THE USE OF KAHOOT GAMES APPLICATION TO IMPROVE VOCABULARY MASTERY OF THE EIGHTH GRADE STUDENTS AT SMP NEGERI 32 SIGI

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ABSTRACT

The research aimed to find out the improvement of the students' vocabulary mastery by using kahoot games applications that focused on verbs and nouns. The research applied pre-experimental design with one group pre-test and post-test. The sample of the research was the eighth grade students at SMP Negeri 32 Sigi in academic year 2023/2024 which consisted of 29 students. The researcher used verbs and nouns of vocabulary test as instruments in pre-test and post-test. The research findings indicated that kahoot games application can improve students' vocabulary mastery. It was proved by the mean score of pre-test was 58.86 it classified as fair, post-test was 73.34, it classified as good and the improvement from pre-test to post-test was 24.60. Therefore there was the improvement of the students' vocabulary mastery. The result of improvement is also proved with t-test value. The researcher found that the value of t-test (7.352) was greater than t-table (2.048). This value means that there is a significant difference between the result of the students' pre-test and post test. The conclusion could be strengthened by stating the significance of the findings more clearly. e.g. "It was concluded that the use of the Kahoot games application can effectively improve the vocabulary mastery of eighth-grade students at SMP Negeri 32 Sigi."
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Keywords: Kahoot Games Application; Vocabulary Mastery; Verb; Noun

INTRODUCTION

Vocabulary is one of the aspects of language that must be learned when learning English. Gulthon (2006), explains that vocabulary is a knowledge of words and interpreting words, where vocabulary is the number of words needed to communicate ideas, and also express the intention of the speaker. Learning vocabulary is very necessary because by mastering the vocabulary, learners or students are definitely able to understand the words used in a sentence. To master it, it requires frequent practice both at home and at school. Mastering vocabulary means that students have comprehensive knowledge about the vocabularies including the meanings, the spoken form, the written form, the grammatical behavior, the word derivation, the collocations of the words, the register of both spoken and written, the connotation or associations of the word, and word frequency (Thornbury, 2002). One cannot communicate effectively and express ideas, both orally and in writing without a sufficient vocabulary. A limited vocabulary can also be an impediment to learning a foreign language. Solikhah (2015) argues that the limitations of the vocabulary domain will make it difficult for students to express ideas and expressions of intent towards a specific goal.

Therefore, mastery of vocabulary is necessary to support students in the mastery of the target language they are learning. According to Hockett (in Celce-Murcia and McIntosh, 1978: 124), vocabulary is the easiest aspect of a second language to learn and requires little formal attention in the classroom. Endang (2010) adds that in recent years, less emphasis has been placed on teaching vocabulary. According to Hemming (in Celce-Murcia and McIntosh, 1978: 242), today's lack of attention to vocabulary acquisition is unfortunate. Hemming believes that learning linguistic terms and expressions (vocabulary) is critical in the early stages of language learning. Many students still have trouble understanding what the teacher says. The inability of students to master vocabulary is to blame. Furthermore, the teacher's teaching technique is less effective and innovative, in addition to the teacher's inability to manage lessons in the classroom with the help of media that can support when learning occurs. Learning is greatly influenced by teaching methods. Inappropriate teaching methods occur, for example when the teacher lacks mastery of the subject matter and preparation, way that results in the teacher's delivery being unclear. As a result, students will be uninterested in learning.

Technological advances are used as a means of connecting students with learning resources, both in the form of educators and other learning resources. Technology is used as a medium to make teaching easier and make students interested in following lessons and of course can create a pleasant atmosphere in the classroom. The example is the use of certain applications that support the student learning process. Technology can be used to attract students' interest in learning so that learning becomes more effective and efficient.

There are so many techniques of teaching vocabulary. One of them is using gamification. Gamification is a learning approach using elements in the game with the aim of encouraging and motivating students in learning and maximizing pleasant feelings during the learning. Gamification also makes the process more interesting, which can provide a learning experience, and the use of games in the classroom is very beneficial for students (Barab, Gresalfi, & Arinci 2009). The game helps learners to reach their targets easily, and also teaches them to memorize new vocabulary faster.

