The Effect of Make a Match Technique on Students' Vocabulary Mastery

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Abstract

The purpose of this study is to determine the effect of the Make a Match Technique on students' vocabulary mastery at SMPN 1 Panti Jember in the academic year 2022/2023. This study employed a quasi-experimental design with a pre-test post-test non-equivalent control group. The population was seventh grade consist of 186 students and the sample of this research was seventh grade consist of 58 students of class E and F. The data were collected by using pre-test and post-test in control class and experimental class were analyzed using SPSS 16.0. The mean score of experimental class before giving the treatment is 72,30 and the mean score after giving the treatment is 87,40. For testing the hypothesis is used mann-whitney test as a substitute independent test, and the result is Sig. (2-tailed) 0,000 < 0,05. So, the Ha is accepted and H0 is rejected. Additionally, the result of data analysis shows that there is a significant effect on students' vocabulary mastery who taught using *Make a Match Technique*. Using the Make a Match technique can also stimulate students to remember vocabulary better, especially in nouns and verbs.
Keywords: make a match technique, vocabulary mastery, cooperative learning

INTRODUCTION

Vocabulary consists of all the words that make up the language. Before we learn and can master the four skills in English, we have to learn vocabulary first. Vocabulary becomes the important aspect of learning English. A low vocabulary makes it difficult to keep up with the learning process and to communicate with foreigners. Once students have mastered their vocabulary, they will be able to easily develop ideas, opinions and feelings and share them with others. If someone can master vocabulary well, then the quality of his English will also increase. Therefore mastery of vocabulary is very important in learning English as well as the importance of English to learn because it really helps someone in determining an education and makes it easier for them to obtain a better job

But, learning English is not the same as learning Indonesian. In fact, as a result, it was found that the students' vocabulary acquisition was still inadequate due to several problems. 1) Students have difficulty remembering and mastering vocabulary, 2). Teachers use inefficient study methods, 3). Student participation in learning activities is still low, 4). Teachers cannot effectively develop teaching materials, 5). Lack of positive, creative, effective and enjoyable learning techniques during learning activities (Romadhon & Qurohman, 2019). To overcome these obstacles, teachers are encouraged to seek out appropriate vocabulary learning techniques and adapt them to the situation of the students in their class. This is because the teacher is the most important support in learning process.

There are several ways to teach vocabulary in the classroom they are by using media, teaching techniques or strategies. The learners require an enjoyable and practical method of instruction so that they can finally integrate themselves into English, such as the Make a Match Technique. This technique is one of the cooperative learning models. Cooperative learning models is a group work approach that minimizes the occurrence of unpleasant situations while maximizing the learning and satisfaction that come from working on a high-performing team. When students struggle to solve problems on their own, this cooperative learning model keeps them from becoming bored because they work with pairs (Johnson & Johnson, 1998).

Make a Match technique can be used to teach students of all levels and subjects, particularly English vocabulary. According to Huda (2011) was cited in Maduratna (2014) Make a Match technique can be implementing for every subjects especially English subject, because this technique can help students review language they have learned and allows learners to work together with other students during teaching and learning activities, the teacher will find it easier to use in the classroom.

According to Nurfahrudianto et al (2017) was cited in Andriani et al., (2022) Make a Match technique is a type of cooperative learning that is distinguished by the use of cards in its implementation. Make a Match

technique employs cards, which are divided into two categories: answer cards and question cards. So that students can work together with their peers to find matching answer cards as well as question cards. The advantage of this technique is that students seek out partners while learning a topic in a pleasant setting. Using Make a Match technique make students become more active and understand the material that the teacher has taught through these activities, allowing them to remember the material in the long term. They will not feel bored during learning process and easy to memorize the vocabulary (Desmiyanti et al., 2020). The Make a Match Technique can assist students in improving their ability to write descriptive text (Mahmudatin Arifah, 2013). Make a match technique is effective for improving students vocabulary especially in mastering noun (Abdul Waris, 2020).

The aim of this study is to determine the effectiveness of the Make a Match technique for teaching vocabulary specifically nouns and verbs, in an experimental class at SMPN 1 Panti Jember based on the problems mentioned above.

