. Then, teachers recorded the number of students' correct answers to assess students' understanding of the lesson and consider giving additional exercises for reinforcement if necessary. When doing the assignments, students in both groups were encouraged to check the grammatical rules in the textbook again or discuss difficult questions. Then, the 30-minute post-test was given to both groups in week 12 on Azota (https://azota.vn/en/de-thi/vhrk9f?zarsrc=30&utm_source=zalo&utm_medium=zalo&utm_campaign=zalo) (**Appendix A**). The requirements and procedures for delivering the post-test were the same as those of the pre-test. The data collected was then analyzed by using SPSS version 25. A paired sample t-test was conducted to determine the effect of doing extra assignments on learners' grammar achievement in treatment and control groups. An independent samples t-test was used to compare learners' level of grammar achievement from control and experimental group before and after intervention.
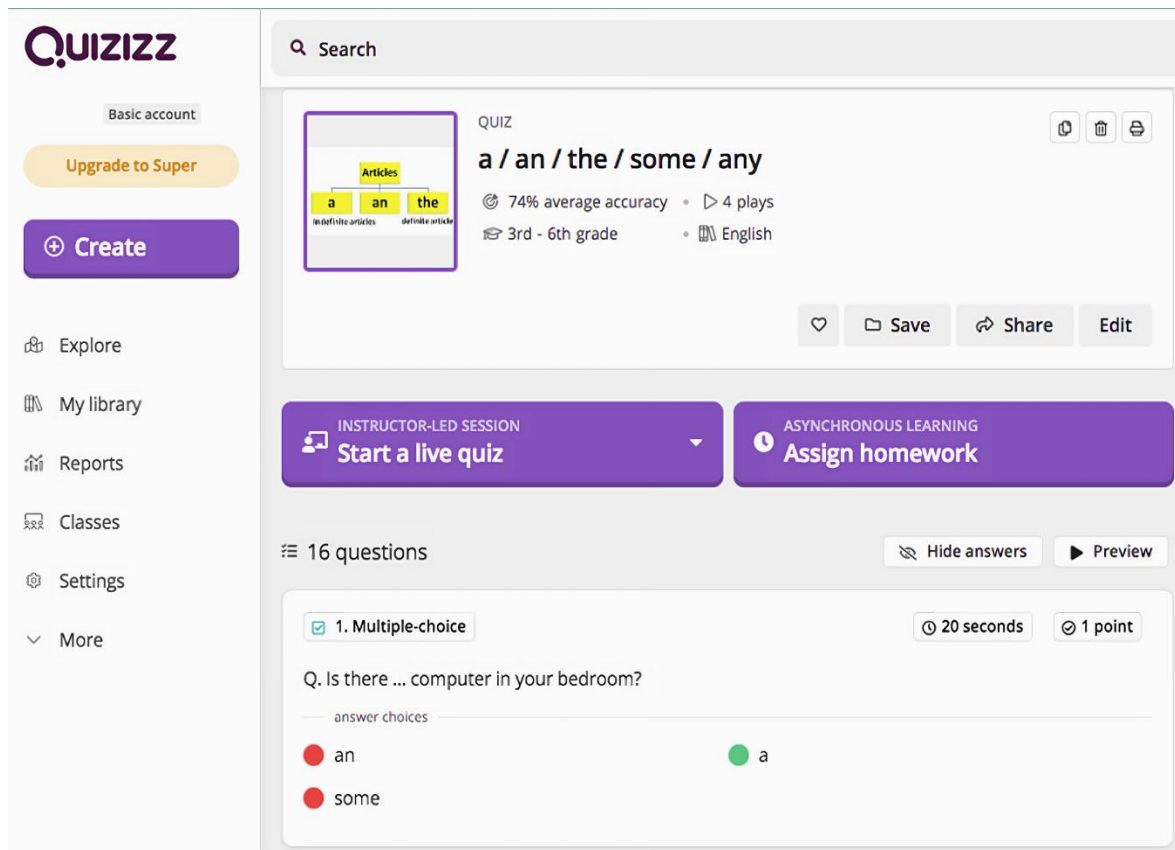
Figure 3. A screenshot of a part of a quiz on Quizizz (Source: Author)

Table 2. Descriptive statistics of the pre- & post-test of the control group

	Mean	n	Standard deviation	Standard error mean
Pre-test	5.06	30	1.89	.35
Post-test	5.93	30	1.67	.30

Table 3. The results of the paired sample t-test in terms of the pre- & post-test of the control group

	Paired differences							
	M	SD	Standard error mean	95% confidence interval of difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre- & post-test	-.88	1.69	.31	-1.51	-.24	-2.83	29	.008

Note. M: mean & SD: Standard deviation

RESULTS

Results of the Pre-& Post-Test of the Control Group

Table 2 displays the descriptive statistics of the pre- and post-test of the control group.

