

The Effect of Make a Match Technique on Students Vocabulary Mastery at The Seventh Grade of SMPI Nurul Islam Penjaringan Jakarta Utara

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Abstrak: *Vocabulary mastery is fundamental to English language learning because it enables students to comprehend linguistic input and communicate ideas effectively. However, seventh-grade students at SMPI Nurul Islam Penjaringan, North Jakarta, demonstrated difficulties in understanding word meanings, identifying synonyms and antonyms, using words appropriately in sentences, and interpreting vocabulary in context. This study examined the effect of the Make a Match technique on students' English vocabulary mastery. A quantitative approach with a one-group pretest-posttest design was employed involving 31 seventh-grade students. Data were collected using a 20-item multiple-choice vocabulary test administered before and after six instructional sessions using the Make a Match technique. The data were analyzed using descriptive statistics, the Shapiro-Wilk normality test, and a paired-samples t-test. The findings showed a substantial improvement in students' vocabulary mastery, with the mean score increasing from 39.03 in the pre-test to 84.84 in the post-test. The statistical analysis confirmed that this improvement was significant ($p < 0.05$). These findings indicate that the Make a Match technique effectively enhances students' vocabulary mastery by engaging them in interactive and collaborative vocabulary-learning activities. The study highlights the potential of this technique as an alternative instructional strategy for vocabulary teaching in junior secondary English classrooms.*

INTRODUCTION

English plays an important role in education and communication, particularly in scientific, technological, economic, and social contexts. Within English language learning, vocabulary is fundamental because learners need sufficient knowledge of words to understand spoken and written language and to express ideas through speaking and writing. Vocabulary knowledge involves more than recognizing word meanings; it also concerns learners' ability to understand and use words

appropriately in communication (Nation, 2001; Schmitt, 2000). Despite this importance, preliminary observations and interviews at SMPI Nurul Islam, North Jakarta, indicate that the vocabulary mastery of seventh-grade students remains low. Most students have not reached the Minimum Mastery Criterion (KKM) of 72 and experience difficulty memorizing and retaining English words. Vocabulary instruction also tends to rely on repetitive activities, particularly asking students to find word meanings in dictionaries, with limited opportunities to interact with, recall, and use the vocabulary they learn. A similar instructional problem is identified in the research framework of this study, which describes limited vocabulary knowledge, difficulty understanding word meanings, and the need for a more engaging vocabulary-learning technique.

This condition reveals a gap between how vocabulary learning is expected to occur and how it is currently practiced. Ideally, vocabulary should be learned through systematic and meaningful exposure that allows learners to repeatedly encounter, retrieve, and use words rather than merely memorize isolated meanings (Nation, 2001; Schmitt, 2000). Retrieval itself can strengthen long-term retention because recalling previously learned information contributes to subsequent learning (Roediger & Karpicke, 2006). Vocabulary instruction should therefore provide students with opportunities to actively process word–meaning relationships. The *Make a Match* technique is relevant to this need because students search for corresponding cards, such as words and their meanings, and interact with peers while identifying the correct pairs. The activity is consistent with cooperative learning, in which learning is supported through interaction and positive interdependence among learners (Johnson & Johnson, 2009). In the context of vocabulary learning, the technique also provides repeated opportunities to recognize and retrieve word meanings through an active rather than exclusively dictionary-based learning process. The theoretical suitability of *Make a Match* for vocabulary learning through repetition, association, interaction, and active engagement is also emphasized in the theoretical framework of this study.

