

## The Effect of Using Kahoot on Students' Reading Achievement: a Quasi-Experimental Study

Youma Fairu Nazmi<sup>1</sup>, Noor Eka Chandra<sup>2</sup>, Fahmi Hidayat<sup>3</sup>

<sup>1</sup>Universitas Lambung Mangkurat, Indonesia

<sup>2</sup>Universitas Lambung Mangkurat, Indonesia

<sup>3</sup>Universitas Lambung Mangkurat, Indonesia

[2010117310022@mhs.ulm.ac.id](mailto:2010117310022@mhs.ulm.ac.id)

### Abstract

Gamification in English Language Teaching (ELT) is a pedagogical strategy that uses game design and features to improve the learning experience and engage students in a more dynamic and engaging style. However, teachers rarely minimise the use of games in the English teaching and learning process, whereas the use of games is very helpful for students to understand the material easily and fun. This research is to measure whether there is difference on students' reading achievement between those who are taught by using Kahoot and those who are taught by using Quizizz at one of the senior high schools in Banjarmasin. This research used a quantitative approach by applying a Quasi Experimental design. The samples in this research were 74 students based on purposive sampling technique. Thirty-seven students of XI were included in the experimental class and control class. Data collection was used by analysing the results of pre and post tests that were tested followed by paired sample test and interpretation hypothesis testing. Based on the findings Independent sample t-test, it was discovered that the sig value was 0.04 and the t-test calculation was 2.101, with the t-table being 1.672 for  $df = 56$  at a significance level of 0.05 (95%). It confirmed that there is a difference on student reading achievement between those who are taught by using Kahoot and those who are taught by using Quizizz in class XI. Therefore, teachers and students should minimise the use of kahoot in the teaching and learning process at school.

**Key words:** gamification, Kahoot, reading achievement

### Introduction

Gamification in English Language Teaching (ELT) is a pedagogical strategy that uses game design and features to improve the learning experience and engage students in a more dynamic and engaging style. In the early 21st century, the proliferation of digital tools and the advent of smartphones and tablets allowed teachers to experiment with game-like elements in language learning. The rise of digital technology has significantly contributed to the growth of gamification in ELT. Educational apps, online platforms, and virtual reality experiences offer a dynamic and interactive way to learn and practice language skills.

Besides, following the game's function in general, it also makes students compete with other students so that the learning process is more interesting. Increasing student enthusiasm, interest, fond of learning can be obtained by applying gamification in the classroom (Zainuddin et al, 2019). Therefore the rise of the use of technological media in learning with current features makes students more

interested in it. by applying technological media students will be more active in learning English in particular, therefore researchers want to implement the use of the kahoot application as a medium for students to understand reading.

Furthermore, The researcher feels that the selection of the appropriate application is very influential on student achievement in learning. In other words, Kahoot can be an effective tool for reading achievement by creating interactive and engaging quizzes and games that reinforce reading skills. This application is very suitable and researchers interested to conduct an experimental study to measure whether there is the difference on students' reading achievement between those who are taught by using Kahoot and those who are taught by using Quizizz in eleventh-grade student.

Gamification is the practice of providing a service with opportunities for gameful experiences in order to promote the overall value generation of the user (Huotari and Hamari, 2012). Which means demonstrates that the application of

game design components, referred to here as benefits for gameful experience, may improve the user's experience and outcome. It also relates to the functional side of gamification, since it should help the user create value. It has been widely considered a method for practicing language learning. Several games, such as online multiplayer roleplaying games, exergames, adventure games, tutorial games, and simulation games, stimulated helpful emotional responses and improved learning outcomes in students (Hung et al. 2018). Furthermore, it is clear that gamification promotes motivation and engagement while decreasing learning anxiety among learners of all language skills (Castillo Cuesta et al, 2022). As a result, it is claimed that gamification provides necessary aspects for learners to develop language abilities.

The use of online learning applications is very popular nowadays. The technology used in the learning process is very influential to support learning assessment. Kahoot is one of the top 100 new apps to use in the classroom it in at number 36 on the list of apps related to educational trends (Chiang, 2020). Kahoot is a well-known game-based learning platform that is easy to use for both teacher and students (Sari, 2019). Therefore, Kahoot provides an easier platform for developing and delivering game-based learning activities. The platform includes a variety of features that enable teachers to create engaging quizzes, surveys, and discussions to enhance the learning experience in a fun and engaging manner.