Teachers or educators can use various applications that can support a learning process to achieve the objectives of the learning process. Learning vocabulary through gamification can give confidence that their value can improve. According to Hamari, et. al (2014), gamification refers to the application of game systems and thinking in a non-game context. In this case, gamification has a role to combine students' learning experience and game elements which can increase their learning motivation and task engagement. Students' interest in gamification in vocabulary learning has increased in recent years. This is because gamified vocabulary teaching can facilitate high motivation and engagement among students. An example of gamification in question is the Kahoot games application.

Kahoot games application is a learning platform that contains certain elements that can help students during the learning process. According to Harlina and Ahmad (2017), this application is one of the alternative choices of various kinds of learning media that support the learning process to be exciting and fun. This is because the kahoot application emphasizes learning styles that involve active relationships between students and their peers competitively with the lessons they have gone through or learned.

Kahoot games provide an exciting and fun quiz atmosphere in class. This application can be used as a learning medium using an internet connection and can be accessed via the www.kahoot.com website. Kahoot as a learning media that can support students to be more interested and can also support digital-based learning styles. Besides, Kahoot can be used as a medium for evaluation, assignment, or as homework.

METHOD

In this research, the researcher used a pre-experimental design. Pre-experimental has only one group in the process of taking the data. It is an experimental group. This group was given pre-test, treatment and post-test. The design of this research is proposed by Cohen, Manion, and Marrison (2005:212-213).

The population of this research is all classes of the eighth grade at SMP Negeri 32 Sigi. There are 3 classes from VIII A up to C. Each class consists of 28-30 students. The researcher chose class A for the eighth grade students of SMP Negeri 32 Sigi. As for the reason the

researcher chose an eighth grade student as the sample of the research is based on a consideration that an eighth grade student is in middle position, stable level of adaptation. This is because the eighth grade students are still an adjustment point, a transition to the environment and learning process.

The variable of this research consists of two variables; they are dependent variable and independent variable. The dependent variable is the vocabulary mastery of the eighth grade students of SMPN 32 Sigi and the independent variable is kahoot games application. In this research, the researcher used a test as a technique of collecting data. The test is divided into pre-test and post test. The researcher used the objective test in the form of multiple choices which consisted of 15 items with four options (A, B, C and D) of each item and 15 items for matching questions. One of the options is the correct answer and the others are distractors. It was allocated for 30 minutes for the test. Pre-test data compares with the post-test data to find out whether there is any significant improvement after being taught by kahoot. After getting students individual score in the pre-test and post-test, the researcher was calculated the individual scores by using the formula:

a. Scoring the students' correct answer of pre-test and post-test :

$$\text{Score} = \frac{Students'correct\ answer\ score}{Maximum\ score} \times 10$$

b. Calculating the mean score of the students' pre test and post test by using the formula :

$$X = \frac{\Sigma x}{N}$$

Notation:

    X   : Mean score

    ΣX   : Total raw score/the sum of the score

    N   : The total number of students

<div align="right">(Gay, 2006)</div>

c. Calculating the percentage of the students' score by using the following formula:

$$P = \frac{F}{N} \times 100\%$$

Notation:

    P   : Percentage

    F   : Frequency

    N   : The total number

<div align="right">(Gay, 2006)</div>

d. Calculating the improvement of the students' score of pre-test and post-test, the researcher used the following formula :

$$P= \frac{X2-X1}{X1} \times 100\%$$

Where : X1   = Mean score of pre-test

X2　　= Mean score of post-test

P　　= Improvement

<div align="right">(Gay,2006)</div>

e. Finding out the significance difference between the pre-test and post-test by calculating the value of the test. The following formula was employee :

$$t = \frac{D}{\sqrt{\frac{\Sigma D^2 - \frac{(\Sigma D)^2}{N}}{N(N-1)}}}$$

Where:

t　　　: Test of significant

D　　: The mean score from the different score of pre-test and post-test

$\underline{D}$　　: The mean of D square

Σ_{D^2}　: The sum of D (the difference between two pair score) Square

(Σ_{D^2})　: The square of Σ_D

N　　: The number of subject

<div align="right">(Gay,2006)</div>

RESULT AND DISCUSSION

　　　This research was conducted with eight meetings divided into three main parts, namely the pretest given at the first meeting, while six meetings were for treatment, and the posttest was given at the last meeting. Researcher conducted a pre-test on Monday, January 29, 2024, while the treatment was carried out on Wednesday January 31, 2024.