Previous research generally supports the use of *Make a Match* for vocabulary learning, although the evidence has emerged from different instructional settings and research designs. Destika (2022) reported significant improvement in students' vocabulary after the implementation of the technique, while Pratiwi and Fransiska (2022), using classroom action research, also found progressive improvement in students' vocabulary mastery. Lindayanti et al. (2023) similarly found that *Make a Match* supported vocabulary learning among eighth-grade students at SMPN 3 Palu, whereas Mahbubah (2024) reported a significant effect among eighth-grade students at SMP Ma'arif 04 Padangratu, Central Lampung. More recently, Rimandani and Sofiana (2024) demonstrated the effectiveness of *Make a Match* combined with QR code-based flashcards among seventh-grade students at MTs Miftahul Huda Bulungan. Their study, however, examined a technology-enhanced form of the technique rather than *Make a Match* as the primary instructional intervention. These studies establish a growing body of evidence in favor of *Make a Match*, but they also show that previous findings are distributed across different grade levels, schools, research designs, and instructional modifications. Consequently, the effect of the *Make a Match* technique on seventh-grade students' vocabulary mastery in the specific instructional conditions of SMPI Nurul Islam, where low vocabulary achievement and limited instructional variation have been identified, still requires empirical examination.

Against this background, the present study positions *Make a Match* as a cooperative vocabulary-learning technique in which students actively retrieve, compare, and match vocabulary information through structured peer interaction. Rather than treating the technique merely as a classroom game, the study focuses on its instructional function in providing repeated and active engagement with word–meaning relationships. This position connects the principles of cooperative

learning with the cognitive importance of retrieval in vocabulary learning (Johnson & Johnson, 2009; Roediger & Karpicke, 2006). Accordingly, the research question addressed in this study is: Does the *Make a Match* technique have a significant effect on the vocabulary mastery of seventh-grade students at SMPI Nurul Islam, North Jakarta? Based on this question, the study aims to determine the effect of the *Make a Match* technique on students' vocabulary mastery.

The study is expected to contribute empirical evidence to the literature on cooperative vocabulary instruction in junior high school EFL settings. More specifically, it extends previous studies by examining *Make a Match* among seventh-grade students in a school context where vocabulary achievement and instructional variation have been identified as practical problems. The findings may therefore strengthen understanding of the applicability of *Make a Match* across different EFL classroom contexts rather than assuming that results obtained in other schools or through modified forms of the technique are automatically transferable. Practically, the study is expected to provide English teachers at SMPI Nurul Islam with an alternative vocabulary-teaching technique that promotes active student participation, repeated engagement with vocabulary, and a more interactive learning environment.

RESEARCH METHOD

This study employed a quantitative approach using a pre-experimental method with a one-group pretest–posttest design. A quantitative approach was selected because the study examined changes in students' vocabulary mastery through numerical data and statistical analysis. Quantitative research is appropriate for examining measurable variables and testing hypotheses concerning the effects or relationships among variables (Creswell & Creswell, 2018). In the one-group pretest–posttest design, the same group is measured before and after an intervention, allowing the researcher to identify changes that occur following the treatment, although the design does not involve a separate control group (Campbell & Stanley, 1963). Accordingly, the students were first administered a pre-test, subsequently received vocabulary instruction using the *Make a Match* technique, and finally completed a post-test to determine whether their vocabulary mastery improved after the treatment.

The primary data consisted of students' vocabulary test scores obtained directly from the pre-test and post-test. The research was conducted at SMPI Nurul Islam, North Jakarta, with a population of 319 students. The sample comprised 31 seventh-grade students selected purposively according to the characteristics required by the study. Purposive sampling enables researchers to select participants on the basis of predetermined characteristics that are relevant to the purpose of the research (Fraenkel et al., 2012). The principal data therefore consisted of the pre-test and post-test scores of these 31 students, which represented their vocabulary mastery before and after the implementation of the *Make a Match* technique.

Data were collected primarily through vocabulary tests administered before and after the treatment. The pre-test was conducted to measure students' initial vocabulary mastery, whereas the post-test was administered after the intervention to identify changes in their achievement. The research instrument consisted of 20 multiple-choice questions covering four indicators: recognition of word meanings, identification of synonyms and antonyms, correct use of words in sentences, and understanding word meanings in context. Each correct answer was scored 1 and each incorrect answer 0, with the total raw score converted to a scale of 0–100. Between the two tests, students participated in 18 treatment sessions using the *Make a Match* technique, conducted twice a week for approximately 60 minutes per session. The use of pre- and post-intervention measurements allows changes in the dependent variable to be systematically assessed after exposure to the

treatment (Fraenkel et al., 2012).

