

The Effectiveness of Game Based Learning “Board Race Game” to Fostering Vocabulary Mastery

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Abstract

Vocabulary is a basic component of language. Before learning English, students need to understand some components of the language, such as vocabulary. However, there are many students who have low vocabulary mastery with almost the same factors for each student. Therefore, the researcher conducted a study using the game method in a language teaching as an effort to increase students' ability in vocabulary mastery. In this study the researcher used grade 10 MA Muhammadiyah Banyutengah students as many as 21 students. In collecting data, the researcher conducted 5 meetings in the study, 1 pre-test, 3 treatments, and 1 post-test. It can be seen from the pre-test score is 43.62 and the posttest is 73.86 where the difference between the two tests is 30.44. After implementing the treatment, the researcher can solve the problem in improving students' vocabulary mastery. From this research it can be concluded that the use of the board racing game method is very effective in improving students' ability to master English vocabulary in class X MA Muhammadiyah 02 Banyutengah.

Keywords: Game Based Learning; Board Race Game; Vocabulary Mastery;

1. Introduction

In this chapter, the researcher discusses several points regarding the background of the study, statement of problem, purpose of the study, hypothesis, significance of the study, scope and limitations, and definition of key terms.

1.1 Background Study

Vocabulary is one of the fundamental parts of language. Parts of language that students must master before learning English is vocabulary. Vocabulary is often considered as an indicator of students' success in learning English. One of the most important aspects of language teaching is developing students' vocabulary, this requires them to continue learning new words even after they have mastered the structure and sound system (Syamsinar et al., n.d.). Effective communication and academic performance rely heavily on language skills and vocabulary knowledge. Building a broad and diverse vocabulary is essential to foster critical thinking and cognitive ability, in addition to aiding comprehension and production of spoken and written language. Across the field of language education, a variety of pedagogical approaches from creative and interactive methods to conventional memorisation techniques have been used to improve vocabulary acquisition. Therefore, vocabulary is needed in language learning in all skills, both in listening, speaking, reading, and writing.

There are many students who have low vocabulary mastery with almost the same factors for each student. According to (Ningrum, 2015), a few factors contributed to students' struggles with vocabulary learning: the written and spoken forms of English differ, the sheer volume of words students must learn, the scarcity of word-related information sources, the complexity of word knowledge. Memorizing a word list is not the sole step in expanding one's vocabulary. But the difficult procedure requires the capacity to be familiar with the terms, remember them when needed, spell them correctly, and utilize them appropriately (Pratiwi & Nur, 2019). Understanding a term requires more than just knowing the dictionary meaning, but learning the meaning and finding out the differences and similarities of words in English both in writing. However, there are still many reasons and factors that influence why students do not understand the grammar of the word, namely the difference between oral and written, for example the word "soon" is read "soon/suun" some students if they only learn using oral then students in Indonesia will write it using the word "sun". This is because it is certainly difficult for students in remember and mastering English vocabulary. Thus, it is still a major factor in learning English.

According to (Nurdina, 2021) Interactive or visually appealing learning tactics are necessary to help pupils retain the material and correctly place it in their sentences. A fun learning method is certainly able to be a solution to the problem of vocabulary mastery faced by students. Thus, students be able to more comfortable and enjoy the learning atmosphere that can affect student understanding. Developing language abilities through game-based learning is an enjoyable and

captivating method of acquiring vocabulary. Games can generate a good learning environment where students feel mostly positive emotions, which may in turn boost their vocabulary memory. There are many methods and media that can be used in learning vocabulary acquisition. according to (Rahmasari, 2021) The use of the bingo game and related activities was effective in assisting the pupils in quickly learning and comprehending new vocabulary. Scrabble online has the potential to improve students' memory skills through strategies such as increasing memory capacity (Tanjung & Fithriani, 2023). There are also many other online media that can have a good effect on vocabulary mastery. However, in this study, researchers experienced difficulties in using online media as a school learning medium to be researched. This is due to limited technological facilities in schools, so researchers cannot implement vocabulary mastery using the latest online media. Therefore, researchers chose the board race game as a learning method by utilizing supporting facilities, namely the classroom board.

