

New Ways to Improve Student Material Understanding Using Quizizz during the Covid-19 Pandemic

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ABSTRACT

Covid-19 has had a considerable impact on learning, so to keep improving student learning outcomes, lecturers are required to be more creative in using technology applications such as quizizz. This study aims to see the effectiveness of quizizz in improving student learning outcomes during the implementation of online learning during the Covid-19 pandemic. This type of research is quasi-experimental, involving two sample classes, namely the experimental class and the control class. Sorting the two sample classes using random sampling technique. The data collection instrument used multiple choice tests. The data analysis technique used the t test by first doing the prerequisite tests, namely normality and homogeneity tests. The results of data analysis show that there are significant differences in learning outcomes between students who study using Quizizz and study conventionally. Quizizz has contributed significantly to student learning outcomes, because quizizz is a learning application that is packaged in an attractive manner, has a good graphic design and is automated. Online learning should integrate one of the quizizz applications so that it can motivate students to learn and can directly improve student learning outcomes. The creativity of the teacher in operating the quizizz also influences the course of the learning process.

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1. INTRODUCTION

Corona virus 2019 (Covid-19) has spread very quickly and almost all countries in the world are experiencing it, so the World Health Organization (WHO) declared this outbreak a recorded pandemic starting March 2020. All sectors of life are affected. To break the chain of Covid-19 spread, several institutions have implemented a new policy, namely working from home so that there are no services in

the office. Even if there are services in the office, the number of employees and visits is limited, and health protocols are strictly enforced.

According to UNESCO, the education sector has experienced a fairly severe impact due to the pandemic. As a result, the growth of online teaching has increased (Rahman, 2020). Online learning is the best solution for continuing education during the pandemic, especially at the higher education level (Mahyoob, 2016). In education, the government through the Ministry of Education and Culture in all countries has implemented a learning policy, namely learning from home. This allows the teaching and learning process to continue even though teachers and students do not meet face-to-face at school. Teachers can still deliver teaching materials, and students can still receive lessons without leaving their homes. Learning from home is carried out with a distance learning system. A study conducted by Chun, Kern, and Smith (2016) summarizes that distance learning is education where students are separated from educators and learning uses various resources through Information and Communication Technology (ICT). In the conditions of the Covid-19 pandemic, this learning method can be a solution so that the teaching and learning process can continue. Online learning is part of distance education that specifically combines electronic technology and internet-based technology or ICT in learning. ICT-based learning can be a liaison between teachers and students to support the learning process (Zakirman & Hidayati, 2017). Online learning is a program to organize online learning classes to reach a broad and massive group of students. Online learning refers to the use of internet-based technology features, which are highly dependent on the availability of information technology. Online learning requires an internet network. Teachers and students carry out learning together, at the same time, but in different places. Various applications and platforms can be used, such as whatsapp, telegram, zoom meeting, google meet, google classroom, edmodo, kahoot, quizizz, and others.

The facts among the people really show that this online distribution system creates some difficulties and problems. A study conducted by Ahmad (2016) found that EFL learning which requires a lot of practice for its application also experiences problems when the learning system is implemented. In listening sessions, for the ICT tools used by teachers to train students who are separated and distant places are often ineffective. Teachers also cannot supervise students optimally when giving listening exams (Leli, 2021). In distance speaking sessions or online learning, students also find problems in imitating the way of speaking that is exemplified by the teacher, and the teacher also cannot train students optimally to speak. Another problem is that some parents and students do not have computers or android devices, as found in the research conducted by Wahab and Iskandar (2020). Many studies have also found that some students fail to participate successfully in online classes due to lack of skills in online learning (Rahman, 2020). Some of the other challenges found were; some students don't have their own smartphones, the internet connection is not stable, some students can't afford to buy enough internet quota because to provide internet quota it costs a lot of money. This difficulty is felt more by students and parents who are in the lower middle class economy. They do not have adequate budget to provide internet network (Efriana, 2021). In addition, students often find themselves challenged by self-regulation problems such as not being on time to attend online classes, low motivation to study and ineffective communication with fellow students. This self-regulation problem can become worse if students do not have adequate information and communication technology (ICT) knowledge (Aini, 2020). In addition, it was also found that there was a significant increase in online assignments given by teachers. Therefore, most of the student respondents expect learning in a conventional or face-to-face way (Hermanto, 2021).