METHOD

This study was conducted in SMPN 1 Panti Jember in May 2023. This study uses a quantitative research method with a quasi-experimental design pre-test post-test non-equivalent control group design. The researcher used non-equivalent control group design because the two sample groups are not equivalent or equal in all respects or aspects, but are only equal in a few (Isnawan, n.d., 2020). The total population of this study is 186 students of seventh grade and the sample was taken from class VII E and F consist of 58 students. In a quasi-experimental design, researchers cannot take a random sample because it will disrupt classroom learning activities. One type of experimental research design is quasi-experimental, but the sample is not chosen at random because it is convenient (Isnawan, n.d., 2020). According to Donald Ary et al, (2010) the non-randomized control pre-test and post-test design is a popular quasi-experimental design in educational research. Here is the table research design of quasi-experimental:

Table. 1
Research Design of Quasi Experimental Design

Experiment	Y1	X	Y2
Control	Y1	-	Y2

Notes:
Y1: pre-test for control and experimental class
X : treatment
Y2: post-test for control and experimental class

The data was gathered using a multiple-choice vocabulary test. Multiple choice are simple to administer, easy to score, and can be applied to a large number of students in a short period of time(Öztürk, 2007). Furthermore, vocabulary multiple-choice tests are so simple to create that they can even be generated automatically by computers. The best instrument must meet four critical criteria: validity, reliability, difficulty level and discriminating power.
1. Validity of the Test

The extent to which a research instrument actually measures what it is supposed to measure is referred to as its validity (Donald Ary et al., 2010). The test material corresponds to the material on seventh grade in K-13 (Kurikulum 2013). Validity is essential because it ensures that a test is meaningful and accurately measures students' abilities. In item analysis, there are two types of validity: content validity and construct validity. The researcher is used content validity. Content validity means the extent to which a test device reflects the overall ability to be achieved by students. The term content validity refers to how well a test reflects what will be measured from students' abilities in relation to the learning objectives to be met also focuses on students' cognitive domains, as stated in the curriculum (Ida & Musyarofah, 2021). If the r-hitung is higher than r-table then the item is valid.
2. Reliability of the Test

The reliability coefficient indicates the degree to which an instrument test can be trusted, implying that if the same instrument is used to measure the same thing repeatedly, the results are relatively stable or consistent. The formula of reliability:

$$r = \frac{n\Sigma - (\Sigma x (\Sigma y)}{\sqrt{\{n\Sigma x^2 - (\Sigma x)^2\}\{n\Sigma y^2 - (\Sigma y)^2}}}$$

Notes:

r : correlation of coefficient between x and y variable

n : the total number of students

x : sum of the students' right answer of the odd number

y : sum of the students' right answer of the even number

$\sum x^2$: sum of X² score of the odd number

$\sum y^2$: sum of Y² score of the even number

$\sum xy$: sum of the students' right answer of odd and even number

After being calculated using the formula above, it is followed by calculations using the Spearman Brown formula: r_{11}

$$= \frac{2r_{1/2 \, 1/2}}{\left(1 + r_{1/2 \, 1/2}\right)}$$

Note:

r_{11} : Coefficient Correlation

$r_{1/2 \, 1/2}$: Correlation between the scores on each test

3. Difficulty Level

The difficulty level of a question is a measurement of how difficult a question is. Good questions are neither too difficult nor too easy to answer. Questions that are too easy do not motivate students to work harder to solve them. Meanwhile, difficult questions discourage students from attempting to answer them (Sukendro JS, Wiyatni Tri, Ginanjar R, 2018). P values greater than 0.90 indicate that the item is very simple and that the concept is not worth testing. P-values less than 0.20 indicate difficult items that should be evaluated for possible confusing language or re-instruction of the contents (Boopathiraj & Chellamani, 2013). This is the formula of difficulty level:

Formula: $DL = \frac{U+L}{T}$

Notes:

DL : Index of Difficulty level

U : Total number of upper students with correct answer

L : Total number of lower students with correct answer

T : The number of student

4. Discriminating Power

The degree to which passing or failing a test item indicates possession of the ability being measured is referred to as item identification or the discriminating power of the test item. determines how well the test taker is differentiated by the item in the function or ability it is measuring. This number ranges from 0.0 to 1.00. The difference between items is greater the higher the value. When an item is highly discriminatory, it means that a student who scored well on the test answered the question correctly and a student who scored poorly on the test answered the question incorrectly (Boopathiraj & Chellamani, 2013). Here is the formula to calculate the discriminating power:

The formula $= \frac{U-L}{1/2T}$

Notes:

DP : Index of Discriminating Power
U : Total number of upper who choose correct answer
L : Total number of upper who choose correct answer
½T: Half of total number of students in upper and lower group

Pre-test and post-test vocabulary tests are given twice. The pre-test was used to assess vocabulary mastery prior to treatment, while the post-test was used to assess the technique used in the experimental class. Both classes received a pre-test and a post-test. After the treatment, the mean was compared to see if there was a significant difference between the students who used the Make a Match technique and those who used the conventional technique. The data was analyzed using SPSS 16.

