

Improving Junior High School Students' Vocabulary in Descriptive Reading Using Quizizz E-Flashcards

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Abstrak

Kosakata, khususnya dalam membaca, merupakan keterampilan yang perlu dikuasai oleh siswa yang sedang belajar Bahasa Inggris Yüksel et al. (2022) karena pesatnya perkembangan teknologi yang mempengaruhi proses pembelajaran bahasa. Namun, keterampilan kosakata siswa Indonesia masih perlu banyak peningkatan karena beberapa hal, seperti: (1) rendahnya motivasi dalam belajar bahasa Inggris (2) kecanduan terhadap gadget (3) orientasi pada hasil yang instan. Oleh karena itu, peneliti mencoba untuk mengatasi masalah tersebut dengan menggunakan e flashcards atau kartu cepat elektronik untuk meningkatkan kosakata siswa. Subjek dari penelitian ini adalah siswa kelas 8 dari salah satu SMP di Surabaya yang dipilih berdasarkan purposive sampling. Kemudian, para siswa dibagi menjadi kelompok eksperimen (N = 30) dan kelompok kontrol (N = 30) karena penelitian ini menggunakan kuasi-eksperimental sebagai desain penelitian. Selanjutnya, para subjek penelitian ditugaskan untuk melakukan pre-test yang berisi 15 item kosakata sebelum menerima perlakuan selama 3 kali. Tes tersebut diadaptasi dari Updated Vocabulary Levels Test yang dikembangkan oleh (Webb et al., 2017). Satu hari setelah perlakuan terakhir diberikan kepada para siswa, mereka diminta untuk melakukan post-test yang memiliki soal yang sama seperti pre-test, namun urutan pertanyaan untuk post-test diacak. Temuan penelitian ini menunjukkan bahwa e-flashcards memiliki pengaruh kecil (0,01) terhadap peningkatan kosakata siswa (Kornell & Bjork, 2008; Senzaki et al., 2017; Uchihara et al., 2019). Akan tetapi, menurut perbedaan rata-rata nilai pada pre-test dan post-test, kelompok eksperimen (M = 3,33) menunjukkan peningkatan yang lebih baik dibandingkan dengan kelompok kontrol (M=1,27). Dengan kata lain, e-flashcards dapat menjadi media pembelajaran alternatif untuk meningkatkan kosakata siswa dengan lebih banyak pengembangan untuk hasil yang lebih baik.

Kata kunci: kosakata, kartu cepat elektronik, membaca secara deskriptif

Abstract

Vocabulary, specifically in reading, is a skill that needs to be mastered by EFL students (Yüksel et al., 2022) due to rapid development of technology that affects language learning process. However, vocabulary skills of Indonesian students are still concerning due to several reasons: (1) demotivated in learning English (2) addicted to gadget (3) preferred an instant result. Thus, the researcher attempted to overcome the problem by using e flashcards to enhance students' vocabulary. The participants of this research were 8th grader from one of junior high schools in Surabaya that is chosen based on purposive sampling. Moreover, they were divided into experimental group (N=30) and control group (N=30) since this research used quasi-experimental as the research design. Furthermore, the participants were assigned to do the pre-test that contains 15 items of vocabulary before receiving the treatment for 3rd times. The test was adapted from Updated Vocabulary Levels Test developed by (Webb et al., 2017). A day later after the last treatment given, they were asked to do the post test that had the exact content as the pre-test, but the order of the questions was shuffled. The findings of this research showed that the treatment, which is the e-flashcards, had a small effect (0.01) on students' vocabulary improvement (Kornell & Bjork, 2008; Uchihara et al., 2019). Nevertheless, according to the mean difference of pre-test and post-test score, experimental group (M=3.33) outperformed the control group (M=1.27). In other words, e-flashcards can be an alternative media to enhance students' word attainment with more development for better results.

Keywords: vocabulary, vocabulary acquisition, e-flashcards, descriptive reading

INTRODUCTION

These days, the development of technology has advanced rapidly and it affects a lot of aspects in 21st century learning process, particularly in reading, which requires the students to master some skills in order to follow and adapt the changes. One of the skills mentioned in the

previous sentence is vocabulary, since vocabulary is the core skill that students, especially English as a Foreign Language (EFL) students need to accomplished. Yüksel et al. (2022) stated that vocabulary is one of the crucial aspects for EFL learners to master in order to acquiring new words. Another statement comes from Li & Hafner

(2022) that stated vocabulary acquisition is one of the challenges that faced by EFL learners. Those two statements are in line with (Hao et al., 2019)'s statement that defined student's vocabulary mastery determine their language skills.

