

# THE EFFECTIVENESS OF MAKE A MATCH TECHNIQUE WITH QR CODE-BASED FLASHCARDS ON STUDENTS' VOCABULARY MASTERY

Diantia Cahya Rimandani<sup>1</sup>, Nina Sofiana<sup>2</sup>

Universitas Islam Nahdlatul Ulama Jepara, Indonesia

<sup>1</sup> 201320000491@unisnu.ac.id, <sup>2</sup> ninasofiana@unisnu.ac.id

## Abstract

Vocabulary is one of the most crucial components that students should have. However, the students have limited vocabulary. As a result, the students have difficulty remembering the new words. The aim of this research was to determine the effectiveness of the Make a Match Technique with QR Code-based Flashcards on vocabulary mastery for seventh-grade students at MTs Miftahul Huda Bulungan. This research used a true-experimental design with a pre-test post-test design. The population of this research was seventh-grade students. The sample of the research was 2 classes, experimental class (VII B) and control class (VII A). Data were acquired using multiple-choice tests. The researcher employed the t-test to analyze the data. Students in the experimental class had an average score of 81.73, whereas those in the control class was 71.67. Then, The Sig. (2-tailed) was 0.000, which is less than 0.05, and the T-test was greater than the T-table ( $5.542 > 1.697$ ). The result showed that using Make a Match Technique with QR Code-based Flashcards was effective for improving students' vocabulary.

**Keywords:** Vocabulary Mastery; Make a Match Technique; QR Code; Flashcard

## INTRODUCTION

In teaching English, vocabulary is one of the most crucial aspects of preparing students to become proficient in all four language skills: reading, writing, speaking, and listening. Linse & Nunan (2005) stated that vocabulary is a set of words that an individual knows. It means that students have to master their vocabulary by themselves. In line with the statement above, Rumaisyah (2023) revealed that learning vocabulary becomes especially important for students to learn a new language. Students who lack vocabulary will find it difficult to write, communicate, and understand others.

Vocabulary has a big role in learning English because students would not be able to speak English if their vocabulary is limited. Furthermore, students who lack a rich vocabulary will struggle with their writing, reading speaking, and listening skills. By acquiring vocabulary, students can construct sentences in writing activities, comprehend English sentences and text in reading activities, understand information and prevent misconceptions in listening activity, and create phrases and convey them in speaking activities (Reskiawan et al., 2020). Moreover, many teachers and educators have demonstrated that acquiring vocabulary can increase one's English ability quickly (Lutfiyah et al., 2022). It means that the larger the students' vocabulary size, the better their level of English.

Based on the preliminary research by interviewing English teacher at MTs Miftahul Huda Bulungan, the English teacher said that most students have many problems in learning vocabulary. The problems are that many students struggle to memorize the meaning of words. In addition, when the teacher delivers the material to students using English, they have difficulties understanding the teacher's explanation. They are also unmotivated in learning English because most of the student said that English is a difficult subject. The problem does

not only occur with students, but the teacher's technique also. The teacher's technique when teaching vocabulary is still using a conventional technique, the teacher only asks to students to find the meaning of a new word from the dictionary. The teacher also does not use interactive media, the teacher only uses a handbook and LKS without any special media in teaching vocabulary. This situation can make students feel bored and not interested to learn new words. Meanwhile, according to Seliani et al. (2022) Learning media is an essential component of school-based learning. Applying media is a creative and methodical approach to create experiences that can make students learn more effectively.

In order to solve the problem, teachers must apply several techniques and creative media to guide students in teaching and learning language. According to Nasri (2022), teachers' methods for assisting students in learning a language must be improved. It means that the instructor must be able to select, adapt, and develop a range of strategies, including the use of interactive technology, in order to properly teach and acquire vocabulary. The Make a Match Technique is one of the approaches used to aid students with vocabulary challenges. Curran created and introduced the Make-a-Match technique as part of cooperative learning strategies in 1994. The fundamental principle of Make a Match is that students discover or match a partner while studying a concept in an exciting classroom environment (Fatmawati, 2022). Make-a-Match technique is a type of game in which students must find their partner (Lindayanti et al., 2023). Using this technique, teachers can teach students in a pleasant environment, allowing students to enjoy understanding the material in in textbook and become more involved in class (Destika, 2022).

Furthermore, the use of creative media is also important to help the student to understand the material clearly. The researcher combined the technique with QR-Code based Flashcards to improve students' vocabulary mastery. QR codes are a sort of material that may be accessed whenever and wherever not only during class. QR codes are less difficult and more efficient (Nugraha, 2022). Deineko et al. (2022) stated that students are already knowledgeable about QR codes in their social activities, thus their motivation increases when they utilize the same tools for educational objectives as they do in their social activities. Additionally, QR codes have been frequently employed in education to complement students' learning due to their feasibility (Celik, 2023). Moreover, flashcards are a collection of cards with written items to be studied (Atmaja & Sonia, 2020). Flashcards are a type of children's educational game that combines visuals and words. The words can be applied in both Indonesian and English (Fitriana et al., 2021). In implementation of vocabulary teaching at the junior high school level, vocabulary learning activities using flashcards will become more engaging. Flashcards can be used in the form of games using cards as a medium to learn English vocabulary (Arsana & Maharani, 2021). Applying QR code based flashcard allows students to scan the QR code with a smartphone, students can access the vocabulary items on the cards.