RESULTS AND DISCUSSION

1. Research Findings

The data was collected from pre-test and post-test both of classes. The statistical analysis of pre-test and post-test in the control and experimental class is showed:

Table. 2 Descriptive statistics analysis of Control Class

	N	Minimum	Maximum	Sum	Mean	Std. Dev
Pre-test	28	10	57	1.185	42.32	12.205
Post-test	28	23	67	1.438	51.36	12.272
Valid (N)	28					

The descriptive statistics analysis for the pre-test of the control class reveals that the minimum score is 10 and the maximum is 23, the mean score is 42.32, and the standard deviation is 12.205. While the post-test results revealed that the minimum score is 23 and the maximum score is 67, the mean score was 51.36 and the standard deviation was 12.272. The table later shows that the pre-test score is lower than the post-test score.

Table.3 Descriptive Statistics Analysis of Experimental Class

	N	Minimum	Maximum	Sum	Mean	Std. Dev
Pre-test	30	50	83	2.169	72.30	7.675
Post-test	30	67	97	2.622	87.40	7.271
Valid (N)	30					

The descriptive statistics analysis for the pre-test of the experimental class shows that the minimum score is 50 and the maximum score is 83, with a mean score of 72.30 and a standard deviation of 7.675. While the post-test results revealed that the minimum score is 67 and the maximum score is 97, the mean score was 87.40 and the standard deviation was 7.271. The table later shows that the pre-test score is lower than the post-test score. It is possible to conclude that the Make a Match technique is useful for teaching vocabulary.

Hypothesis Test

The researcher substituted the Mann-whitney test for the Independent sample t-test for the hypothesis test. The Mann-Whitney test is a non-parametric test that is used when the data is not normally distributed or homogeneous. The outcome is shown in the table below:

Table.4 Hypothesis test using Mann-whitney test

Test Statistics[a]	
	Using Make a Match Technique
Mann-Whitney U	2.500
Wilcoxon W	408.500
Z	-6.521
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Class	

The U value in the table above is 2,500, and the W value is 408,500. The magnitude is -6,521 when converted to a Z value. The sig value, also known as the P value, is 0.000 0.05. The null hypothesis (H0) is

rejected and the alternative hypothesis (Ha) is accepted if the P value is less than 0.05. It means that students who are taught using the Make a Match Technique have significantly better vocabulary mastery. This theory is supported by previous research findings; it encourages students to be more self-directed, and teachers are strongly advised to use this technique to help students improve their vocabulary (Nikmah & Husein., 2018).

2. Discussion

The finding of this study is showed that the Make a Match technique was effective for teaching vocabulary at experimental class of SMPN 1 Panti Jember. The researcher evaluated the normality and homogeneity of each data set before testing the hypothesis. Because the probability value in the normality and homogeneity test results is less than 0.05, it is concluded that the data was not normal distributed and non-homogeneous distribution, and thus testing the hypothesis uses the Mann-Whitney test as a substitute for the Independent sample t-test. The result of hypothesis test was mention that the P value $0,000 < 0,05$. It means that the null hypothesis (H0) was rejected and the alternative hypothesis (Ha) is accepted. It is possible that there are differences in the ability to master vocabulary, particularly nouns and verbs, between the experimental class who were given treatment using the Make A Match technique assisted by cards consisting of question and answer cards and the control class who used the conventional technique during learning nouns and verbs for class VII SMPN 1 Panti Jember.

Students in the experimental class were very enthusiastic about learning vocabulary related to nouns and verbs while receiving treatment. When the researchers began using this technique to help students remember and master the vocabulary that had been taught, the classroom atmosphere improved. The procedure of this research are teacher prepared the material that will be delivered, divide the students into two groups A and B, makes the s of question and answer, shared the question card into group A an group B hold the answer cards. After the researcher shared the cards, the game is began in a matter of 10 seconds tomatch wih his partner. With this technique students can also group nouns and verbs. This technique also contains games that make them more enthusiastic during learning activities. From the data above Make a Match technique is effective for teaching vocabulary in class VII E SMPN 1 Panti Jember.

CONCLUSION

The value of Sig 0,000 0,05 indicates that the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted based on the data presented above. In other words, the Make a Match technique is effective for teaching vocabulary at SMPN 1 Panti Jember, particularly in the seventh grade. This technique may have influenced students' vocabulary mastery at SMPN 1 Panti Jember 2022/2023 during the academic year. Students who learned the Make a Match technique outperformed those who did not learn the technique. This study observed that the Make a Match Technique assists students in mastering vocabulary, particularly nouns and verbs, remembering the words well, and training students to cooperate with their classmates in matching answers. It is suggested that English teachers use this technique during the learning process.

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