Compared to offline learning, online learning is significantly improved. Teachers need to explore what makes students to attend lessons with enthusiasm and enthusiasm. Educational gamification is one way that can make learning more interesting and motivate students to attend learning (Abu-Dawood, 2017). One of the gamification platforms that can be used in online learning is quizizz. Quizizz is a fun, informative, multiplayer, free learning platform accessible on computers, tablets and smartphones. Each participant or group of students can access this platform anytime and anywhere because they do not need to create an account on the quizizz platform. They can join directly by entering the game code given by the quizizz admin, in this case the teacher who will act as admin later. Quizizz can transfer multiple tasks,

repeat, entertain, motivate, and accommodate multiple participants (Eser eker, 2017). Quizizz questions and answers will appear on the computer screen or mobile phone of each participant, thus this learning activity tends to be individual but can provide answer analysis for each answer that has been done by students. The use of quizizz makes students more active and concentrates on the learning material. In terms of formative evaluation, quizizz informs and identifies both wrong and correct answers for each student so that the results of the learning evaluation are more effective and detailed. The use of quizizz can also be done outdoors as long as there is an adequate internet network because quizizz should not be used in the same room to avoid cheating in doing exercises or assignments given directly by the teacher. In addition, quizizz can also be attended by participants outside the city as long as they are given a game code to be tested.

In the quizizz application, the learning questions tested can be in the form of audio or audio-visual. The use of quizizz is very suitable for use in learning English with story-telling project based learning material. Story telling can also be interpreted as telling stories. So what is meant by story-telling project based learning is learning by using the storytelling method. In this case, the story-telling used is in the form of soft-data because the source of the narrative that will be given to students can be uploaded on the quizizz platform. The narration that will be used is taken from a narration that uses native language speakers, in this case a native English speaker or can also be referred to as a native speaker. Students will listen to the narration and play it twice so that students can understand well the meaning of the story conveyed. Then students will answer several questions that have been stored on the quizizz related to the story they have heard. In making practice questions, they can be made in the form of essay questions, multiple choice, and many other choices that can be adapted to material needs. In answering a question, students will be given a time limit in doing it so that students do not have the opportunity to ask questions with their friends. Thus the results of the answers that are done by the students in the quizizz application are purely the results of the thoughts and abilities of the individual students so that the results of the answers are measured reliably.

2. METHODS

This type of research is quasi-experimental involving the experimental class and the control class. The sampling technique used is random sampling with details of choosing the control and experimental classes at random. The instrument used in the study was a multiple choice test in accordance with the theme of Two Sisters and The Cat. Comparison of learning outcomes in the control class and the experimental class was analyzed using the t test. The t test was carried out after going through the normality test and homogeneity test.

The t test is used to see the significant difference between the test results of the control class and the experimental class, in this t test SPSS is used to see a significant difference in the learning outcomes of the control class and the experimental class, if it is significant < 0.05 , it can be interpreted that there is a significant difference between the learning outcomes of the control class and the experimental class.

Research Hypothesis:

Ho : There is no significant difference in learning outcomes between the experimental class and the control class

Hi : There is a significant difference in learning outcomes between the experimental class and the control class

Information:

H0 is accepted and H1 is rejected, if the value of t count $>$ t table or if the value of Sig ≥ 0.05 .

H0 is rejected and H1 is accepted, if the value of t count $<$ t table or if the value of Sig ≤ 0.05 .

3. FINDINGS AND DISCUSSION

The results obtained from the research have to be supported by sufficient data. The research results and the discovery must be the answers, or the research hypothesis stated previously in the introduction part.

The classes involved in this study were the experimental class and the control class. The experimental class is a class that uses the quizizz application in learning, while the control class is a class that has the same student characteristics as the experimental class, but learns using conventional methods. To see the difference in student learning outcomes, hypothesis testing was carried out using the SPSS application.

Findings

To test the effectiveness of Quizizz in helping to improve understanding of the material, it is necessary to analyze data on student learning outcomes. Before testing the hypothesis, the prerequisite tests are carried out, namely the Normality test and Homogeneity Test. The normality test uses the Kolmogorov-Smirnov test, provided that the data will be normally distributed if the value of Sig 2. Tailed is obtained after analysis using the SPSS application. The results of the normality test for the two classes involved in the study are presented in table 1.