One of the kinesthetic games that helps learning and can be used in teaching and learning activities is the board race game (Pratiwi & Nur, 2019). The use of games in learning will certainly make the classroom atmosphere more interesting and comfortable for students. Board racing games may be a pleasant technique to address pupils' low motivation and vocabulary deficiencies while also piquing their interest in learning English (Pratiwi & Nur, 2019). The use of board race games, students will enjoy and reduce fear in learning languages, students will feel more enjoy the lesson. Board race game is a popular and engaging strategy for vocabulary learning, there is a lack of comprehensive research assessing its effectiveness in enhancing vocabulary mastery. The existing literature provides limited empirical evidence on the impact of the board race game on long-term retention and application of learned vocabulary. Additionally, the influence of individual learner characteristics, such as learning style and prior knowledge, on the effectiveness of the board race game remains underexplored. The use of board race games was chosen as a learning method because board race games are very easy to apply in the school to be studied. Therefore, in this study, the researcher used board race game as the game to be investigated regarding its effectiveness in vocabulary acquisition.

The researcher made initial observations at schools in the Panceng area, Gresik. The researcher chose MA Muhammadiyah 02 Banyutengah as a research site because the school is the only Muhammadiyah high school in Panceng that has been accredited "A" and has appropriate criteria for research. Based on the initial observation conducted by the researcher at MA Muhammadiyah 02 Banyutengah, one of the factors influencing why English lessons are considered difficult to learn is due to the lack of vocabulary mastery possessed by students. This can happen because students feel that the method used to increase students' vocabulary is too monotonous, such as only memorising 10-20 words then depositing the results of memorising the vocabulary to the teacher. the method is still used today, with a method that is said to increase students' knowledge, but many students feel bored and less interested in the method.

In previous studies, some researchers focused more on improving students' vocabulary acquisition by using board racing games in junior high school (SMP/MTS) or in university by testing the level of pronunciation, memorisation, word comprehension and spelling. The previous researchers suggested that further research on board racing games for vocabulary learning be conducted in the future. However, it may be difficult for researchers to determine which vocabulary strategies were applied in the board racing game test because most researchers in previous studies did not clearly state how the vocabulary test was conducted. Therefore, in this study, the researcher wants to test the effectiveness of a game-based learning method with different student characters from previous studies in vocabulary acquisition about verbs to be used in present perfect sentences, using board racing games in senior high schools as well as testing the understanding of word context, writing, and sentence making. In this study, the researcher will also list in detail what are the techniques used in this study more specifically. This research focuses on the use of board racing games as an alternative medium in teaching vocabulary, its effectiveness in improving students' vocabulary acquisition, and its potential in developing problem-solving and teamwork skills.

1.2 Statement of Problem

This study aims to address these gaps in the literature by investigating the effectiveness of the board race game as a tool for vocabulary acquisition and its potential variations based on learner characteristics. Furthermore, the problem formulated in this study is stated below:

1. "Is there any significant effect on students' vocabulary mastery by using game-based learning method with board race games?"

1.3 Purpose of the Study

Based on the problem in this research, the purpose of this research is to find out the effectiveness of learning vocabulary using game-based learning method with board race game.

1.4 Hypothesis

The hypothesis to answer the research question is as follows: null hypothesis (H0) and alternative hypothesis (Ha) if the null hypothesis is rejected then the alternative hypothesis will be accepted.

H0: There is no significant effect on students' vocabulary mastery taught with game-based learning (board race game) at MA Muhammadiyah 02 Banyutengah.

Ha: There is a significant effect on the vocabulary mastery of students taught with game-based learning (board race

game) at MA Muhammadiyah 02 Banyutengah.

1.5 Significance of the Study

In a study, the researcher is required to provide a written statement explaining why the research is needed. In this study, the researcher obtains results through two significance, namely theoretical significance and practical significance.

1. Practical significance

The researcher hopes that this research will provide benefits to the world of education, including:

- For teacher

This research is useful to be a solution in the use of appropriate, interesting, and interactive learning methods so that it can create a very pleasant and comfortable classroom situation for students. This research also can certainly improve the quality of teachers in teaching vocabulary by using game-based learning.

- For student

This research may be useful for students as a method of learning while playing so that the classroom atmosphere becomes not boring, it can be done in learning vocabulary.

- For reader

The researcher expects that this study can attract readers' interest in studying the effectiveness of game-based learning as a method of learning vocabulary mastery.

- For researcher

This research is also useful for further researchers as a reference in further research, that the board race game is very effective in learning English.

