

Improving English Vocabulary on Things Around Us Using Matching Pairs Game for The Seventh Grade Students of SMP Negeri 2 Jatinom in 2025

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Abstract: This Classroom Action Research (CAR) aimed to investigate whether the Matching Pairs Game could be used to improve the vocabulary mastery of seventh-grade students at SMP Negeri 2 Jatinom on the topic of "Things around Us." This study employs a mixed-methods approach to data analysis, aligning with the data collection methods used. The research indicator achievement is focused on students' mean scores, the findings consistently revealed a progressive achievement in value attainment as the intervention cycles were implemented. The initial data revealed a low baseline achievement, with the students' mean score (X) being only 51.8. After implementing the first intervention (Cycle 1), the mean score showed a significant rise to 61.8, indicating a positive effect, though still short of the success criteria. The teaching method was then refined, and the implementation in Cycle 2 resulted in a substantial increase, culminating in a final mean score of 80.8. This progressive and marked improvement from 51.8 to 80.8 confirms that the application of the Matching Pairs Game is highly effective. Therefore, the study concludes that the Matching Pairs Game is proven to be an effective strategy to improve the students' vocabulary mastery on the specified material.

Keyword: *Matching Pairs Game, Vocabulary, Educaplay, Things around Us*

A. Introduction

The Indonesian government's Merdeka Curriculum (Kemendikbudristek, 2022), provides a full guide for teaching English in Junior High School (Phase D) (Nugraheny et al., 2023). This comprehensive framework is designed to move beyond the traditional four skills by defining achievements across six elements, including Listening-Speaking (CP 3.1), Reading-Viewing (CP 3.2), and Writing-Presenting (CP 3.3) (Aprillasis & Ayu Saputri, 2022).

Based on modern pedagogical principles and the demands of the Merdeka Curriculum, learning needs to be engaging and focused on the students to help them understand deeply and develop a wide range of skills (Panjaitan et al., 2021). This thorough method means teachers need to create interesting and effective lesson plans to help students learn well. Vocabulary is very important for language skills (Marcelina, 2022)(Komalasari, 2022). Without a good vocabulary, students can't clearly share their ideas, talk in real situations, or reach the learning goals (Brooks et al., 2023). Recent

studies suggest that teaching vocabulary in real-life situations helps students understand and remember words better.

Despite the Merdeka Curriculum's focus on developing a wide range of skills and its push for learning that is flexible and centered around each student's needs, there is still a major issue: students in Phase D, which is Junior High School, often have trouble learning new vocabulary. The main problem in teaching English as a Foreign Language, especially to students in Junior High School, is that they find it hard to learn and remember new words. This makes it difficult for them to become good at using the language and communicate effectively (Mukhtorova, 2024). This makes their overall English skills low, reduces their confidence, and causes them to be less active in class (Ginting, 2021).

This problem is especially serious because vocabulary is the foundation of language ability, and traditional teaching methods often don't help students remember new words effectively. The government is trying to clarify what kind of skills or abilities the education system should be aiming for through strengthening the curriculum concept. In early observations at SMPN 2 Jatinom showed that most students had low vocabulary scores and weren't very motivated to actively take part in English lessons, which greatly limited their ability to meet the learning goals for Phase D.

This local problem reflects a bigger national issue, where many Indonesian children can't understand simple reading or use basic language concepts (Harista et al., 2022). The Merdeka Curriculum aims to fix this through big changes in the education system (Nugraheny et al., 2023). To do this, new ideas and teaching methods are needed, as the Merdeka Curriculum encourages teachers and students to work together to create a more active and effective learning environment (Ndari et al., 2023). To address the ongoing vocabulary gap and low student engagement seen at SMPN 2 Jatinom, this study looks at how the Matching Pairs Game method can help. The study starts with a traditional version where students create their own matching cards. This step is important because it gives students a chance to be creative and think critically as they choose words and images that go together (Widiastuti & Al-Qibtiyah, 2021).

It also makes the learning more personal and relevant. The act of swapping cards and working with classmates builds teamwork and communication skills, helping students take more ownership of their learning and stay actively involved (Sitanggang & Nababan, 2024). The second approach uses a digital tool called Educaplay. This was introduced to tackle a problem from the first method—students making pronunciation mistakes.