The data were analyzed statistically using SPSS. The analysis began with prerequisite testing, including a normality test using the Kolmogorov–Smirnov test and a homogeneity test, with a significance level of 0.05. The main hypothesis was subsequently tested using a paired-samples t-test, as the pre-test and post-test scores were obtained from the same participants at two different measurement points. The paired-samples t-test is appropriate for determining whether the mean difference between two related measurements is statistically significant (Field, 2018). The null hypothesis (H_0) stated that the *Make a Match* technique had no significant effect on students' vocabulary mastery, whereas the alternative hypothesis (H_1) stated that the technique had a significant effect. H_0 was rejected when the significance value (p) was lower than 0.05 and retained when p was greater than 0.05.

RESULTS AND DISCUSSION

Results

Descriptive Results of Students' Vocabulary Mastery

The study involved 31 seventh-grade students who completed a pre-test before the intervention and a post-test after six sessions of instruction using the *Make a Match* technique. The pre-test was administered to establish students' initial vocabulary mastery, whereas the post-test measured their achievement after the treatment.

The descriptive statistics indicate a substantial change in vocabulary achievement between the two measurement points. Before the intervention, the students obtained a mean score of 39.03 ($SD = 15.46$), with scores ranging from 20 to 70. The median was 35 and the mode was 20. After the intervention, the mean increased to 84.84 ($SD = 8.01$), with scores ranging from 70 to 95. The post-test median was 85 and the mode was 90. Thus, the mean vocabulary score increased by 45.81 points from pre-test to post-test. The original dataset similarly shows a pre-test mean of approximately 39 and a post-test mean of approximately 85.

Table 1. Descriptive Statistics of Pre-test and Post-test Scores

Statistic	Pre-test	Post-test	Change
<i>N</i>	31	31	—
Mean	39.03	84.84	+45.81
Standard deviation	15.46	8.01	-7.45
Median	35	85	+50
Mode	20	90	—
Minimum	20	70	+50
Maximum	70	95	+25

The change becomes more apparent when the scores are examined by achievement category. Prior to the treatment, 26 of the 31 students (83.9%) were classified in the very-low category, while four students (12.9%) were in the low category and only one student (3.2%) was in the medium category. No students reached the high or very-high categories. After the treatment, no students remained in either the very-low or low categories. Seven students (22.6%) were classified as medium, nine (29.0%) as high, and 15 (48.4%) as very high. The post-test distribution reported in the original data therefore shows a pronounced upward shift in students' vocabulary achievement.

Table 2. Distribution of Students Across Vocabulary Achievement Categories

Score Range	Category	Pre-test, <i>n</i> (%)	Post-test, <i>n</i> (%)
0–59	Very Low	26 (83.9%)	0 (0.0%)

60–69	Low	4 (12.9%)	0 (0.0%)
70–79	Medium	1 (3.2%)	7 (22.6%)
80–89	High	0 (0.0%)	9 (29.0%)
90–100	Very High	0 (0.0%)	15 (48.4%)
Total		31 (100%)	31 (100%)

As illustrated in Figure 1, the score distribution changed markedly between the two assessments. The pre-test distribution was concentrated at the lower end of the achievement scale, whereas the post-test distribution shifted toward the high and very-high categories. In particular, 77.4% of students achieved either high or very-high scores after the intervention, compared with none before the intervention.