1.6 Scope and Limitation

In order to make this study more specific, the researcher determine the scope and limitation which focus on tenth grade students in vocabulary mastery in senior high school in Muhammadiyah 02 Banyutengah. the reseacher only focus on identifying the significant effect of board race game implemented by tenth grade students in students' ability to write a vocabulary

Because the purpose of this study to identify the significant effect of board race game implemented by tenth grade students in vocabulary mastery in senior high school. Here, the reseacher will limit the material about present perfect tense for tenth grade that focus on mastering vocabulary into a sentence combined in present perfect tense material according to school learning. For analyzing th result of the test, the reseacher used SPSS to analyze the data. In this study, researchers only focused on the effectiveness of game-based learning methods in the form of board race games at the senior high school level.

The objective of this study is more focused, the researcher establishes the parameters and scope with an emphasis on tenth-grade students at Muhammadiyah 02 Banyutengah who are proficient in language. The researcher only concentrates on determining the significant impacts of board racing games utilized by pupils in the tenth grade when they create present perfect tense s using a word as a phrase. The objective of this study is to determine how much playing a board racing game significantly affects students' tenth-grade vocabulary learning in senior high school. In this instance, the researcher will restrict the content to grade 10 present perfect tense, which concentrate on using vocabulary to compose sentences that will be put together to create a present perfect tense. The researcher utilized SPSS to analyze the data to interpret the experiment's findings. The usefulness of game-based learning, namely board racing games, at the senior high school level is the only emphasis of this study.

1.7 Definition of Key Term

A board race game is a game that uses a board as its medium, in the context of game-based learning refers to an educational activity or game format in which participants, who are learners in an instructional environment, engage in a competitive or collaborative race to complete tasks, answer questions, or solve problems presented on a whiteboard or visual display. These games typically involve active participation, quick thinking, and often incorporate elements of teamwork or individual competition. in this study students conducted a race in collecting as much vocabulary as they knew and writing it on the board.

Vocabulary is a term in words that must be understood in learning a language. Vocabulary is needed in any skill, whether in listening, reading, writing, and speaking. According to (Irani, 2016), vocabulary is essentially the understanding of word meanings. Vocabulary mastery refers to the thorough and expert comprehension, memory, and application of a group of words or concepts in a certain language or academic subject. In research on game-based learning, this entails evaluating how well participants internalize and memorize the intended vocabulary, which may be learned through the interactive and captivating elements of the game-based learning methodology. The researcher uses verb vocabulary in this study with verb types (regular and irregular verb). Verbs are words and are one of the elements of part of speech, which indicate actions, events, states, and attitudes. Verb is one of the important elements of various languages including English, so this element gets a special place and more treatment in every grammar.

2. Method

In this chapter, the researcher provides an overview of the research methods used to conduct the research. This chapter consists of research design, population and sample, research instruments and data collection procedures.

2.1 Research Design

The quantitative technique was used in this study. According to (John W. Creswell, 2012), experimenters examine theories, methods, and procedures to see how they affect results. This is consistent with the issues that the researchers want to look into, namely how the application of board racing games as a therapy would affect students' vocabulary knowledge in the study.

Pre-experimental design research is the experimental research methodology that will be applying. Pre-experimental design research is experimental work when there isn't a control group and, in theory, only one group is used (Yusuf, 2017: 78). Using a one-group pretest-posttest design, researchers employed a pre-experimental design. The pretest was administered prior to therapy, and the posttest following therapy. After that, the data were examined to see how board racing games affected the students' ability to acquire vocabulary in English classes in MA 02 Banyutengah Muhammadiyah.

There are two variables in this study. The first is board race game and the second is vocabulary mastery. The dependent variable is vocabulary acquisition and the independent variable is board race game.

Table 2.1 Design of Pre-experimental can be describe as follow:

Group	Pre-test	Treatment	Post-test
Experiment	X1	Y	X2

Where the description is:

X1 : pre-test (before using board race game)

Y : with treatment (using board race game)

X2 : Post-test (after using board race game)

In the above design, the quality of the subject is checked first by conducting a pre-test. Then students were given treatment using the board race game. After getting the treatment, students were given a post-test. Then the results were calculated statistically.

2.2 Population and Sample

2.2.1 Population

In this study, the researcher selected grade 10 students at MA Muhammadiyah 02 Banyutengah. The reason why the researcher chose this school is because, the researcher felt that students at the school had a lack of interest and difficulty in learning English due to their lack of vocabulary mastery. The researcher felt the need to find new strategies for learning English.