As in **Table 3**, a paired sample t-test was conducted to determine the effect of doing extra assignments in handouts on learners' grammar achievement. The results show a significant difference between the test score at the beginning of the course (M=5.06, SD=1.89) and at the end of the course (M=5.93, SD=1.67; t[29]=-2.83, p=.008). Therefore, it can be concluded that students' grammar knowledge from the control group improved significantly after participating in a 10-week course.

Results of the Pre- & Post-Test of the Treatment Group

Learners' test scores were compared before and after doing extra assignments on Quizizz. In **Table 4**, on average, learners performed worse before (M=5.73, SD=2.09) than after the intervention (M=7.08, SD= 2.06).

Table 4. Descriptive statistics of the pre- & post-test of the treatment group

	Mean	n	Standard deviation	Standard error mean
Pre-test	5.73	33	2.09	.36
Post-test	7.08	33	2.06	.36

Table 5. The results of the paired sample t-test in terms of the pre- & post-test of the treatment group

	Paired differences							
	M	SD	Standard error mean	95% confidence interval of difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre- & post-test	-1.35	1.54	.27	-1.89	-.80	-5.04	32	.000

Note. M: mean & SD: Standard deviation

Table 6. The results from the pre-test between the control & treatment group

Group	Mean	n	Standard deviation	Standard error mean
Control group	30	5.06	1.89	.35
Treatment group	33	5.73	2.10	.36

Table 7. The results of the independent samples t-test between the pre- & post-test-1

	Levene's test for equality of variances		t-test for equality of means						
	F	Sig.	t	df	Sig. (2-tailed)	MD	SED	95% CI of difference	
								Lower	Upper
Equal variances assumed	2.085	.15	1.34	61	.19	.68	.51	-.33	1.69

Note. MD: Mean difference; SED: Standard error difference; & CI: Confidence interval

Table 8. The results from the post-test between the control & treatment group

Group	Mean	n	Standard deviation	Standard error mean
Control group	30	5.93	1.67	.30
Treatment group	33	7.08	2.06	.36

The improvement, 1.35, 95% CI [-1.89, -.80], was significantly different, t(32)=-5.04, p=.000 (**Table 5**). Thus, it can be said that after 10 weeks of receiving the treatment, learners' grammar knowledge was improved significantly.

Results from the Pre-Test Between the Control and Treatment Group

As can be seen from **Table 6** and **Table 7**, there was no significant difference between the control and the experimental group in terms of grammar competence, t(61)=1.34, p=.19, despite the treatment group (M=5.73, SD=2.10) attaining a higher mean score than the control group (M=5.06, SD=1.89).

This result indicated that learners from the control and experimental group had the same level of grammar knowledge before the intervention.

Results from the Post-Test Between the Control and Treatment Group

The figures from **Table 8** and **Table 9** show that the 33 participants who received the intervention (M=7.08, SD=2.06) compared to the 30 students in the control group (M=5.93, SD=1.67) demonstrated significantly better mean score, t(61)=2.42, p=.02.

DISCUSSION

The above result demonstrates that doing extra assignments on Quizizz after 10 weeks significantly increased learners' grammatical knowledge compared to doing them on handouts.

The data suggest that learners from the experimental and control group both increased their grammar mastery after 10 weeks of studying the basic grammar course. However, those from the treatment group who had received the intervention got higher average scores in a grammar test than those from the control group.

This analysis supports the hypothesis that doing extra assignments on Quizizz can enhance English-majored learners' grammar achievement. It is also consistent with some previous studies regarding the

Table 9. The results of the independent samples t-test between the pre- & post-test-2

	Levene's test for equality of variances		t-test for equality of means						
	F	Sig.	t	df	Sig. (2-tailed)	MD	SED	95% CI of difference	
								Lower	Upper
Equal variances assumed	1.88	.18	2.42	61	.02	.68	.51	-.33	1.69