Table 1 – Students Score on Pre-test and Post-test

No	Students Name	Score Pre-test	Score Post-test
1.	S-1	50	73
2.	S-2	66	60
3.	S-3	50	60
4.	S-4	66	76
5.	S-5	50	73
6.	S-6	43	83
7.	S-7	60	86
8.	S-8	86	100
9.	S-9	50	70
10.	S-10	70	80
11.	S-11	60	76
12.	S-12	35	40
13.	S-13	53	60
14.	S-14	55	70
15.	S-15	65	70
16.	S-16	40	50
17.	S-17	66	80
18.	S-18	50	90
19.	S-19	60	80

20.	S-20	76	83
21.	S-21	70	80
22.	S-22	56	76
23.	S-23	70	83
24.	S-24	76	96
25.	S-25	40	50
26.	S-26	73	93
27.	S-27	46	66
28.	S-28	60	53
29.	S-29	65	70

The data of vocabulary test of the students' were obtained by verb and noun. In order to knew the students' vocabulary mastery using kahoot games application, the score observed as follows:

Table 2 – Rate Percentage and Frequency of the Students'

Classification	Score	Pre-test		Post-test	
		F	%	F	%
Excellent	96-100			2	6.90%
Very Good	86-95	1	3.45%	3	10.34%
Good	76-85	2	6.90%	10	34.49%
Fair Good	66-75	7	24.14%	7	24.14%
Fair	56-65	7	24.14%	3	10.34%
Poor	46-55	8	27.58%	3	10.34%
Very Poor	0-45	4	13.79%	1	3.45%
Total		29	100%	29	100%

Based on the rate percentage on Table 2, in pretest it was found that there were not students got excellent. There are 1 (3.45%) students got very good, 2 (6.90%) students got good, 7 (24.14%) students got fair good, 7 (24.14%) students got fair, 8 (27.58%) students got poor, and then 4 (13.79%) got very poor. Then, in the posttest it was found that there were students who got excellent grades. There are 2 (6.90%) got excellent, 3 (10.34%) students got very good, 10 (34.49%) students got good, 7 (24.14%) students got fair good, 3 (10.34%) students got fair, 3 (10.34%) students got poor, and then there was 1 (3.45%) students got very poor.

Table 3 – The mean score and standard deviation of the students' pretest and post-test

Component	Pre-test		Post-test	
	Mean Score	Standard Deviation	Mean Score	Standard Deviation
Vocabulary	58.86	12.35	73.34	14.36

The result of data analysis from pre-test and post-test of the students' vocabulary mastery in the table above. The mean score in pre-test was 58.86 (categorized as fair), and the standard deviation was 12.25, and the mean score of post-test was 73.34 (categorized as fair good) with the standard deviation was 13.94. In conclusion, from the discussed table above, the students tested achieved a higher score after giving the treatment.

Table 4 – The improvement of the students' vocabulary in pre-test and post-test

Indicator	X1 (pre-test)	X2 (post-test)	Improvement %
Vocabulary	58.86	73.34	24.60%

Based on Table 4.4, showed that the score of students vocabulary mastery (24.60%) from the mean score in pretest was 58.86 and post test was 73.34. It indicated that the score of students' vocabulary mastery in the post-test was higher than the pretest. Based on these results, it concluded that using kahoot games application could improve the vocabulary mastery of the eighth grade students' at SMP Negeri 32 Sigi. Based on Table 2 the researcher concluded that students vocabulary mastery most of them got good with 2 (6.90%) students in pre test and 10 (34.49%) students in post test.