The digital version offers a more complete learning experience by using pictures, text, and sounds together (Saritama & Celi, 2024). This helps fix pronunciation and spelling issues that paper-based games often miss. Using the digital game makes students more active in their learning, which fits well with the Merdeka Curriculum's focus on interactive and real-world learning. This combination of traditional and digital game-based methods is backed by research showing they can improve vocabulary learning.

The study aims to find out how both types of strategies can help students learn more words and become more involved in class, making the teaching approach better match the Merdeka Curriculum's goals for a more interactive and well-rounded education.

B. Methods

The study focuses on seventh-grade students from Class 7E, which includes 33 students, at the school. The goal is to examine how the Matching Pairs Game can help improve their English vocabulary related to the topic "Things Around Us." The study will use two different versions of the game: one that is traditional and paper-based, and another that is powered by AI through Educaplay.com.

The study will follow an iterative CAR process, which will take place over one or more cycles, with each session lasting two sessions of 45 minutes each. Data will be collected using a mixed-methods approach (Creswell & Creswell, 2023), which includes: Quantitative data: This will be collected through a Pre-test and a Post-test to measure how well students know the vocabulary before and after the study.

It will also include performance data from both the traditional and AI versions of the Matching Pairs Game, tracking how accurate students are and how quickly they complete the game. The key indicator of success is a steady increase in the average scores of the students across the Pre-Cycle, Cycle 1, and Cycle 2. To calculate student learning outcomes in the test, the researcher using the formula from (Mahendra et al., 2024) below:

$$X = \frac{\sum X}{n}$$

Notes :

X: Mean score

$\sum x$: Sum of scores

n: Number of students

Qualitative data: This will be gathered through observations, which will be recorded using checklists and field notes. Additionally, questionnaires and interviews will be used to understand how engaged the students are with the game and how effective they find it in helping them learn the vocabulary. Since this study is a Classroom Action Research (CAR) with specific success goals like 70% of students reaching the Minimum Mastery Criterion (KKM), it's important to calculate the Classical Completion Percentage. This formula is key for comparing results between Cycle 1 and Cycle 2 with the set success standard. The formula for calculating the Classical Completion Percentage (Alfikri et al., 2025) is as follows:

C. Results and Discussion

Results

This section closely looks at the research results, which look at data in three steps to explain why students' vocabulary skills have improved a lot. The discussion is organized to highlight the importance of materials made by students, how effective the Matching Pairs Game is as a teaching method, and the important role of using digital and audio resources. Initial observations and pre-test results showed that the intervention was needed because students had trouble linking the written words with their correct spoken

sounds, which caused problems with both pronunciation and vocabulary. Without a structured game-based intervention, the students scored very low, mostly in the "Very Poor" to "Poor" range, showing a serious lack of basic vocabulary knowledge and motivation.

Table 1. Student Achievement Test Results in Pre-Cycle

Stage	Intervention/Activity	Mean Score (X̄)	Classification (Student Percentage)	Key Finding
Pre-Cycle	Traditional/Conventional Teaching	Very Low	Majority in 'Very Poor'	Low base knowledge and poor phonetic-written form connection.

In the first cycle, students created their own traditional Matching Pairs Game. This method worked well and helped students who had little vocabulary knowledge and weren't very interested in learning. The classroom became more lively and students were more involved, which encouraged creativity, thinking skills, and made learning more personal. This matched the goals of the Merdeka Curriculum, which focuses on student-centered learning. When it came to numbers, there was a big improvement.

The average score went up to 61.8, which meant most students (84.8%) reached the "Fair" level. However, one problem was that the activity didn't focus much on speaking skills. Some students were still shy about pronouncing words. This made us rethink the next steps and plan to include audio support to help with speaking.

Table 2. Student Achievement Test Results in Cycle 1

Stage	Intervention/Activity	Mean Score (X̄)	Classification (Student Percentage)	Key Improvement & Limitation
Cycle 1	Traditional, Student-Made Matching Game	61.8	84.8% in 'Fair'	Improvement: Increased recognition, spelling, and motivation. Limitation: Pronunciation errors persisted.

The improvement in Cycle 2, which involved using the AI-powered Matching Pairs Game on the Educaplay platform, turned out to be the right solution. The game used both pictures and sounds, helping students fix their pronunciation and phonetic mistakes that

were found earlier. This change led to big improvements, with the class average score reaching 80.8.