2.2.2 Sample

In this study, researchers used several considerations in taking samples at the research site, so here researchers used the "purposive sampling" technique. Researchers took class 10 "A" as a sample, with a total of 21 students. Therefore, researchers used pre-experimental research with one group.

2.3 Data Collection

In this study, researchers collected data from the vocabulary mastery test by conducting a test before treatment to the experimental group. The first data is the pre-test given to MA Muhammadiyah 02 Banyutengah students. This was done to determine the ability of students before receiving treatment. The next step is for researchers to provide treatment to students. After receiving treatment, researchers gave a post-test to determine the effect of the board race game on vocabulary mastery skills. Then the researcher collected data from students' pre-test and post-test scores and began to analyse the data with the SPSS program.

Table 2.3 Procedure of Collecting Data

No	Activities	Meeting Duration	Date & Time of Implementation	Activities Description
1.	Pre-test	90 minutes	19 may 2024	• Pre-test

2.	Treatment	90 minutes	26 may 2024	<ul style="list-style-type: none"> • Introduction to the learning method used in the study (board race game) • the researcher gave 10 vocabularies as the beginning of treatment • the researcher asked students to try using the board race game
3.	Treatment (Implementation of board race game)	90 minutes	02 june 2024	<ul style="list-style-type: none"> • Students are given examples of 20 vocabulary about regular verbs. • Students are given an explanation • explanation about the verb given. • Students understand the vocabulary that has been given. • Students are divided into 3 groups for preparation. • Students start the board race game. • Each group corrects the vocabulary from the board race game.
4.	Treatment (Implementation of board race game)	90 minutes	09 june 2024	<ul style="list-style-type: none"> • Students are given examples of 20 vocabulary about irregular verbs. • Students are given an explanation • explanation about the given verb. • Students understand the vocabulary that has been given. • Students are divided into 3 groups for preparation. • Students start the board race game. • Each group corrects the vocabulary from the board race game. Students make vocabulary into correct sentences.
5.	Post-test	90 minutes	16 june 2024	Post-test

2.3.1 Research Instrument

To achieve the research objectives, the researcher determines the appropriate test preparation such as, the type of test and the test setting. In this study, the authors used tests as instruments to collect data. In this study, researchers used two tests in this study. the test is pre-test and post-test. The pre-test and post-test will be conducted to high school students. This is to find out whether they have progressed in their vocabulary acquisition skills or not. The researcher designed a pre-test that is the same as the post-test. In preparing the test, the researcher used material about verb present perfect that would be used for the vocabulary mastery test. The researcher used vocabulary knowledge scale (VKS) as an instrument.

2.3.2 Test

In a study, a research instrument is a tool used by researchers to collect data. Therefore, the instrument is needed to determine the quality of the research. In this study, researchers used vocabulary tests. The tests conducted were pre-

test and post-test. The purpose of the vocabulary test was to determine the students' vocabulary level, where the number of questions tested was 20 questions. This test consists of verbs in the form of multiple choice and sorting pictures into words, multiple choice consists of 15 questions, and 5 questions to interpret words. The time needed to do this test is 20 minutes.

A. Pre-test

Data will be collected through an initial test in one class to determine the difference in the ability of students taught with traditional methods and board race game techniques. The pre-test is conducted to determine the ability of students before being given treatment using the board race game.

B. Post-test

The post-test was conducted after the treatment. The post-test was used to measure students' ability to master vocabulary after treatment using the board race game.

2.3.3 Validity

Validity is a test of the suitability between the question and the main target to be measured. Validity is generally understood as an accurate and precise measure of an instrument performing its measurement objectives. This implies that validity can reveal how well a scale can report the information collected completely and precisely about the characteristics to be measured. In this study, before conducting pre-tests and post-tests as research instruments, the questions to be given must be tested for validity first. Content validity is measured in relation to instruments in the independent curriculum. To test the validity of the content the researcher must compare the contents of the instrument with the subject matter in the curriculum and syllabus of the Senior High School. If the content of the test is in accordance with the curriculum guide, syllabus, and textbook, it means that the test has content validity and the test items can be given to students.