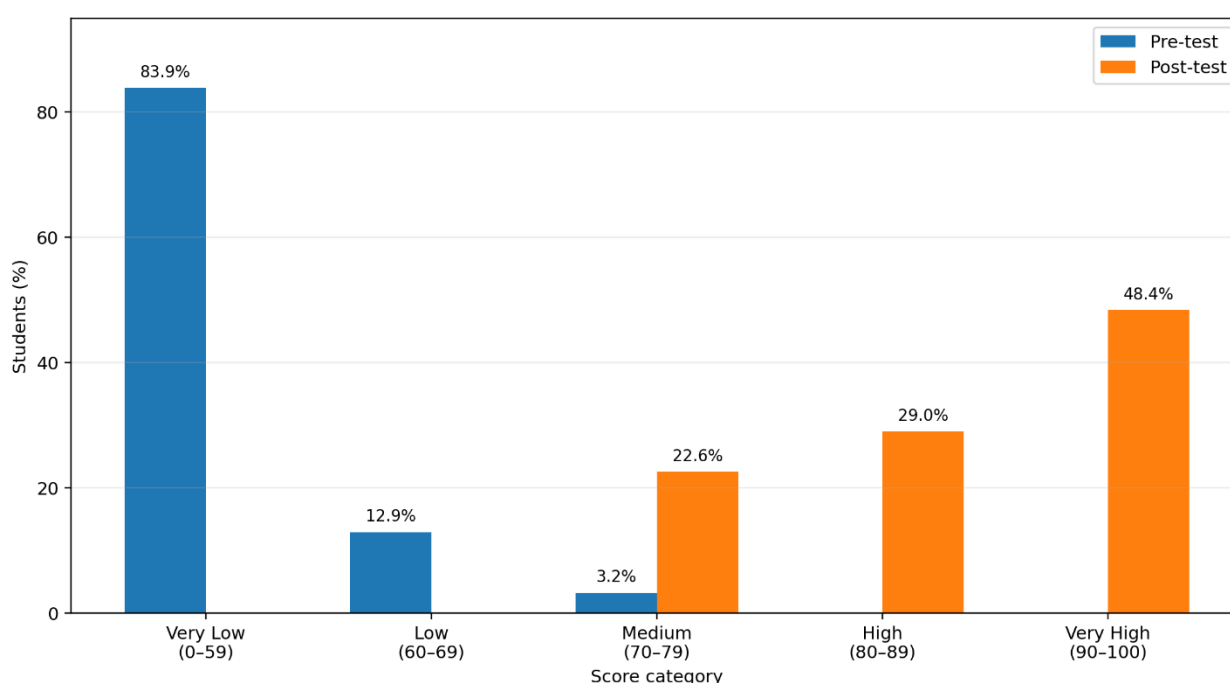


Figure 1. Distribution of Vocabulary Achievement Before and After the Make a Match Intervention

Assumption Testing

Because the study compared two measurements obtained from the same participants, a paired-samples *t*-test was used. For a paired-samples test, the relevant normality assumption concerns the distribution of the difference scores between the two measurements. Recalculation of the 31 paired observations using the Shapiro–Wilk test showed that the difference scores were normally distributed, $W = .964$, $p = .366$. Since $p > .05$, the normality assumption required for the paired-samples *t*-test was satisfied.

Table 3. Normality Test of Difference Scores

Variable	Shapiro–Wilk W	p	Decision
Post-test – Pre-test	.964	.366	Normally distributed

Accordingly, hypothesis testing was conducted using a paired-samples *t*-test.

Hypothesis Testing

The paired-samples analysis demonstrated a statistically significant difference between students' vocabulary scores before and after the intervention. The mean gain was 45.81 points, with a 95% confidence interval ranging from 39.91 to 51.70. Expressed according to the pre-test minus post-test ordering used in the original analysis, the test produced $t(30) = -15.863$, $p < .001$. This result corresponds with the t -value reported in the original study.

The magnitude of the difference was also examined using Cohen's d for paired observations (d_{z}). The resulting effect size was 2.85, indicating a very large within-group difference between pre-test and post-test scores. Therefore, the null hypothesis stating that there was no difference in students' vocabulary mastery before and after the implementation of *Make a Match* was rejected.