Table 5 – The t-test and t-table of the students' improvement

Variable	T-test value	T-table value
Vocabulary Mastery	7.352	2.048

The table above showed that t-test value was higher than the t-test table value (7.352 > 2.048). It means that there was improvement in the students' learning vocabulary before and after use Kahoot games application to the students' vocabulary mastery of the eighth grade students at SMPN 32 Sigi.

If the result of t-test value was higher than t-table's value, the null hypothesis (H0) was rejected, and if the result of t-test was lower than the t-table's value, the null hypothesis (H0) was accepted. The result of the statistical analysis of t test at the level of significance 0.05 with degree of freedom (df) = n − 1, where n: number of students was 29. It could be seen as follows:
df = n-1,
df = 29-1, df = 28

Based on elaboration above, it could be concluded that there was a significant difference in students' vocabulary mastery of the eighth grade students at SMPN 32 Sigi in academic year 2023/2024 by using Kahoot games application.

DISCUSSION

The primary purpose of this research was to find out whether the use of kahoot games is effective to improve students' vocabulary mastery of the eighth grade students at SMP Negeri 32 Sigi. To find out the purpose, the researcher used the test as an instrument. The test was given through pre-test and post-test and the researcher taught about vocabulary in the treatment in the classroom with six meetings.

In the treatment process, the first meeting was conducted on Monday, January 29, 2024 at 08.00 until eighth meetings were conducted on Wednesday, February 21, 2024 at 10.30 a.m. In the first meeting to eighth meetings , the researcher conducts the material and introduces the kahoot games application. The introduction of kahoot games aims to help students learn English, especially about English vocabulary.

This finding expanded the superiority in kahoot games application. Previously, Putri (2019), Yip and Kwan (2006), Publicando (2017) and Budiati (2017), found out the same result however they studied with different focus with the researcher.

CONCLUSION

Based on the research findings and discussion, the researcher concluded that using kahoot games application is one of the ways to teach vocabulary. Researchers found that the use of kahoot games application can improve vocabulary mastery of the eighth grade students at SMPN 32 Sigi, and the findings indicated that this media effective in improving students' motivation and had succeeded to improve the students vocabulary mastery. It was because the result indicated that the t-test value were higher than t-table value (7.352>2.048) in which to reject the null hypothesis ($H0$), t-test value certainly should be higher than t-table value. Therefore, the null hypothesis ($H0$) was rejected otherwise the alternative hypothesis ($H1$) was accepted.

REFERENCES

Adinda, R. P. (2019). *The Effectiveness of Using Kahoot Game to Improve Students' Vocabulary Comprehension.* Universitas Negeri Semarang.

Alqahtani. (2015). The Importance of Vocabulary in Language Learning and How to be Taught. *Journal of Teaching and Education*, III (3), pp. 21-34.

Arikunto. (2010). *Prosedur Penelitian: Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.

Asyiah, D. (2017). The Vocabulary Teaching and Vocabulary Learning: Perception, Strategies, and Influences on Students' Vocabulary Mastery. *Jurnal Bahasa Lingua Scientia, 9*(2), 293-318. https://doi.org/10.21274/1s.2017.9.2.293-318

Barab, S. A., Gresalfi, M., & Aricssi, A. (2009). *Why educators should care about: Games*. Educational Leadership, 67(1), 76-80.

Bicen, H., Kocakoyun, S. (2018). Perceptions of Students for Gamification Approach: Kahoot as a Case Study. *International Journal of Emerging Technologies in Learning (iJET)*, 13(02), 72—93.

Cohen, L., Manion, L., & Morrison, K. (2005). *Research Methods in Education (5th Ed)*. London: Routledge Falmer.

Dellos, R. (2015). Kahoot!: A Digital Game Resource for Learning. *International*

Journal of Instructional Technology and Distance Learning, 12(4), 49-52.
https://doi.org/=10.1.1.694.5955

Dini Restu Profita. (2012). *Improving English Vocabulary Mastery by Using Crossword Puzzle (A Classroom Action Research at the Fourth Grade Students of SD Negeri Pakurejo, Bulu, Temanggung in the Academic Year 2011/2012).* A Thesis, Surakarta: Teacher Training and Education Faculty of Sebelas Maret University.