In determining the validity test, researchers used the Bivariate Correlate formula using SPSS for Windows version 20. The r_{table} value with $N = 20$ and a significance level of 0,05 is 0.444. Questionnaire items are declared valid if R_{count} is more than R_{table} or $R_{count} > 0.444$. The results of the calculation of the validity test of the questionnaire can be seen in the following table:

Table 2.3.3 Validity test result

Question	R_{count}	R_{table}	
1.	0,549	0,444	Valid
2.	0,389	0,444	Invalid
3.	0,659	0,444	Valid
4.	0,530	0,444	Valid
5.	0,673	0,444	Valid
6.	0,176	0,444	Invalid
7.	0,317	0,444	Invalid
8.	0,740	0,444	Valid
9.	0,619	0,444	Valid
10.	0,667	0,444	Valid
11.	0,541	0,444	Valid
12.	0,228	0,444	Invalid
13.	0,519	0,444	Valid
14.	-0,14	0,444	Invalid
15.	0,250	0,444	Invalid
16.	0,121	0,444	Invalid
17.	0,697	0,444	Valid
18.	0,713	0,444	Valid
19.	0,747	0,444	Valid
20.	0,527	0,444	Valid
21.	0,447	0,444	Valid
22.	0,590	0,444	Valid
23.	0,577	0,444	Valid
24.	0,055	0,444	Invalid
25.	0,562	0,444	Valid

Based on the criteria mentioned, if r_{count} is higher than 0.444, it is considered valid. From the table it is very clear that there are 17 items that are greater than 0.444, so the 17 test items are considered valid. Finally, it can be concluded

that out of 25 items there are exactly half of the number of valid items. So, there are 17 valid questions used in this study.

2.3.4 Reliability

Reliability is when the rubric is reliable in measurement (Brown, 2001: 386). reliability test is a data testing stage carried out if the data has undergone a validity test process. The reliability test in this study uses the Cronbach alpha formula. An instrument data is said to be reliable if the data meets the criteria.

Table 2.3.4.1 Guilford's decision criteria

Nilai	Kriteria
$r < 0,20$	Very low
$0,20 \geq r < 0,40$	Low
$0,40 \geq r < 0,70$	Medium
$0,70 \geq r < 0,90$	High
$0,90 \geq r < 1,00$	Very high

Table 2.3.4.2 Reliability test result

Reliability Statistics	
Cronbach's Alpha	N of Items
0,916	17

Alpha value of 0,916 is known. Based on the output table above, it is known that the correlation value is $0,90 \geq 0,916 < 1,00$, so it can be concluded that the items of the competency variable as a whole are declared reliable or trusted as a data collection tool in research.

2.3.5 Procedure of Collecting Data

In collecting data, the researcher conducted several procedures. The first step that must be prepared by the researcher is to prepare the test instrument, the researcher identifies topics from the curriculum and syllabus to make pre-test and post-test items. The second step is to give a pre-test to the class to be tested, before applying the board race game as a media, then get the test scores. The third step is to give treatment as many as 2 times using the board race game media. in this study, researchers conducted 2 meetings to apply the board race game media in the ability to master vocabulary at MA Muhammadiyah 02 Banyutengah. the next step in this study, researchers gave a post-test after treatment, then took the results of the test scores that had been carried out. Then, the last step is to analyse the pre-test and post-test data using the SPSS 20 program.

2.4 Data Analysis

The next stage of research, after collecting data, researchers will analyse the data. Analysing data is very important in the research because it is to answer research problems with data taken from pre-test and post-test. Researchers analysed the data using the t-test from the SPSS program specifically by using the paired sample t-test. In addition, the t-test for paired sample is conducted to determine whether there is a significant difference between before and after using the board race game.

According to (Singgih Santoso, 2014: 265), the decision-making guidelines in the paired sample t-test are based on the significance value (Sig.) If the Sig value. (2-tailed) < 0.05 , then H_0 is rejected and H_a is accepted. Conversely, if the Sig value. (2-tailed) > 0.05 , then H_0 is accepted and H_a is rejected.

The researcher used SPSS version 20 to calculate the statistics of students' vocabulary mastery. This study was conducted to determine the effect of treatment whether significant or not from the technique of using board race game media.

2.4.1 Normality Distribution Test

To analyse the normality distribution, this study used Kolmogorov Smirnov Sample on SPSS version 20. This aims to determine the distribution of pretest scores whether normally distributed or not. In this case, the results of the distribution normality test are also used to determine the distribution of normality in the study. on the pretest score is normal or not. The first step in calculating the normality distribution test states the hypothesis:

H_0 : pretest and post-test scores are normally distributed.

H_a : pre-test and post-test scores are not normally distributed.