Table 4. Paired-Samples Test of Students' Vocabulary Achievement

Comparison	Mean Difference	95% CI	t	df	p	Cohen's d_{z}
Pre-test – Post-test	-45.81	[-51.70, -39.91]	-15.863	30	< .001	2.85

Taken together, the descriptive and inferential findings show that students obtained substantially higher vocabulary scores after participating in the *Make a Match* learning activities. The increase was not limited to the average score but was also reflected in the redistribution of students from predominantly very-low achievement before the intervention to predominantly high and very-high achievement afterward.

Discussion

The central finding of this study is the substantial improvement in students' vocabulary achievement following the implementation of the *Make a Match* technique. The mean increased from 39.03 to 84.84, while the proportion of students in the high and very-high categories increased from 0% to 77.4%. At the same time, the standard deviation decreased from 15.46 to 8.01, suggesting that the improvement was accompanied by a narrower dispersion of scores. These results indicate that the observed improvement was not confined to a small number of initially stronger students but occurred across much of the class.

One explanation for this pattern lies in the learning mechanism embedded in *Make a Match*. Vocabulary acquisition requires learners to establish and repeatedly retrieve connections among word form, meaning, and use (Nation, 2013). Rather than merely asking students to copy definitions or locate meanings in dictionaries, matching activities require them to recognize target words, search for corresponding meanings, discriminate among alternatives, and retrieve lexical information in order to complete the task. Such repeated retrieval is relevant because repeated attempts to recall lexical items can strengthen second-language vocabulary learning and retention (Nakata, 2017).

This mechanism can also be observed in the progression of the six treatments implemented in the present study. In the initial treatment, students matched vocabulary concerning rooms in a house with corresponding meanings. Subsequent sessions increased task complexity by requiring students to match furniture with rooms and then use the vocabulary in simple sentences involving *there is* and *there are*. In later sessions, students incorporated prepositions of place, constructed descriptive sentences, and ultimately presented descriptions of their dream homes.

This progression is pedagogically important because the intervention did not treat *Make a Match* merely as a game involving isolated word pairs. The activities gradually shifted from recognition to controlled production and contextual use. Students first identified lexical relationships and

subsequently applied the same vocabulary to grammatical and communicative contexts. From a vocabulary-learning perspective, this sequence potentially strengthens the relationship among lexical form, meaning, and use, dimensions that Nation (2013) identifies as central components of vocabulary knowledge.

The findings are consistent with previous empirical research on *Make a Match* in Indonesian EFL classrooms. Hendrety et al. (2021), for example, employed a quasi-experimental design among seventh-grade students and reported significant improvement in vocabulary mastery among students exposed to the technique. Ima et al. (2024) similarly found that the mean vocabulary score of their experimental group increased from 72.30 to 87.40 and that students taught using *Make a Match* achieved significantly different vocabulary outcomes.

Comparable findings were obtained by Prayuda et al. (2023), whose classroom action research showed an increase in vocabulary scores from a pre-test mean of 40 to a post-test mean of 80. More recent evidence from Oktosi et al. (2026) is particularly relevant because their quasi-experimental study included an experimental and a control group. They found significantly greater vocabulary improvement in students taught using the *Make a Match* technique. The consistency between the present findings and these studies suggests that interactive matching activities have considerable potential as a vocabulary-learning strategy in junior secondary EFL contexts.

The present findings add another dimension to this evidence by demonstrating a substantial redistribution of students across achievement categories. Before the intervention, almost all participants were located in the very-low or low categories. After the intervention, none remained in these two categories, while almost half attained the very-high category. The reduction in the standard deviation also suggests that post-intervention scores became more homogeneous. Although this pattern cannot by itself establish why lower-performing students improved, the structured peer-oriented nature of *Make a Match* may have provided repeated opportunities for lexical exposure, retrieval, correction, and interaction that were less available under more passive vocabulary-learning practices.