Schmitt et al. (2017) claimed that "people use language to communicate and express meaning, and this meaning is essentially conveyed by vocabulary" (p. 2). His claim is supported by Webb & Nation (2017) that said "words are the building blocks of language" (para.1). However, Schmitt (2000, p. 131) asserted that the principal of vocabulary learning is a long-term process with students facing some features in order to get the best understanding of certain words and it is the core of language learning. In other words, students have difficulties in acquiring new words due to its complexity and long-term learning process. Consequently, the students' progress in vocabulary learning went slow. Regarding the difficulties faced by teachers while teaching vocabulary, preliminary research conducted by the researcher through a brief interview with the English teacher whose class were used in this research revealed that the vocabulary size of the students is concerning in terms of understanding and pronouncing certain vocabulary due to the indication of low motivation in learning English. The result of the interview implied that students' vocabulary size needs to be improved due to these reasons: (1) their lack of interest to learn English; (2) their preference to have an instant result more than a process; and (3) their limited time to have the actual teaching and learning activity.

Previous paragraphs showed that students' vocabulary, specifically Indonesian students, needs to be enhanced as an effort to face the 21st advanced technology development. Conversely, students' low motivation and addiction to their smartphone are the obstacles for them to gain more vocabulary despite the best effort from the teacher to assist them to do so. Therefore, teaching media is needed to support both teachers and students in enhancing students' vocabulary. Using e flashcards for media in learning and teaching process has been introduced as a solution to overcome the problem.

Yulsardi & Ratmanida (2021) addressed that the students who employed e-flashcards in the learning process performed better than the ones who employed paper flashcards. Similar finding has been found in Maming et al. (2023)'s research that mentioned the utilization of flashcards through Quizizz platform, has a positive effect on students' improvement in vocabulary acquisition. Those findings are reinforced by Prayogi & Wulandari (2017)'s research that discovered an improvement on students' word acquisition using digital platform, which in this case is Quizlet.

The findings on the research above proved that the use of e-flashcards enhances students' vocabulary. However, little research was carried out to investigate the use of e-flashcards as a method in gaining new vocabulary, specifically in Surabaya, East Java. Besides the utilization of e-flashcards, one of previous research was conducted in Bali, which has higher English exposure to students (Atmojo, 2022; Hidayati et al., 2023; Risadi et al., 2020) than Surabaya. Subsequently, students' English improvement in Bali and East Java would be different. Furthermore, previous research mentioned above has different sample size and different school grade of research subject. Thus, it will raise different result regarding to participants or subjects of the study compared to this research. Therefore, the current research employed the e-flashcards as a teaching media to assist the students acquiring their vocabulary in one of state junior high schools in Surabaya.

The following research question is formulated to guide the current research in attaining its purpose/ objective: To what extent does the junior high school students' vocabulary improve after learning using e-flashcards? Based on the research question formulated previously, the current research aims to investigate how far the implementation of e-flashcard in junior high school students' learning can enhance their vocabulary mastery.

This research aims to examine the effectiveness of e flashcards in improving junior high school students' vocabulary mastery. Since this research scope is students' vocabulary mastery, the researcher used vocabulary provided in the targeted text, which is based on descriptive text material taken from students' textbook entitled "English for Nusantara untuk SMP/MTs Kelas VIII" written by Damayanti et al. (2022), specifically describing an event in Chapter 5: Embrace Yourself. To provide a clear measurement of how effective the use of e-flashcards, the researcher has set the minimum score for students to achieve, which is 80 as it has been stated on the school's curriculum document (Tim Pengembang Kurikulum SMP Negeri 14 Surabaya, 2023).

METHODS

This research aimed to examine the vocabulary improvement between students who learn using e-flashcards and students who learn using conventional flashcards. To make this research eligible, the researcher conducted quantitative study with quasi-experimental as the research design to interpret the data from the future research. As said by (Gopalan et al., 2020), quasi-experimental design or QED is an alternative to experimental setting research design when researchers face some challenges (ethical consideration, research cost, etc.) in utilizing "true experimental" as research design.