Gay, L. R. 1981. *Educational Research--*: Charles E. *Merill Columbus Ohio*.

Hadijah, et al. (2020). Interactive game "Kahoot!" as the Media of Students' Vocabulary Assessment. *Journal on English as a Foreign Language*. 10(1), 84-102. p-ISSN 2088-1657; e-ISSN 2502-6615. DOI: https://doi.org.10.23971/jefl.v10i1.1670

Handayani, F. (2016). *The Use of Matching Pairs Games to Enrich Students'Vocabulary Mastery (The Case of Seventh Grade Students of SMP Negeri 5 Magelang in the Academic Year 2016/2017).* Final Project English Department FBS Unnes.

Harlina, Nor, Z. M., & Ahmad, A. (2017). Pembelajaran Interaktif Berasaskan Aplikasi Kahoot dalam Pengajaran Abad Ke-21. *Seminar Serantau*, 627-635.

Hatch, E. & Brown, C. (1995). *Vocabulary, Semantics, and Language Education*. Cambridge: Cambridge University Press.

Huang, et al. (2011). Investigating the Learning-Theory Foundations of Game Based Learning: A Meta-Analysis. *28(3), 0-0*. DOI:10.1111/j.1365-2729.2011.00437.x

Jeanette, et al. (2012). *Teaching Vocabulary to English Language Learners*. Teachers College Press: Chicago.

Kusumah, R. Y. (2016). *The Effectiveness of Find the Words Game to Teach the Vocabulary of Junior High School Students (A Quasi Experimental Research at the Eighth Grade of a Junior High School)*. Final Project English Department FBS Unnes.

Licorish, et al. (2018). Students' Perception of Kahoots' Influence on Teaching and Learning. *Research and Practice in Technology Enhanced Learning*. 13:9 https://doi.org/10/1186/s41039-018-0078-8

Lopez, J. (2018). Technology for Teaching Vocabulary. *The TESOL Encyclopedia of English Language Teaching, First Edition*. DOI: 10.1002/9781118784235.eelt0446.

McIntosh, L., Murcia, M. C. (1979). *Teaching English as a Second or Foreign Language*. Newbury House Publishers: University of California. ISBN 088377125X,9780883771259

Multi, D. L. (2016). *Improving Students' Vocabulary Mastery by Using Bingo Games (A Classroom Action Research at Seventh Grade Students of SMP Negeri 11 surakarta in 2015/2016 Academic Year).* Final Project English Department FBS Unnes.

Nguyen, T. T. T., & Yukawa, T. (2019). Kahoot with smarphones in testing and assessment of language teaching and learning, the need of training on mobile devices for Vietnamese teachers and students. *International Journal of Information and Education Technology, 9*(4), 286-296. https://doi.org/10.18178/ijiet.2019.9.4.1214

Nugroho, W. (2015). the effectiveness of picture crossword puzzle game in teaching vocabulary. *Journal of English Language Teaching*, 6(7), 191-200.

Putri, A. M. (2017). *The Use of 20-Squares: Add One More Word and Word Clap Games to Teach Vocabulary (A Case at the Seventh Graders of SMPN 5 Magelang in the Academic Year 2015/2016)*. Final Project English Department FBS Unnes.

Richard, J. C. & Renandya, W. A. (2002). Methodology in Language Teaching an Anthology of Current Practice. Cambrige University Press.

Solikhah, I. (2015). Reading and Writing as Academic Literacy in the EAP Program of Indonesian Learners. Dynamics of Science, 15 (2): 325-341

Susanto, Alpino. (2017). The Teaching of Vocabulary: A Perspective. *Jurnal KATA*. DOI:10.22216/JK.V1i2.2136.

Thornbury, Scout. (2002). *How to Teach Vocabulary*. London : Longman.

Wang, A. I., & Lieberoth, A. (2016). The Effect of Points and Audio on Concentration, Engagement, Enjoyment, Learning, Motivation, and Classroom Dynamics Using Kahoot! in: *Proceedings from the 10th European Conference of Games Based Learning: Academic Conferences and Publishing International Limited*