Note. MD: Mean difference; SED: Standard error difference; & CI: Confidence interval

positive impact of using Quizizz on improving learners' grammatical knowledge in teaching grammar (Dewi et al., 2020; Fadhilawati, 2021; Rahayu & Purnawarman, 2019). Several factors can be the possible explanations for the more significant improvement of learners from the experimental group. First of all, it is essential to note that learners themselves play an active role in their learning process and involving actively when accomplishing the language games raises their awareness of the importance of practicing grammar forms (Thirusanku & Melor, 2014). Secondly, game elements such as feedback, points, a leaderboard, and attractive visual features can make the assignments more appealing to students. Then, they would spend more time interacting with those exercises. As mentioned before, on Quizizz, students can get some feedback right after each answer, and the leaderboard shows their results at the end of the quiz for self-review and self-evaluation. That can encourage them to retry the quiz again to achieve better results. Moreover, lively and attractive visual features can make learning more meaningful and exciting (Brinton, 2001). Other features on Quizizz such as meme feedback, music, colorful backgrounds, and clear display can create a more interesting experience for learners while doing the assignments. Then, they would spend more time interacting with those exercises. Doing quizzes many times would help learners improve their understanding of grammar points. Thirdly, all of the questions designed in the extra assignments were multiple-choice questions which encouraged students to improve themselves by doing the tasks many times, not just trying to guess the correct answers (Lee et al., 2012).

CONCLUSION

Regardless of the language, grammar is considered the foundation of communication. In English, grammar plays an indispensable role in developing all four skills. To some extent, using Quizizz is an effective way of improving learners' participation in learning activities and grammar knowledge. The findings of this study indicate that Quizizz can increase ESL students' scores on the grammar achievement test.

This result builds on existing evidence of the impact of using Quizizz on English-majored freshmen, and the variety of grammar points included in the course. These results should be considered when considering how to improve learners' knowledge not only in teaching grammar for English learners but also in other subjects for students who are in different majors. It is policymakers who are to promote the implementation of Quizizz to enhance students' participation in learning activities. However, the purpose of gamification is to alter learning-related behavior or attitudes that can affect learning in some ways. Hence, it is emphasized for educators that using gamification in general, Quizizz in particular, just plays a role as a means to improve the instructional content. In other words, educators need to select appropriate instructional materials to convey the target knowledge to their learners first.

However, a limitation of the study is the small sample size for the test piloting. Therefore, piloting tests in further research should be carried out on a larger sample size to enhance the validity of the test. In addition, research in the future should consider the relationship between the types of questions and the learners' engagement with Quizizz or the impact of using Quizizz on learners' competence in different subjects. Besides, a follow-up experiment to investigate the elements that shaped students' Quizizz experience should be conducted.

REFERENCES

Bal, M. (2019). Use of digital games in writing education: An action research on gamification. *Contemporary Educational Technology, 10*(3), 246-271. https://doi.org/10.30935/cet.590005

Brinton, D. M. (2001). The use of media in language teaching. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (pp. 459-475). Heinle and Heinle.

Dao, V. D. (2008). Some Vietnamese students' problems with English grammar: A preliminary study. *Hawaii Pacific University TESOL Working Paper Series, 6*(2), 37-56.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th International Academic MindTrek Conference on Envisioning Future Media Environments–MindTrek'11* (pp. 9-15). https://doi.org/10.1145/2181037.2181040

Dewi, K. S., Myartawan, I. P. N. W., Swari, N. K. T. A., & Sugihartini, N. (2020). Quizizz effect on students' grammar mastery in higher EFL classroom-based mobile assisted language. *Language and Education Journal Undiksha, 3*(1), 15-24.

Fadhilawati, D. (2021). Using Quizizz application for learning and evaluating grammar material. *Journal of Students Academic Research, 6*(1), 85-94.

Flores, J. F. F. (2015). Using gamification to enhance second language learning. *Digital Education Review, 27*, 32-54.

Fuhrman, M. (1996). Developing good multiple-choice tests and test questions. *Journal of Geoscience Education, 44*(4), 379-384. https://doi.org/10.5408/1089-9995-44.4.379

Greenbaum, S. (1996). *English grammar*. Oxford University Press.

Hanh, L. T. T., & Chau, L. H. P. (2021). EFL high school students' attitudes towards English grammar teaching. *Vietnam Journal of Educational Sciences, 17*(1), 105-110.

Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & Education, 80*, 152-161. https://doi.org/10.1016/j.compedu.2014.08.019

Hashim, H., Rafiq, K. R. M., & Yunus, M. M. (2019). Improving ESL learners' grammar with gamified learning. *Arab World English Journal, 5*, 41-50. https://doi.org/10.24093/awej/call5.4

Jackson, G. T., & McNamara, D. S. (2013). Motivation and performance in a game-based intelligent tutoring System. *Journal of Educational Psychology, 105*(4), 1036-1049. https://doi.org/10.1037/a0032580

Kapp, K. M., Blair, L., & Mesch, R. (2014). *The gamification of learning and instruction fieldbook: Ideas into practice*. Wiley.