Moreover, similar research (Dyah Pusparani & Musarokah, 2021; Y. Li & Hafner, 2022; Rika Permata Yulsardi & Ratmanida, 2021; Xodabande, Iravi, et al., 2022) have been found using quasi-experimental as the research design to conduct the research.

Eighth grader students from one of state junior high schools in East Java as this research's subject with two classes as the population of this research which were divided into experimental group (N=30) and control group (N=30). These groups were chosen using purposive sampling since the researcher had to collaborate with the teacher to decide classes whose characteristics matched the criteria of this research (Campbell et al., 2020; Guarte & Barrios, 2006; Klar & Leeper, 2019). There were no requirements to be this research's subject, except that experimental group acquired new vocabulary by employing the e-flashcards during the treatment. As for the control group, they gained new vocabulary using conventional flashcards.

Students' vocabulary test score obtained from pre-test and post-test was the source of data for this research. The source is needed to find out how far does the e-flashcards affect students' word acquisition. In addition, the design of the pre-test and the post-test was adapted from Updated Vocabulary Levels Test developed by (Webb et al., 2017), where students are assigned to match certain words with the definition given.

The designed instrument (see Appendix A), which was pre-test and post-test, is in the form of paper-based due to some reasons: (1) avoiding the attempts of cheating; (2) reducing the potential of distraction; and (3) hindering the possibility of technical issues. Additionally, the researcher collected the data in two different times, which was before the treatment given and a day later after the last treatment given. Moreover, the researcher used Updated Vocabulary Levels Test as the instrument. There are 15 items of targeted vocabulary with different part of speech (adjective and noun).

IBM SPSS Statistics version 25 was used to analyse the data due to its effectiveness and suitability for statistical analysis. Moreover, the researcher used Shapiro-Wilk as a tool to test the normality of the data since the sample size of this research is above 30 for each group. According to Mishra et al. (2019), Shapiro-Wilk can be used when the sample size of the research is <50. Appropriately, this research meets the criteria of using Shapiro-Wilk to test its data normality. Furthermore, since the normality test shows that the data is normally distributed, researcher would use Independent Sample T Test to answer the research question to determine the differences the pre-test and post-test score between control group and experimental group (Amanda Ross & Victor L. Willson, 2017). The method is suitable to decode the

research question for its usage is to measure the impact of the independent variable (in this research's case is the utilization of e flashcards) towards the dependent variable (in this research's case is students' vocabulary test score).

RESULTS AND DISCUSSION

The researcher has interpreted the data collection and the result of the data showed that e-flashcards has an insignificant effect in enhancing students' vocabulary. The detail of how the data is explained as follow:

Figure 1

Independent Sample T Test Result – Pre-test

		Independent Samples T Test					
		T-Test for Equality of Means					
		t	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Pre-test Score	Equal Variances Assumed	1.52	.13	1.40	.92	-.45	3.25
	Equal Variances Not Assumed	1.52	.13	1.40	.92	-.45	3.25

Pallant (2011) explained that the data can be considered has significant difference between experimental group and control group when the value of Sig. (2-tailed) showed $\leq .05$ (for instance: .02, .004). Nonetheless, when the value of Sig. (2-tailed) showed $\geq .05$ (for instance: .07, .33), it means that there is no significant difference on students' mean score. The result showed that the value of Sig. (2-tailed) is .13, which means that there is no significant difference between experimental group and control group's pre-test scores.

Figure 2

Independent Sample T Test Result – Post-test

		Independent Samples Test					
		T-Test for Equality of Means					
		t	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Post-test Score	Equal Variances Assumed	-.59	.56	-.66	1.13	-2.94	1.6
	Equal Variances Not Assumed	-.59	.56	-.66	1.13	-2.94	1.6

Note. The negative result on t-value and mean difference is caused by lower score in control group -even though the difference is not significant.

The result from the Table 4.6: Independent Sample T Test Result – Post-test above showed that the value of Sig (2-tailed) in post-test from both group is .56, which is more than .05. In other words, there is no significant difference between experimental and control group. However, based on difference calculation of mean value from Table 4.3 and Table 4.5, experimental group showed better improvement (M=3.33) than control group (M=1.27).