Table 1. Data Normality Test for Experiment Class and Control Class

Variabel			Experiment Class	Control Class
N			38	37
Normal Parameters				
Mean			73.6842	63.5135
Std. Deviation			12.59742	11.17194
Most Extreme Differences	Absolute	Most	0.226	0.275
		Extreme	0.169	0.266
		Negative	-0.226	-.275
Kolmogorov-Smirnov Z			1.392	1.671
Asymp. Sig. (2-tailed)			0.042	0.008

Based on the results of the analysis, it can be concluded that the two groups of data, namely: data on student learning outcomes in the experimental class and control class have been normally distributed. This can be interpreted that the variance of the two groups is also the same and the data distribution has been normally distributed. The first requirement for testing the data has been met, the test is continued with the homogeneity test of the data.

Data Homogeneity Test

The homogeneity test of the data was carried out using the Levene test. The homogeneity test aims to see the similarity of the variance of the two data groups. This can be done if the data to be tested has been normally distributed. The results of the data homogeneity test are presented in Table 2.

Table 2. Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig. 2 Tailed
1.333	1	73	0.252

Based on the results of the homogeneity test, it can be seen the value of Sig. 2 Tailed obtained > from the alpha value (0.05). It can be concluded that the two groups of data, namely the experimental class and the control class, were homogeneous. The two data groups have the same variance. Because

the two data prerequisite tests have been met, namely the data has been normally distributed and homogeneous, then the main hypothesis testing of the research can be continued.

Data Effectiveness Test

Testing the effectiveness of the data aims to see if there is a significant difference in the results between student learning outcomes who learn to use the Quizizz application and those who study conventionally. To see the significant difference in learning outcomes between the two groups, a statistical test was conducted using the t test. The results of statistical testing of the data are summarized in Table 3.

Table 3. Results of t-test analysis to see the effectiveness of Quizizz

Group Homogeneity Data	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	3.696	73	0.000	10.171	2.752
Equal variances not assumed	3.702	72.379	0.000	10.171	2.748

Based on the test results, it can be concluded that the value of Sig. 2 Tailed obtained $<$ alpha value (0.05), so it can be concluded that H_0 is rejected and H_1 is accepted. The test results statistically indicate that the use of Quizizz in learning can provide significant differences in results with students who are in conventional learning classes.

Discussion

Online interactive learning platforms provide opportunities for learners to become independent knowledge seekers as well as to equip themselves with relevant skills in today's human lifestyle, which is gradually rotating around the world. To support online learning, the main device needed is a computer or android that is connected to the internet network (Ariani, 2021). Game-based learning can make students the center of learning and make the learning process easier, more interesting, and more effective. This is in line with the statement Abu-Dawood (2017) educational gamification is one way that can make learning more interesting and motivate students to attend lessons so that students become more active in learning process. As we know, today the principles of 21st century learning places great emphasis on student-centred learning and promotes the use of learning into an enjoyable and engaging experience. Quizizz is a gamification-based platform that can increase students' motivation to learn. There are several factors that make quizizz interesting for students, among them is that this platform is a free or free platform, so students don't have to pay a penny to use quizizz. Students also don't need to create an account to access it, just enter the game code.

Another factor that gives quizizz an advantage in the eyes of students is that because quizizz has an attractive appearance, quizizz has features that make them motivated to learn. The students stated that their favorite feature of quizizz is the 'leaderboard' where they can see where they are when they are working on the questions, whether they are in the top position or at the bottom position compared to their friends who are also working on the same questions. This fosters a competitive spirit among the students and makes them to compete and strive to improve their learning abilities. According to Eserceker (2017) quizizz is a platform that can transfer multiple tasks, repeat, entertain, motivate, and accommodate multiple participants at the same time. Beside, the quizizz can also be set to display interesting pictures accompanied by motivational words every time one question is answered by participant. This of course provides its own mood booster for students in learning process.

Quizizz is very important in helping teachers, especially for lecturers who teach English courses because this platform has quite a lot of features and is complete where quizizz can store learning

resources in audio and audio-visual form. According to Citra and Rosy (2020) quizizz is a game-based educational application that brings the activities of many participants to the classroom and makes learning in the classroom more fun and more interactive. This feature is very helpful for English lecturers because by using quizizz, lecturers can create practice questions that aim to test students' competence in terms of listening skills. Listening skill is one of the important basic skills that need to be learned in learning English courses. In the current online learning system, listening skill is one of the most difficult skills to teach and test for students. The limitations of learning media in online learning systems make listening skills often neglected due to space and time limitations. However, the existence of quizizz no longer makes this a significant obstacle for teachers. Not only in terms of listening skills, but other skill competencies can also be taught and tested using quizizz because of the complete features provided by the platform.