## Methods

The researcher conducted quantitative approach and the design Quasi-experimental for this research. There are two variables in a quasi-experimental study: independent variable and dependent variable (Fraenkel et al, 2012). The independent variable in this study was the usage of the Kahoot application in teaching reading, and the dependent variable was the students' reading achievement.

The population in this study includes eleventh grade students in the 2024 school year, divided into 13 classes. There are roughly 19-42 students. The total population is are 455 Students. For this study, the researcher selected the purposive sampling to determine the sample. The researcher choose purposive sampling because of the limited class capacity given by the teacher and the teacher only teaches in the several classes.

This research used test as primary data. The test used by this study was multiple choice and True or False Question. Then, using an observation sheet allows the researcher to record specific behaviors and evaluate some behaviors as they occur (Fraenkel et al, 2012). In this study, observation sheet was used to observe and record the teaching and learning process in the experimental and control groups. For support the data, the researcher also use interview as a secondary data and asked 10 students from the Experimental Class to be interviewed with several questions about whether they liked the use of Kahoot during the teaching and learning process in class.

The procedure on this study, the validity as "ensuring that the test is a representative sample of the content the test was designed to measure" (Brown, 2015). Reliability refers to the consistency of the generated scores how consistent they are for each individual from one attempt of an instrument to the following and from one set of items to the next (Fraenkel et al, 2012). After doing validity and reliability, the researcher conducted a level of difficulty test on the instrument that had been tested and use Discriminating to discriminate between individuals or units of analysis that have different levels of the variable being measured.

In data collection, the data refers to the types of information obtained by researchers on the topic of their research (Fraenkel et al, 2012). The researcher conducted several steps to acquire data for this study, covering preparation, execution, and analysis.

- 1) Researcher Using Pearson Product Moment in SPSS version 26, to calculate the reliability of a reading comprehension test.
- 2) Researcher calculate the students' pre-test and post-test scores

$$\frac{\text{total number of correct answer}}{\text{total number of test item}} \times 100$$

- 3) Researcher Applying the scoring standard (KKM) to interpret students' pre-test and post-test scores.
- 4) Researcher considering sample paired test
- 5) Researcher Applying the independent sample t-test (Machali, 2016) in SPSS version 26 to test hypotheses. The t-test calculation formula utilized in this research is presented follows (Sudijono, 2016):

$$1) \quad t_0 = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right) \left(\frac{N_1 + N_2}{N_1 \times N_2}\right)}}$$

Note :

$M_1$  = mean of experimental group

$M_2$  = mean of control group

$\sum x_1^2$  = the sum of the square of post-test score deviation from experimental group

$\sum x_2^2$  = the sum of the square of post-test score deviation from control group

$N_1$  = number of the samples from experimental group

$N_2$  = number of the samples from control group

6) Creating a hypothesis conclusion.

## Results and Discussions

The data collected from the pre-test and post-test in the experimental class using Kahoot and the control group using Quizizz were examined using a paired sample test to figure out whether the two classes could be used as tools for reading. The pre-test and post-test scores of students in the experimental class were examined first. The paired sample t-test in the experimental class generated a sig value of 0.000, a t-test value of 8.520, and a t-table value of 1.701 for  $df = 28$ , with a significance level of 0.05 (95% confidence). The sig value is discovered to be less than 0.05, and the t-test value is higher than the t-table. This confirms that there is a difference in student achievement between pre-test and post-test in the experimental class.

The pre-test and post-test scores of students in the control Class were examined after the Kahoot class. If the sig value is less than 0.05 and the t-test value is higher than the t-table, it means that there is a difference in student achievement between pre-test and post-test. If the sig value is higher than 0.05 and the t-test is less than the t-table, there is no difference in achievement between the pretest and the post-test. Based on the results of the paired sample t-test in the control class, the sig value is 0.000, the t-test value is 6.291, and the t-table is 1.701 for  $df = 28$ , with a level of significance of 0.05 (95%). The sig value was found to be less than 0.05, and the t-test value exceeded the t-table. This indicates a difference in student achievement from pre-test to post-test in the control class.

Both the control and experimental classes' paired t-test results confirm that student achievement increases between pre-test and post-test in both classes. The t-test value in both

the control group and the experimental class is positive and higher than the t-table. This represents that the post-test value is higher than the pre-test. In conclusion, Kahoot and Quizizz in both classes were helpful in supporting students in achieving reading progress, especially for analytical exposition texts.