Accordingly, the implementation of e flashcards can be an alternative to enhance students' vocabulary.

The findings of the current study presented previously showed that there is a similar score improvement occurred in post-test scores of both experimental and control groups, which supports findings from several previous studies. The first one came from Kim & Kim (2012) that stated students who is in text-only group and students who is in text with graphic guidelines group showed small difference in both pre-test and post-test. Another similar finding is from Sage et al. (2019) that uttered paper flashcards and e-flashcards had similar effect in assisting students in vocabulary learning. However, learning platforms plays an important part during the learning process. More similar finding was found on (Sage et al., 2020) whose finding showed that there is an equal effect of the media (paper, laptop and phone) used in the research. The only difference is that paper flashcards group took more time in understanding the flashcards.

Nevertheless, the result of this research has dissimilar result with (Y. Li & Hafner, 2022; Xodabande, Iravi, et al., 2022; Yüksel et al., 2022)'s research that found out there is a significant difference in students' pre-test and post-test score for both groups. This discrepancy might happen due to some reasons. Comparing to Li & Hafner (2022)'s research, their participants had the freedom to choose which group they were belong to, which is not the case in this research. The freedom that they got might increase students' motivation in doing the treatment that leads the research to have a desired result. Additionally, the participants of the research had external stimulus, which is passing the China national exam called College English Test Band 4 (CET-4). The test is important for Chinese students because the score of the test is a crucial aspect for job recruitment process in China. Furthermore, the participants' English proficiency is already at B1 level, which means that they have better understanding related to English than this research's participants. More detailed information on the flashcards (i.e., definition) is also another factor that might affect the result of the research. The same case was found in Xodabande et al. (2022)'s research in terms of higher English proficiency level of participants. Besides, in the study, it is mentioned that the participants were taking 4-credit of ESP or English for Specific Purposes course for the whole semester. The course that they took got them more exposure to English words than this research's participants, who is most likely got exposure during English subject in a school. More case of higher English proficiency level was attained from (Yüksel et al., 2022)'s research. According to the research, the participants were required to have at least B1 level English proficiency in order to pass the university admission test. Another factor that might be the cause of

dissimilar result between Yüksel et al.'s research and this research is the pre-treatment survey that they did. This survey might help the researcher to understand their participants better in terms of providing the treatment. Subsequently, better result would occur.

Negative treatment effect added the possibility on why this research had no significant result in terms of students' vocabulary improvement. Kazdin (1981) found out that negative treatment effect or adverse effect decreased the effect of intervention of treatment given, which influence the result of the research. Elffers et al. (2024) added the insight by stating the cause of negative treatment effect is the test given to students often measure students' cognitive level rather than students' practical competence or knowledge. Linking the statements above to this research's case, Valencia (2010) has similar point of view with the previous statements. According to him, systematized assessment affected low achiever students negatively since it will lead the students to experience demotivated. Furthermore, there are some probabilities that caused negative treatment effect happened in this research. The first one is students did not really follow the instruction given during the treatment, which results to low understanding the content of the flashcards. Their lack of understanding might obstruct them to give their best answer to the questions on the test. The second possibility is because of the continuous treatment given to the students in 3 days. The non-stop treatment might overwhelm the students with the targeted words, which decreased students' potential to provide their best answers on the test. Another factor is the test that is only tested students' cognitive level, which increase the potential of demotivation for students, just like Elffers et al. (2024)'s explanation related to negative treatment effect.

Students' low motivation in learning is another aspect that might influence the result. According to Oxford & Shearin (1994), motivation takes an important part on students' involvement in learning foreign language. Students who have low motivation will face some challenges in developing their L2 skills. Their stance corresponds with Masgoret & Gardner (2003) that affirmed there is a strong relation between motivation and students' academic performance. Chastain (1976) strengthened the statement above by asserting that "Students high in achievement motivation tend to relax after success and to work harder after failure" (p. 72).