Quizizz can also improve students' English learning outcomes because quizizz is fun and can motivate students to be more diligent in understanding the subject matter given. This is due to the 'leaderboard' feature which fosters an energetic and competitive learning atmosphere among students. Students are motivated to be in the top position when the problem solving session is carried out. In addition, quizizz also makes students more confident and positive in learning because quizizz makes students more enthusiastic about understanding lessons at home or wherever students are. Quizizz also allows students to complete practice questions more independently because students are given a time limit in working on the questions so that the possibility of cheating is minimal and the scores obtained are more fair and objective. This also makes students more focused in answering the questions given by the lecturer. Barrouillet (2015) argues that teachers should strategize to keep students focused and in an alert mental state to keep attention at the highest level by using tools such as; mind mapping, visual aids, presentations and spider maps. Quizizz also has a more attractive and simple appearance because it does not need to use more body movements when it is done and the feedback of questions in the form of memes or interesting pictures is also entertainment for students.

The aim of incorporating gamification into education is to provide students with a more engaging, attractive and effective learning experience. Furthermore, according to Wibawa, Astuti, and Pangestu (2019) the quizizz application has features that in general and can facilitate lecturers and teachers as well as students in the learning process. This shows that the quizizz application can be used for learning innovation. The gamification-based platform offers a fun, interactive, and safe learning environment for students because it can be accessed anywhere. In the current era of industrial revolution 5.0, where almost all fields are influenced by digital elements, it is very appropriate to use a gamification platform to be used as one of the media in learning, especially in English courses. The implementation of online interactive platforms such as quizizz can be seen as a fun, creative, and impactful way to shift the conventional way to a more modern way and provide new experiences and knowledge, especially to the millennial generation to be more technology literate. Thus the world of education can keep pace with the pace of development of the times that we are experiencing today.

In the future, it is hoped that other researchers will be able to maximize the use of quizizz in the learning process, not only at the higher education level so that quizizz can be used widely and evenly among teachers and students. Thus Quizizz is no longer a strange platform in the world of education.

4. CONCLUSION

Based on the results of data analysis and literature review that has been carried out, it can be concluded that the application of the quizizz application can improve student learning outcomes. Learning using the quizizz application becomes warmer, activates students in learning and increases involvement in the process. Students who learn to use the quizizz application have high motivation in doing the exercises, understand the material and get immediate feedback on the results achieved. The quizizz application is a technology application that is designed to be as simple as possible so that it can be widely used and help make online learning successful. The developments carried out by the quizizz

application open up opportunities for other researchers to be able to innovate in learning by using this application.