Many scholars have studied the use of techniques and creative media in teaching and learning vocabulary. The first research was conducted by Pratiwi & Fransiska (2022) on "Improving Vocabulary Mastery By Using Make A Match Technique" and the findings indicated that students respond well to acquiring vocabulary using the Make a Match Technique. It is proven by the higher scores obtained by the students. In addition, Rahmawati et al. (2020) conducted qualitative and quantitative research to increase seventh-grade vocabulary mastery at SMP TD Pardede Foundation. The results revealed that the students' scores in each vocabulary exam have consistently improved, indicating that they are actively engaged in studying English. Moreover, Yusril et al. (2023) conducted classroom activity research on the use of flashcards application in teaching vocabulary, the findings of this research showed that the students improved their vocabulary learning with the use of a flashcard application. The last research was from Atmaja & Sonia (2020) conducted classroom action research with the seventh-grade

junior high school in Katapang. The study's findings demonstrated that flashcards can help students enhance their vocabulary.

In this research, the researcher also used the Make a Match technique, but there were differences in it. The distinction between this research and previous research is the make a match technique combined with QR-Code based Flashcards to improve students' vocabulary mastery.

Motivated by the elaboration of the research finding above, this article attempts to use the Make a Match Technique with QR Code-based Flashcards for increasing students' vocabulary mastery in seventh-grade students at MTs Miftahul Huda Bulungan in the academic year 2023/2024.

## METHOD

This research used a quantitative method. As explained by Sugiyono (2018) a quantitative method is a method for doing research on a specific population and sample, collecting data using instruments, and analyzing the data using quantitative and statistical data analysis to test the hypothesis that has been determined. This research's design was true experimental, including a pre-test and post-test control group.

The place for conducting this research was in MTs Miftahul Huda Bulungan Jepara. The population consisted of seventh-grade students, with the sample divided into two classes. They are the experimental class for VII-B and the control class for VII-A, both of which include 30 students. The sample was selected at random using random sampling, which used a lottery system. This research employed a test as its instrument. The test consists of multiple choice questions designed to assess students' vocabulary competence. This test includes 25 multiple choice questions about daily activities. Each correct answer got 4 points, while each incorrect answer got 0 points.

Pre-tests and post-tests were given to both the experimental and control groups throughout data collection. The experimental class received treatment during the learning process, whereas the control class did not. The result of the post-test score in the experimental class demonstrated the treatment's influence on vocabulary. To know the effect of treatment, the t-test was used to compare pre-test and post-test scores.

## RESULTS AND DISCUSSION

### Results

In this research, all data were acquired from test results in the form of numbers. The researcher used the analysis of pre-test and post-test scores in analyzing research data to find out if there was a difference in the result of the Make a Match Technique combined with QR- based Flashcard on students' vocabulary. To know the differences, the researcher used the t-test. The normality and homogeneity tests were analyzed before to the t-test to assess if the data had a normal distribution.

According to the results of statistical calculations in SPSS 26, the experimental class's pre-test had a significance value of 0.172, while the control class's was 0.83. It indicated that the data in both classes is normally distributed ( $0.172 > 0.05$ ;  $0.83 > 0.05$ ) because the significance is greater than  $\alpha = 0.05$ . Additionally, the post-test result revealed that the experimental class's pre-test significance value was 0.177 and 0.90 for the control class. Due to the significance is greater than  $\alpha = 0.05$  ( $0.177 > 0.05$ ;  $0.90 > 0.05$ ), the results also showed that the data were normally distributed. Furthermore, to assess if the data had the same or a different variance, a homogeneity test was conducted. The pre-test's significant value was  $0.954 > 0.05$ , and the post-

test's was  $0.900 > 0.05$ . It indicated that the data were homogeneous because the significance value was higher than 0.05.

To see a detailed significant score difference between the pre-test and post-tests, the researcher carried out the Independent Samples Testing. The result showed that the highest score in the experimental group was 96, whereas in the control group it was 88. The lowest score in the experimental group was 72, whereas the control group had a score of 60. The experimental group's mean pre-test score was 62.8, while their post-test score was 81.73. In contrast, the control group's mean pre-test score was 64.1 and their mean post-test score was 71.67. It showed that the experimental and control groups had different scores.