Sample size might add the reason why the treatment of this research had a small effect. The sample size of this research is smaller than the previous studies that was conducted outside Indonesia. Brewer (1972, p. 397) suggested in one of study examples that in order to achieve the expected result, increasing the amount of sample size might be the best solution. Devane et al. (2004, p. 297) has

similar point of view as Brewer by stating that the right amount of sample size is one of aspects that the researchers need to pay attention of in order to provide a credible finding(s). Lakens (2022) reinforced the previous studies mentioned by stressing that the principle of deciding sample size assists the researchers to interpret their findings correctly so that they can afford useful information to their readers.

Besides that, repetitive treatment which leads to boredom might also affects the value of effect size of the treatment given. Pawlak et al. (2020)'s finding revealed that some factors that caused students got uninterested during English class are disengagement, monotony and repetitiveness. Similar point of view is given by Kruk & Zawodniak (2020)'s finding that found out that the biggest factor that leads the participants to boredom were the repetition material as well as the difficulty level of the material that was not suitable for their level (it was either too easy or too hard for them). Another insight came from Zhang et al. (2022)'s finding that exposed the result of his interview with some participants. According to them, various form of test hinders them from tediousness and enhance their experiences in language learning.

Despite all the evidence that supports the insignificant effects that the treatment has towards students' vocabulary improvement, the data also shows that the experimental group experienced a slightly higher improvement in post-test score when compared to that of control group. This phenomenon is similar with the ones found in studies by (Boroughani, Behshad, et al., 2023; Boroughani, Xodabande, et al., 2023; Li & Tong, 2019; Xodabande, Pourhassan, et al., 2022)'s findings showed that the mean value of experimental group in pre-test was ($M=2.65$) while in the post-test was ($M=11.07$). As for the control group, the pre-test and post test scores respectively was ($M=0.79$) and ($M=6.06$). Moreover, Li & Tong (2019)'s result showed that the mean value of experimental group in pre-test and post-test for reading task respectively was ($M=0.21$) and ($M=9.08$). Meanwhile, the pre-test and post-test of control group respectively was ($M=0.19$) and ($M=6.39$). With that being said, the use of e-flashcards may still have a positive impact on students' words acquisition to a certain level. Moreover, the positive impact of word acquisition mentioned in the previous sentence is in the scope that students are able to understand the targeted words better by reading the definition of the targeted words, which can be proven by the score enhancement on post-test for experimental group.

CONCLUSION

This study found that e-flashcards can slightly improve vocabulary acquisition in reading skills among 8th grader students, even though the improvement was not

statistically significant. This topic was investigated by the researcher because the advance of technology growth that affects a lot of aspects in educational field and one of them is language learning, specifically acquiring vocabulary in reading skills. The utilization of e-flashcards has been proposed as one of solutions to enhance students' word acquisition (Maming et al., 2023; Prayogi & Wulandari, 2017; Yulsardi & Ratmanida, 2021). The findings of those studies showed that e-flashcards assisted students in enhancing their vocabulary. Nonetheless, few research conducted in Surabaya and the studies mentioned has different sample size and educational level of research subject, which leads to different research result. Thus, the researcher conducted the research in Surabaya with slightly larger sample size than the previous studies mentioned, which was conducted in Indonesia.

Updated Vocabulary Levels Test was used as an adapted instrument for this research since its credibility has been proven by its usage in several studies (Macis et al., 2021; Uchihara et al., 2019; Vu & Peters, 2022; Xodabande, Iravi, et al., 2022). The scope of intervention, which is e-flashcards, slightly improved experimental group's score in post-test better than control group even though there is no significant difference between the groups. There are some aspects that might influence the result of this research. To begin with, negative treatment effect (Elffers et al., 2024; Kazdin, 1981; Valencia, 2010) and students' low motivation in learning, which affects their pre-test and post-test score (Chastain, 1976; Masgoret & Gardner, 2003; Oxford & Shearin, 1994). Moreover, repetitive treatment is another aspect that influence the result of this research (Hanzawa & Suzuki, 2023; Kruk & Zawodniak, 2020; Pawlak et al., 2020; Zhang et al., 2022). Even though spaced repetition has been introduced as one of some effective learning methods, it has its back draw, which in this research's case is boredom. Furthermore, different amount of sample size is another factor that affects this research's result (Brewer, 1972; Devane et al., 2004; Lakens, 2022). In conclusion, e-flashcards is one of some tools that can be used as a media to improve students' vocabulary with some development as an attempt to improve students' vocabulary better.

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