Based on the findings of the independent sample t-test, it was discovered that the sig value was 0.04 and the t-test calculation was 2.101, with the t-table being 1.672 for  $df = 56$  at a significance level of 0.05 (95%). This demonstrated that the value of sig was less than 0.05 and the value of t-test was more than the t-table. It might be regarded as the alternative theory being accepted and null hypothesis is rejected. It confirmed that there is a difference on student reading achievement between those who are taught by using Kahoot Application and those who are taught by using Quizizz in eleventh grade student.

According to the findings of Anggraeni et al. (2023), Aprilia et al. (2023), Hasanah et al. (2023), Mala et al. (2023), and Samboteng et al. (2023), These studies provide strong support for Kahoot as a tool for increasing reading comprehension and promoting active participation in the classroom. Kahoot help in Increasing Students' Attention in eleventh grade student, the results supported by Samboteng et al. (2023) indicated that utilizing Kahoot in assessments can effectively enhance students' attentiveness during classroom activities. Hasanah et al. (2023) concluded that the Kahoot application had a strong impact on students' reading comprehension achievement. This suggests that Kahoot can significantly contribute to enhancing students' proficiency in reading comprehension.

All in all, these studies suggest that Kahoot is a useful tool for teachers who want to improve students' reading comprehension skills, promote active participation, improve test scores, and increase students' attention during lessons. As a result, introducing Kahoot could be a potential strategy for creating a more engaging and effective learning environment in the classroom.

## Conclusion

Researcher found that the use of Kahoot Application in teaching reading analytical exposition text contributes better than the usual strategies used by teachers. Kahoot Application proved to be more effective in helping students

obtain higher reading achievement. The results of this study confirm that the utilisation of Gamification can provide benefits in improving students' reading achievement.

## References

Anggraeni, R. I., Fitriyah, S. M., & Wahjuningsih, E. (2023). The Use of Kahoot to Improve the Students' Reading Comprehension Achievement and Active Participation. *Pancaran Pendidikan*, 12.

Aprilia, A., Sulistyaningsih, S., & Musyarofah, L. (2023). The Use of Kahoot to Improve Students' Narrative Text Reading Comprehension. *International Journal of English and Applied Linguistics (IJEAL)*, 3.

Brown, H. D., & Lee, H. (2015). Teaching by principles: an interactive approach to language pedagogy (fourth). Pearson Education.

Castillo-Cuesta, L. (2022). Using Genially Games for Enhancing EFL Reading and Writing Skills in Online Education. *International Journal of Learning, Teaching and Educational Research*, 21.

Chiang, H. H. (2020). Kahoot! in an EFL reading class. *Journal of Language Teaching and Research*, 11.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How To Design and Evaluate Research in Education*. New York: McGraw-Hill.

Hasanah, N. F., Harahap, Y. M., & Rangkuti, L. A. (2023). The Effect of Kahoot Application on the Students' Achievement in Reading Comprehension. *Journal of English Language and Education*, 8.

Hung, A. C. Y. (2018). Gamification as Design Thinking. *International Journal of Teaching and Learning in Higher Education*, 30.

Huotari, K., & Hamari, J. (2012). Defining gamification: a service marketing perspective. In *Proceeding of the 16th international academic MindTrek conference*.

Machali, I., & Hidayat, A. (2016). *The Handbook of EDUCATION MANAGEMENT Teori dan praktik pengelolaan sekolah/madrasah di Indonesia* (Vol. 1, No. Cet. 1). Prenadamedia Group.

Mala, J., Mustofa, M., Jihad, M. S., & Hariyanto, S. (2023). Using Kahoot! To Improve Skimming and Scanning Skills. *EDUTECH: Journal of Education And Technology*, 6.

Samboteng, L., Nadeak, B., Razati, G., Abidin, A. Z., & Rachman, R. S. (2023). The Effectiveness of Pre-test and Post-test Using Kahoot in Increasing Students' Attention. *Al-Ishlah: Jurnal Pendidikan*, 15.

Sari, S. N., Shodiqin, A., & Buchori, A. (2019). Efektivitas Model Pembelajaran Problem Based Learning (PBL) Berbantu Kahoot Terhadap Hasil Belajar Siswa Kelas XI SMK Pada Materi Persamaan Lingkaran. In *Prosiding Seminar Nasional Matematika dan Pendidikan Matematika* (Vol. 4).

Thompson, A. E., & Sorbet, S. (2020). The impact of self-efficacy on leveraging technology in the classroom. In *Leveraging Technology to Improve School Safety and Student Wellbeing*. IGI Global.

Zainuddin, Z., & Perera, C. J. (2019). Exploring students' competence, autonomy and relatedness in the flipped classroom pedagogical model. *Journal of further and higher education*, 43