The table below displays the results from the experimental and control groups' independent samples testing

**Table 1. Group Statistics**

		N	Mean	Std. Deviation	Std. Error Mean
Result	Post-Test Experiment	30	81.73	6.782	1.238
	Post-Test Control	30	71.67	7.279	1.329

The table above showed that each class had 30 students and the total of both class were 60 students participated in this research. The average score in the experimental class was 81.73, whereas in the control class it was 71.67. It revealed that the experimental and control groups had significantly different mean post-test scores.

**Table 2. Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
Result		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Result	Equal variances assumed	.016	.900	5.542	58	.000	10.067	1.816	6.431	13.703
	Equal variances not assumed			5.542	57.712	.000	10.067	1.816	6.430	13.703

According to the data shown above the value of sig. 2- tailed in the equal variance assumed section was  $0.000 < 0.05$ . It showed that that the average scores of students in the experimental class and control class were significantly different. Additionally, the data in the table statistic demonstrated that at the 5% significance level, t-observe was greater than ttable ( $t_0 > t_{table}$ ), which is  $5.542 > 1.697$ . It indicated that the Hypothesis Alternative ( $H_a$ ) is accepted. As a result, the use of Make a Match Technique with QR-based Flashcard for improving vocabulary for seventh grade worked well.

## Discussion

In conducting this research, the researcher used Make a Match Technique combined with QR-based Flashcard as an alternative way to assist students in expanding their vocabulary. The Make a Match Technique can increase students' enthusiasm for memorizing new vocabulary because they work together and share their ideas with their friends. However, the use of make a match technique alone is not sufficient in vocabulary learning. Therefore, the researcher combined the Make a Match Technique with the innovative method, which is the QR code-based flashcard. Before the researcher applied Make a Match Technique with QR code-based Flashcards, the pre-test was used to assess students' vocabulary with the material about daily activity. Then, the experimental class received treatment from the researcher and the control class received the conventional method. The researcher then gave a post-test to the both classes. The post-test was used to assess the students' vocabulary level after getting treatment.

In implementing Make a Match Technique with QR-based Flashcard, the researcher instructed students to discover the meaning of vocabulary by scanning QR code-based Flashcards and finding their friend that has a suitable card with their card. Every student who finds their matching card quickly will get the high score. This technique can generate pleasurable learning because it is similar to a game, and also utilize QR-Code base flashcards as teacher's creative medium. Collaboration among each student occurs dynamically when applied this technique because they work together to find an answer. Students demonstrated good attention during the teaching and learning process of using the Make a Match Technique combined QR-Code based Flashcards in the classroom. It was clear that when the teacher requested them to use this technique and gave the directions, the students were listening and paying attention.

The effectiveness of learning by of Make a Match Technique with QR Code-based Flashcards could be seen from students' responses during the teaching and learning process. Students in the experimental group were more active and interested in learning than the students in the control group. This situation helped students to memorize new vocabulary well. Furthermore, teaching and learning was conducive and the material that was given could be maximally accepted by students. The research discovered that Make a Match Technique with QR Code-based Flashcards QR codes are beneficial for improving vocabulary.

Based on the findings, the results showed that the experimental group's students scored higher than the control group's students. As can be seen from the post-test mean scores, which was 71.67 in the control class and 81.73 in the experimental class. Furthermore, as the table demonstrated, the post-test Sig. (2-tailed) the result was less than the 5% level of significance ( $0,000 < 0.05$ ). It said that  $H_a$  was approved and  $H_0$  was refused. This means there was a significant difference in students' post-test score after receiving the treatment. The result of the students' post-test scores that was received after the treatment showed that the students' vocabulary had increased. It demonstrated that the use of the Make a Match Technique with QR Code-based Flashcards on vocabulary mastery at seventh grade of MTs Miftahul Huda Bulungan was effective.

Furthermore, from the explanations above showed that after the researcher applied the treatment using Make a Match Technique with QR Code-based Flashcards, the students got better achievement, this technique also allows teachers to easily teach materials and exercises. Students can improve their vocabulary and make the most of their classroom time by combining the Make A Match Technique with QR Code-based Flashcards.

## CONCLUSION

This research used true-experimental using the pretest-posttest control group design. The purpose of this research is to determine how the Make a Match Technique with QR Code-based flashcards affects students' vocabulary for seventh-grade students in MTs Miftahul Huda Bulungan. According to the results of statistical calculations, there was a substantial difference in vocabulary acquisition between students who were taught the Make a Match Technique with QR Code-based Flashcards and those who were not. This is evident from the average post-test value in the experimental class was 81.73, whereas in the control class it was 71.67. The probability significance level (2-tailed) is  $0.000 < 0.05$ . This indicated that the post-test results for the experimental class and control class differ significantly from one another. As a result, the alternative hypothesis ( $H_a$ ) was accepted, whereas the null hypothesis ( $H_0$ ) was rejected. Thus, it was effective to apply the Make a Match Technique with QR Code-based Flashcards to improve the vocabulary of MTs Miftahul Huda Bulungan for seventh-grade students.

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