The second step in calculating the normality distribution test is to compare the Sig. value with the significance level for hypothesis testing. If the Sig. value is more than the significance level (0.05) then the null hypothesis is accepted,

the scores are normally distributed. Conversely, if the Sig. value is less than the significance level (0.05) then the null hypothesis is rejected, the scores are not normally distributed. The analysis procedure is to press the menu, click Analyze, click nonparametrictest, click legacy dialogs, click 1-sample K-S, and move all score variables to the test variable list box, in the distribution test box, the normal option is active then Continue.

2.4.2 Homogeneity Test of Variance

The homogeneity of variance test is used to determine whether two groups are in the same position. For the homogeneity test, researchers used the analysis of variance (anova) test. homogeneity test was carried out on the scores of the results of the pre-test and post-test. If the significance value > 0.05 then it can be concluded that the resulting data is the same or homogeneous, while if the significance < 0.05 then the resulting data is not the same or not homogeneous. The first step in calculating the homogeneity test states the hypothesis:

Ho: the variance of pre-test and post-test scores is the same.

Ha: the variance of pre-test and post-test scores is not equal.

According to (Yulius, 2010), the procedure in analysing homogeneity using SPSS version 20 is as follows: First, enter the pre-test and post-test data, then enter the type coding in the test using code 1 for the pre-test and code 2 for the post-test. The second step, click the analysis menu, click compare means, click one-way anova. Step three, enter the student score variable in the dependent list box. The fourth step, enter the test type variable in the factor box, the fifth step, click options, then activate the descriptive and homogeneity of variance test options, click continue. The last step is to click the options menu, then activate the homogeneity of variance test, and click OK.

2.4.3 Hypothesis Testing

In conducting hypothesis testing, researchers used the two paired samples test. For two-sided data test (two tailed or two side) in SPSS 20 programme. This hypothesis test uses a comparison of two different variables, between students' vocabulary mastery ability before using the board race game and students' ability to master vocabulary after using the board race game. The first step in calculating the hypothesis test is to first state the formulation of the hypothesis:

Ho: there is no effect of using board race game on vocabulary mastery.

Ha: there is an effect of using board race game on vocabulary mastery.

The steps taken in conducting the paired sample t-test based on what is formulated by (Yulius, 2010) are: First, enter the pre-test and post-test score data in SPSS. Second, click the analyse menu, click compare means, click paired-sample t-test. Third, enter the pre-test score variable in the variable box, then enter the post-test score in the variable 2 box, and finally click OK.

3. Findings and Discussion

In this chapter, the researchers discuss about the result of the research. The discussion of this chapter elaborates data description, data analysis, test of the hypothesis, and data discussion.

3.1 Research Finding

In this chapter, researchers discuss the questions in the problem formulation. In this study, researchers collected data using pre-test and post-test. The most important step is to start with the pre-test. In the pre-test and post-test using (Vocabulary Knowledge Scale VKS) taking from the article (Arifani, 2015) which was then modified by the researcher. The questions listed on the pretest and post-test questions are 7 columns, the first column contains vocabulary verb1, the second column contains questions whether students have encountered the vocabulary provided in the first column, the third contains questions whether students often use the vocabulary and know its meaning, In the fourth column, students were asked to write the meaning of the vocabulary provided, in the fifth column students were asked to change the vocabulary provided (verb1) into verb2, while in the sixth column students were asked to change the vocabulary provided into verb3, and in the last column students were asked to make simple present perfect sentences using the vocabulary provided. The pre-test was conducted on Sunday, 19 May 20214. This pre-test was conducted to determine the extent of vocabulary understanding before using the board race game method. after conducting the pre-test, the researcher conducted the next stage, namely treatment.

In the first meeting, of the treatment, the researcher introduced the 'board race game' which will be used as a method in this study. the first treatment was conducted on Sunday, 26 May. At the beginning of the lesson, the researcher prepared about 10 examples of vocabulary about irregular and regular verbs that would be discussed with the students. After that, the researcher invited students to learn the vocabulary that had been given. Most of the students in the class still did not know the vocabulary provided, only about 25% of the students already knew the vocabulary. After learning the vocabulary, the researcher explained how to play the 'board racing game' to the students (as described on page 11). Students were asked to form 3 groups randomly, namely group A, group B, and group C. Then each group gathered and lined up in front of the blackboard that had been aligned into three parts. Then the researcher gave markers to each group with different colours. The researcher asked the students to do a board racing game experiment, where each group alternately wrote down

1 vocabulary in verb1 form that they remembered. In this lesson, students only wrote and pronounced the vocabulary they remembered in the board racing game.