REFERENCES

- Abu-Dawood, S. (2017). Gamification for change: A New Approach to Investigate Students' Attitudes toward Educational Gamification in Online Learning Environments. Annual Proceedings Volume 1 Presented at The Annual Convention of the Association for Education. Jacksonville: The Division of Instructional Design.
- Ahmad, S. Z. (2016). The Flipped Classroom Model to Develop Egyptian EFL Students' Listening Comprehension. *English Language Teaching*, 9(9), 166-178.
- Aini, Qurotul. (2021). Exploring E-learning Challenges During the Global COVID-19 Pandemic: A Review. *Jurnal Sistem Informasi (Journal of Information System)*, 16(2): 57-65. DOI: <https://doi.org/10.21609/jsi.v16i2.1011>
- Ariani, Sri. (2021). Problems of Online Learning During Covid-19 Pandemic in Speaking for Professional Context Class. *Jo-ELT: Journal of English Language Teaching*. 8 (1): 32-37. DOI:10.33394/jo-elt.v8i1.3783
- Atmojo, A. E. P. & Nugroho, A. (2020). EFL Classes Must Go Online! Teaching Activities and Challenges during COVID-19 Pandemic in Indonesia. *Register Journal*, 13(1), 49-76. DOI: 10.18326/rgt.v13i1.49-76
- Barrouillet, P. (2015). Theories of Cognitive Development: From Piaget to Today. *Developmental Review*, 38, 1-12. <https://doi.org/10.1016/j.dr.2015.07.004>
- Chun, Kern, dan Smith. (2016). Technology in Language Use, Language Teaching, and Language Learning. *Modern Language Journal* 100. (S1):64-68 DOI:10.1111/modl.12302
- Citra, C.A. dan Rosy, B. 2020. Keefektifan Penggunaan Media Pembelajaran Berbasis Game Edukasi Quizizz Terhadap Hasil Belajar Teknologi Perkantoran Siswa Kelas X SMK Ketintang Surabaya. *Jurnal Pendidikan Administrasi Perkantoran (JPAP)*. 8(2): 261-272.
- Efriana, Leli. (2021). Problems of Online Learning during Covid-19 Pandemic in EFL Classroom and the Solution. *JELITA: Journal of English Language Teaching and Literature*. 2(1):38-47
- Eser Çeker, F. Ö. (2017). What "Gamification" is and what it's not. *European Journal of Contemporary Education*, 6(2), 221.
- Hermanto, Yustinus Budi. (2021). The Challenges of Online Learning During the Covid-19 Pandemic. *Jurnal Pendidikan dan Pengajaran*. 54(1): 46-57. DOI:<http://dx.doi.org/10.23887/jpp.v54i1>
- Mahyoob, Mohammad. (2020). Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal (AWEJ)*. 11(4): 351-362. DOI: <https://dx.doi.org/10.24093/awej/vol11no4.23>
- Nartiningrum, Novrika. (2020). Online Learning Amidst Global Pandemic: EFL Students' Challenges, Suggestions, and Needed Materials. *ENGLISH FRANCA: Academic Journal of English Language and Education*. 4(2): 115- 140. DOI: <http://dx.doi.org/10.29240/ef.v4i2.1494>
- Rahardjo, A., & Pertiwi, S. (2020). Learning Motivation and Students' Achievement in Learning English. *JELITA: Journal of English Language Teaching and Literature*. 1(2): 56-64.
- Rahman, Mohammed Mahib ur. (2020). Challenges and Solutions of Teaching English as A foreign Language Online During A Global Pandemic Like Covid-19: Saudi EFL Teacher's Perspective. *Journal of Southwest Jiatong University*. 55 (6): DOI:10.35741/issn.0258-2724.55.6.10.
- Rannastu-Avalos, M., & Siiman, L. A. (2020). "Challenges for Distance Learning and Online Collaboration in the Time of Covid-19: Interviews with Science Teachers," *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, pp. 128142. DOI:https://doi.org/10.1007/978-3-030-58157-2_9.
- Riduwan. (2010). *Belajar Mudah Penulisan untuk Guru-Karyawan dan Penelitian Pemula*. Bandung: Alfabeta.
- Saifuddin, Azwar. (2015). *Reliabilitas dan Validitas*. Yogyakarta: Pustaka Pelajar.

- Sugiyono. (2012). *Metode Kombinasi (Mixed Methods)*. Bandung: Alfabeta.
- Suharsono, Agus. (2020). The Use of Quizizz and Kahoot! In the Training for Millennial Generation. *International Journal of Indonesian Education and Teaching*. 4(2). DOI: <https://doi.org/10.24071/ijiet.2020.040215>.
- Tjeerd Plomp dan Nienke Nieveen. (2013). *Educational Design Research*. Netherlands: SLO, Enschede.
- Wahab, S., & Iskandar, M. (2020). Teacher's Performance to Maintain Students' Learning Enthusiasm in the Online Learning Condition. *JELITA: Journal of English Language Teaching and Literature*, 1(2), 34-44.
- Wibawa, R.P., Astuti, R.I., dan Pangestu, B.A. 2019. Smartphone-Based Application "Quizizz" as a Learning Media. *Jurnal Dinamika Pendidikan*. 14(2): 244-253.
- Yunus, Crystal Callista Anak. (2021). Exploring a Gamified Learning Tool in the ESL Classroom: The Case of Quizizz. *Journal of Education and e-Learning Research*. 8 (1): 103-108. DOI: 10.20448/journal.509.2021.81.103.108
- Zakirman & Hidayati. (2017). Praktikalitas Media Video dan Animasi Dalam Pembelajaran Fisika di SMP. *J. Ilm. Pendidik. Fis. Al-Biruni*, 6(4), 85-93.