Katemba, C. V., & Sinuhaji, G. V. (2021). Can ESA method through Quizizz game enhance vocabulary knowledge? *International Journal of Game-Based Learning, 11*(3), 19-37. https://doi.org/10.4018/ijgbl.2021070102

Kijpoonphol, W., & Phumchanin, W. (2018). A comparison between traditional and gamified teaching methods for phrasal verb: A case of grade 10 students. *TESOL International Journal, 13*(3), 56-65.

Landers, R. N. (2015). Developing a theory of gamified learning: Linking serious games and gamification of learning. *Stimulation & Gaming, 45*(6), 752-768. https://doi.org/10.1177/1046878114563660

Le, L. T. (2021). A real game-changer in an ESL classroom? Boosting Vietnamese learner engagement with gamification. *Computer-Assisted Language Learning Electronic Journal, 21*(3), 198-212.

Lee, N. W., Shamsuddin, W. N. F. W., Wei, L. C., Anuardi, M. N. A. D., & Abdullah, A. N. (2021). Using online multiple-choice questions with multiple attempts: A case for self-directed learning among tertiary students. *International Journal of Evaluation and Research in Education, 10*(2), 553-568. https://doi.org/10.11591/ijere.v10i2.21008

McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. Penguin Group.

Mchucha, I. R., Ismaeil, Z. L., & Tibok, R. P. (2017). Developing a gamification-based interactive thesaurus application to improve English language vocabulary: A case study of undergraduate students in Malaysia. *International Journal of Management and Applied Science, 3*(3), 46-53.

Mei, S., Ju, S., & Adam, Z. (2018). Implementing Quizizz as game-based learning in the Arabic classroom. *European Journal of Social Sciences Education and Research, 12*(1), 208-212. https://doi.org/10.26417/ejser.v12i1.p208-212

Nguyen, D. H. (1997). *Vietnamese*. John Benjamins Publishing Company. https://doi.org/10.1075/loall.9

Pham, A. T. (2022a). University students' perceptions on the use of Quizlet in learning vocabulary. *International Journal of Emerging Technologies in Learning, 17*(07), 54-63. https://doi.org/10.3991/ijet.v17i07.29073

Pham, A. T. (2022b). University students' attitudes towards the application of Quizizz in learning English as a foreign language. *International Journal of Emerging Technologies in Learning, 17*(19), 278-290. https://doi.org/10.3991/ijet.v17i19.32235

Qian, M., & Clark, K. R. (2016). Game-based learning and 21st century skills: A review of recent research. *Computers in Human Behavior, 63*, 50-58. https://doi.org/10.1016/j.chb.2016.05.023

Rafiqah, M., Rafid, K., Hashim, H., Yunus, M., & Nor Pazilah, F. (2019). Gamified-learning to teach ESL grammar: Students' perspective. *Religación: Revista de Ciencias Sociales y Humanidades* [*Religation: Journal of Social Sciences and Humanities*]*, 4*(18), 181-186.

Rahayu, I., & Purnawarman, P. (2019). The use of Quizizz in improving students' grammar understanding through self-assessment. *Advances in Social Science, Education and Humanities Research, 254*, 102-106. https://doi.org/10.2991/conaplin-18.2019.235

Tang, G. (2007). Cross-linguistic analysis of Vietnamese and English with implications for Vietnamese language acquisition and maintenance in the United States. *Journal of Southeast Asian American Education and Advancement, 2*(1), 1-33. https://doi.org/10.7771/2153-8999.1085

Thirusanku, J., & Yunus, M. M. (2014). Status of English in Malaysia. *Asian Social Science, 10*(14), 254-260. https://doi.org/10.5539/ass.v10n14p254

Torrado Cespón, M., & Díaz Lage, J. M. (2022). Gamification, online learning and motivation: A quantitative and qualitative analysis in higher education. *Contemporary Educational Technology, 14*(4), ep381. https://doi.org/10.30935/cedtech/12297

Waluyo, B., & Bucol, J. L. (2021). The impact of gamified vocabulary learning using Quizlet on low-proficiency students. *Computer Assisted Language Learning Electronic Journal, 22*(1), 164-185.