The size of the observed change also deserves attention. The paired-samples effect size of $d_{z} = 2.85$ indicates that the difference between pre-test and post-test performance was very large. Statistical significance alone may be influenced by sample size, whereas an effect-size estimate provides information about the magnitude of the observed within-group difference. In the present study, both indicators point in the same direction: the post-test scores were substantially higher than the pre-test scores.

Nevertheless, the finding should not be interpreted as definitive evidence that the entire 45.81-point improvement was caused exclusively by *Make a Match*. The study employed a one-group pre-test–post-test design and did not include a comparison or control group. Such a design cannot fully rule out alternative explanations including testing effects, maturation, historical influences, and regression toward the mean (Knapp, 2016). Therefore, the statistically significant result establishes a strong within-group change following the intervention, whereas a stronger causal statement would require a controlled experimental or quasi-experimental design.

This distinction is particularly important for positioning the study in an international journal. The present evidence supports the pedagogical promise of *Make a Match* rather than an unconditional claim that the technique alone caused all observed improvement. Future studies could strengthen causal inference by including a control group receiving conventional vocabulary instruction, randomly or systematically assigning comparable classes to conditions, and administering a delayed post-test. A delayed measurement would also determine whether vocabulary gains are retained beyond the immediate completion of the intervention, an important

issue given evidence that retrieval frequency and testing intervals can affect longer-term vocabulary retention (Nakata, 2017).

Overall, the results suggest that *Make a Match* can provide a productive instructional framework for vocabulary learning when it is implemented progressively. Its pedagogical value appears to derive not merely from its game-like format but from the combination of repeated lexical retrieval, peer interaction, matching of form and meaning, and subsequent use of target vocabulary in increasingly contextualized tasks. The substantial increase in mean achievement, the upward redistribution of score categories, and the large within-group effect collectively indicate that the technique deserves further examination through more rigorous controlled designs.

CONCLUSION

This study demonstrates that the Make-a-Match technique significantly improves students' English vocabulary mastery. The mean score increased substantially from 39.03 in the pre-test to 84.84 in the post-test, indicating a marked improvement in students' vocabulary achievement after the intervention. The inferential analysis further confirmed this improvement, with a statistically significant difference between the pre-test and post-test scores ($p < 0.05$; $t = -15.863$). Accordingly, the null hypothesis was rejected, providing empirical evidence that the Make-a-Match technique is effective in supporting vocabulary learning.

The findings reinforce the pedagogical value of active and student-centered learning in vocabulary instruction. By involving students directly in matching words and their corresponding meanings or concepts, Make-a-Match transforms vocabulary learning from a predominantly memorization-based activity into an interactive learning process. This finding is consistent with the constructivist view that knowledge is more effectively developed when learners actively participate in constructing meaning through interaction and learning activities. The effectiveness of the technique therefore lies not only in the improvement of vocabulary scores but also in its capacity to create a more participatory and engaging learning environment.

From a practical perspective, Make-a-Match can be adopted as an alternative instructional technique for English teachers, particularly when teaching vocabulary at the junior secondary level. Its interactive format may help teachers vary classroom activities while encouraging greater student participation in the learning process. At the institutional level, schools can facilitate the implementation of similar student-centered approaches by providing appropriate instructional resources and opportunities for teachers to develop competence in designing interactive learning activities.

The findings should nevertheless be interpreted within the specific context in which the study was conducted. Further research could examine the effectiveness of Make-a-Match across different educational levels, larger and more diverse student populations, and longer intervention periods. Future studies may also compare this technique with other interactive vocabulary-learning strategies and investigate additional outcomes, such as vocabulary retention, student engagement, motivation, and the ability to use newly acquired vocabulary in communicative contexts. Such investigations would provide a more comprehensive understanding of the pedagogical effectiveness and broader applicability of Make-a-Match in English language learning.

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