From the results of the game in the first meeting, group 'A' managed to collect 10 vocabulary words correctly. In group 'A': Student1 was able to write 4 correct vocabularies and 1 was still incorrect in spelling, Student2 was able to write 3 correct vocabularies and 2 incorrect vocabularies, Student3 was able to write 4 vocabularies but only 1 correct vocabulary, Student4 was able to write 2 correct vocabularies and 2 incorrect vocabularies, Student5 was able to write 2 correct vocabularies, Student6 was able to write 4 vocabularies but 1 vocabulary written was still incorrect, Student7 was able to write 4 correct vocabularies. Furthermore, group 'B' managed to collect 11 correct vocabularies. Group 'B': Student8 managed to write 1 correct vocabulary and 3 inappropriate vocabularies, student9 was able to write 2 correct vocabularies and 2 inappropriate vocabularies, student10 was able to write 2 correct vocabularies and 2 inappropriate vocabularies, student11 was able to write 4 vocabularies that were still inappropriate, student12 was able to write 3 correct vocabularies and 2 inappropriate vocabularies, student13 was able to write 1 correct vocabulary and 3 inappropriate vocabularies, and student14 was able to write 2 correct vocabularies and 2 inappropriate vocabularies. The last group, group 'C' was able to collect 10 correct vocabularies, Student15 was able to write 2 correct vocabularies and 2 incorrect vocabularies, student16 was able to write 4 vocabularies but all of them were still incorrect, student17 was able to write 2 correct vocabularies and 3 incorrect vocabularies, student18 was able to write 1 correct vocabulary and 3 incorrect vocabularies, student19 was able to write 1 correct vocabullary and 4 incorrect vocabularies, student20 and student21 were able to write 2 correct vocabularies.

In the second meeting, the researcher prepared 20 new vocabulary words about regular verbs to learn. This meeting had the same process as the first treatment meeting. This second treatment meeting was conducted on Sunday, 02 June 2024. In the second meeting, students were more ready to play the board race game. The researcher invited students to learn about regular verbs after playing the board race game. Learning from the game conducted in the first meeting, in the second treatment students were more prepared and found out new vocabulary, including student1, student9, and student20 were able to add as many 2 new vocabularies, student4, student6, student8, student10, student18, and student21 each added 1 new vocabulary. In the board race game, students have started to add new vocabulary that they get themselves. students are asked to write verb 1 in the board race game, where students change the vocabulary that has been written on the board from V1 to V3 and learn its use.

From the results of the game in the second meeting, group 'A' managed to collect 19 vocabulary words correctly. In group 'A': Student1 was able to write 4 correct vocabularies and 1 was still incorrect in spelling, Student2 was able to write 3 correct vocabularies and 2 incorrect vocabularies, Student3 was able to write 4 vocabularies but only 1 correct vocabulary, Student4 was able to write 2 correct vocabularies and 2 incorrect vocabularies, Student5 was able to write 2 correct vocabularies, Student6 was able to write 4 vocabularies but 1 vocabulary written was still incorrect, Student7 was able to write 4 correct vocabularies. Furthermore, group 'B' managed to collect 21 correct vocabularies. Group 'B': Student8 was able to write 3 correct vocabularies and 2 inappropriate vocabularies, student9 was able to write 4 correct vocabularies and 1 inappropriate vocabulary, student10 was able to write 4 correct vocabularies and 1 inappropriate vocabulary, student11 was able to write 5 vocabularies but 3 vocabularies were still inappropriate, student12 was able to write 3 correct vocabularies and 2 vocabularies that were less precise, student13 was able to write 2 correct vocabularies and 2 vocabularies that were less precise, and student14 was able to write 3 correct vocabularies and 1 vocabulary that was less precise. The last group 'C' was able to collect 18 correct vocabularies. Student15 was able to write 3 correct vocabularies and 1 incorrect vocabulary, student16 was able to write 4 vocabularies but only 1 was correct, student17 was able to write 2 correct vocabulary and 3 incorrect vocabularies, student18 was able to write 1 correct vocabulary and 4 incorrect vocabularies, student19 was able to write 3 correct vocabullaries and 2 incorrect vocabularies, student20 and student21 were able to write 4 correct vocabularies.