More than 72.7% of the students got a "Very Good" grade. The game's competitive nature, quick feedback, and use of digital tools helped students build digital skills and learn more on their own. These features match well with the *Capaian Pembelajaran (CP)* for Phase D and the overall goals of *Kurikulum Merdeka*. The success in this digital cycle shows that interactive, game-based tools are a strong way to boost student interest and learning outcomes, as research in English Language Teaching supports.

Table 3. Student Achievement Test Results in Cycle 2

Stage	Intervention/Activity	Mean Score (X̄)	Classification (Student Percentage)	Key Success & Alignment
Cycle 2	AI-Enhanced (Educaplay Audio) Game with	80.8	72.7% in 'Very Good'	Success: Solved pronunciation deficit; achieved final mastery. Alignment: Supported digital literacy and <i>Kurikulum Merdeka</i> goals.

Discussion

The initial implementation of the student-made Matching Pairs Game in Cycle 1, it worked well to solve the main problems of low vocabulary knowledge and low interest. The average score of the class went up a lot from the pre-test to 61.8, and 84.8% of students moved into the "Fair" category. Teachers noticed that the classroom became more lively and students were more active. This hands-on, student-led method helped students connect better with the learning material, which matches research showing that playing games together helps students remember more. However, one problem was that the game was on paper and didn't help much with pronunciation. This showed that a game that uses more senses would be better in the next cycle.

In Cycle 2, using the AI-enhanced Matching Pairs Game on Educaplay helped fix pronunciation issues. The class average score went up to 80.8, and 72.7% of students reached the "Very Good" level. This big improvement was because Educaplay used both pictures and sounds, helping students connect written words with their correct spoken forms. The game also had a competitive part and gave quick feedback, which made students more motivated.

These results match studies showing that using games on digital platforms can greatly improve learning and student involvement. The big improvement in Cycle 2, where students used the Educaplay platform, compared to the paper-based Matching Game in Cycle 1, mainly comes from the multisensory features and game-like elements of Educaplay. While the paper game helped students work together and stay involved, it was

only two-dimensional and couldn't fully fix the pronunciation and spelling problems. Educaplay, on the other hand, offered three types of learning input—visual, text, and sound—which directly helped correct those mistakes.

Also, Educaplay had game features like instant feedback, points, and competition, which made students more interested and motivated. This turned a boring vocabulary lesson into an exciting activity. This matches what modern learning theory says—using different senses and quick rewards makes learning better and helps students remember more and complete tasks faster. Both cycles fit well with the Indonesian government's Kurikulum Merdeka and the Capaian Pembelajaran (CP) for Phase D, which encourages a learning environment that is student-centered, interactive, and uses technology. The Matching Pairs Game, whether students created it themselves or used the digital version, helped build creativity, thinking skills, and teamwork.

This supports the CP's goal of developing 21st-century skills in all four language areas: Listening-Speaking, Reading-Viewing, and Writing-Presenting. The study shows that combining real-life learning with smart use of digital tools can greatly improve vocabulary and student interest, moving learning from just listening to actively building knowledge. The students' performance improved over time, and this improvement shows that the intervention worked well. At first, the students had a big problem with vocabulary, and their average score was 51.8, which was much lower than expected. In the first part of the study, we used a Matching Pairs Game made by the students, and their average score went up to 61.8.

That was a good start, but not enough. Later, in the second part, we used a better version of the Matching Pairs Game based on Educaplay, and their average score increased even more to 80.8. This final score is a big improvement 29 points higher than the starting score. It also meets and goes beyond the minimum score needed to show mastery of the material. This proves that using the Matching Pairs Game, especially the digital version, helped the students reach a strong understanding of the learning goals.

D. Conclusions

In conclusion, the ascending trend observed across the three phases from a mean score of 51.8 in the Pre-Cycle to 61.8 in Cycle 1, and culminating in 80.8 in Cycle 2 provides empirical evidence supporting the effectiveness of the intervention. Therefore, the research hypothesis is strongly accepted. The matching pairs game is proven to be an effective and viable method for improving the students' vocabulary on Things around Us for seventh-grade students of SMP Negeri 2 Jatinom in 2025.

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