Zainuddin, Z., Chu, S. K. W., Shujahat, M., & Perera, C. J. (2020). The impact of gamification on learning and instruction: A systematic review of empirical evidence. *Educational Research Review, 30*, 100326. https://doi.org/10.1016/j.edurev.2020.100326

Zichermann, G., & Cunningham, C. (2011). *Gamification by design: Implementing game mechanics in Web and mobile apps*. O'Reilly Media, Inc.

APPENDIX A: GRAMMAR TEST

1. You do not look very well. You had better ………. out tonight.

A. not going   B. not to going   C. not go   D. not to go

2. Tommy: "Anna is in hospital."

    Sue: "Oh really? I did not know. I ………. go and visit her."

A. am going   B. am going to   C. will   D. going to

3. It is not warm, but it is not as ………. yesterday.

A. warm as   B. more warm   C. warmer than   D. warmer

4. This house ………. in 1961

A. is built   B. was built   C. built   D. builds

5. It is a difficult question. I wish I ………. the answer.

A. know   B. knew   C. have known   D. had known

6. That is your cat. ………. is black and white.

A. My   B. Mine   C. I   D. myself

7. Jim: Why are you turning on the TV?

    Kate: I ………. watch the news.

A. going to   B. am going   C. will   D. am going to

8. My parents are from Japan. ………. are Japanese.

A. She   B. They   C. We   D. He

9. You are ………. me.

A. more older   B. old   C. older than   D. older

10. He can ………. the lake from the hotel.

A. to see   B. sees   C. seeing   D. see

11. Tea has ………. a popular drink in the UK for many years.

A. becomes   B. becoming   C. became   D. become

12. I am going to buy ………. Bread.

A. any   B. an   C. a   D. some

13. We do not have ………. bags in the car.

A. some   B. a   C. any   D. an

14. If you ………. in my situation, what would you do?

A. is   B. are   C. were   D. had been

15. The test was ………. than I expected.

A. difficultier   B. more difficult   C. difficult   D. difficult than

16. If we go by bus, it ………. cheaper.

A. would have been   B. will be   C. is   D. would be

17. Lisa had the roof ……….

A. repairing   B. repair   C. repaired   D. to repair

18. What is the boy's name? -> ………. name is Jack.

A. His   B. Our   C. Their   D. Her

19. The water ………. Can you turn it off?

A. is boiling   B. are boiling   C. boils   D. boil

20. The younger you are, the ………. it is to learn

A. easiest   B. easier   C. more easy   D. easy

21. That man is ………. his wallet on the table.

A. put   B. puts   C. putting   D. putting

22. I have an appointment in ten minutes. I ………. go now or I'll be late.

A. might   B. had better   C. should   D. can

23. He burnt ………. with the matches.

A. herself   B. himself   C. itself   D. myself

24. My sister ………. to Italy recently.

A. travels   B. had travelled   C. has travelled   D. travelled

25. It ………. very much in summer.
A. is not raining   B. do not rain   C. are not raining   D. does not rain

26. When Sam arrived at the party, Paul ………. home.
A. had gone   B. was going   C. went   D. has gone

27. Do you need ………. umbrella?
A. an   B. a   C. any   D. some

28. It is getting ………. and more difficult to find a job.
A. more   B. more than   C. more difficult   D. the most difficult

29. You look tired. You should ………. to bed.
A. go   B. to going   C. to go   D. going

30. If I had been hungry, I ………. something.
A. would have eaten   B. would eat   C. eat   D. will eat

31. The weather was cold. I wish it ………. warmer.
A. could   B. was   C. has been   D. had been

32. Everything will be OK. You ………. worry.
A. cannot   B. may not   C. must not   D. need not

33. This time last year I ………. in Brazil.
A. am living   B. lived   C. had lived   D. was living

34. Have you ever ………. by a dog?
A. bitten   B. bit   C. been bitten   D. bite

35. This hotel is ………. one in town
A. cheaper   B. cheap   C. the most cheap   D. the cheapest

36. My cousin is ………. person I've ever met.
A. patient   B. the most patient   C. more patient than   D. more patient

37. This situation cannot continue. It's time you ………. something about it.
A. to do   B. did   C. doing   D. do

38. It is ………. that she runs ten miles a day.
A. say   B. said   C. to say   D. saying

39. It was cold yesterday, so I ………. the window
A. close   B. have closed   C. closed   D. closes

40. I was so tired, I ………. for a week.
A. could have slept   B. could have sleep   C. could sleep   D. can sleep

◆❖◆