In the third treatment meeting which was held on Sunday, 9 June 2024, researchers focused more on making present perfect sentences. Students were given as many as 20 new vocabularies about irregular verbs. In this last treatment meeting, students were more ready and able to pronounce new vocabulary from their own students, there were 15 vocabularies added, including student1, student5, student10, student12, student20 added 2 new vocabularies each. Meanwhile, 5 students added 1 new vocabulary each, namely student4, student8, student16, student18 and student21. The implementation was also the same as the first and second treatments. At this meeting, the researcher asked the students to only use verb3 in the board race game. After playing the board race game, students were asked to correct the results of the board race game. the results of the corrected vocabulary, students were asked to make correct sentences in the present perfect tense.

From the results of the game in the second meeting, group 'A' managed to collect 22 vocabulary words correctly. In group 'A': student1 was able to write 6 vocabularies, 4 correct vocabularies and 2 were still incorrect in spelling, student2 was able to write 4 correct vocabularies and 1 incorrect vocabulary, student3 was able to write 5 vocabularies, 3 were correct but there were 2 incorrect vocabularies, student4 was able to write 2 correct vocabularies and 3 vocabularies that were less precise, student5 was able to write 4 correct vocabularies, student6 was able to write 3 vocabularies but 2 vocabularies written were still less precise, student7 was able to write 2 correct vocabularies and 3 vocabularies that were less precise. Furthermore, group 'B' managed to collect 25 correct vocabularies. Group 'B': Student8 was able to write 4 correct vocabularies and 1 vocabulary that was not correct, student9 was able to write all 4 correct vocabularies, student10

was able to write 4 correct vocabularies and 1 vocabulary that was not correct, student11 was able to write 3 vocabularies but 2 vocabularies were still not correct, student12 was able to write 4 correct vocabularies and 2 vocabularies that were not correct, student13 was able to write 3 correct vocabularies and 1 vocabulary that was not correct, and student14 was able to write 3 correct vocabularies and 2 vocabularies that were not correct. and the last group ‘C’ was able to collect 20 correct vocabularies: Student15 was able to write 4 correct vocabularies and 2 incorrect vocabularies, student16 was able to write 2 vocabularies but only 3 were correct, student17 was able to write 2 correct vocabularies and 3 incorrect vocabularies, student18 was able to write 2 correct vocabularies and 3 incorrect vocabularies, student19 was able to write 4 correct vocabularies and 1 incorrect vocabulary, student20 wrote 3 correct vocabularies and 2 incorrect vocabularies. and student21 was able to write 2 correct vocabularies and write 3 incorrect vocabularies.

After the researcher conducted the treatment, the researcher conducted a post-test on the students accompanied by the researcher. the implementation of the post-test was carried out by the researcher as a measure of the success of using the board race game during the treatment. From the results of the post-test, it can be seen that the use of the board race gam can be said to be effective or not. After conducting the post-test, researchers obtained data from students. Therefore, researchers used IBM SPSS version 20 to determine data analysis, normality, homogeneity, hypothesis testing.

In this study, the researcher found that the ability of students with learning methods using board race games. Students can memorise and understand more new vocabularies. Therefore, this vocabulary mastery learning can be successful and run well.

3.2 Data Analisis

The researcher analysed the value of the results of the pre-test and post-test using paired samplet-test spss for windows version 20:

Table 3.2 Result of Data Analysis

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pretest – posttest	-30.238	5.621	1.227	-32.797	-27.680	-24.654	20	.000

It is known that the value of Sig. (2-tailed) value in the table above is 0.000 <0.05. Then H0 is rejected and Ha is accepted, so it can be concluded that there is a difference between the Pre-test and Post-test learning outcomes. This means that there is an effect of using the board race game method in improving vocabulary mastery in MA Muhammadiyah 02 Banyutengah students.

3.2.1 Normality Distribution Test

Before computing the data, researchers conducted a normalcy test. This study aims to determine whether or not the research data is normally distributed or not. Researchers use software called SPSS. The results presented here are as follows:

Table 3.2.1 Result of Normality Dtribution Test

One-Sample Kolmogorov-Smirnov Test

		pretest	Posttest
N		21	21
Normal Parameters ^{a,b}	Mean	43.62	73.86
	Std. Deviation	6.037	6.077
Most Extreme Differences	Absolute	.126	.146
	Positive	.091	.076
	Negative	-.126	-.146
Test Statistic		.126	.146
Asymp. Sig. (2-tailed)		.200 ^{c,d}	.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Based on the results in the table above, it can be seen that the sig value in the Kolmogrof-Smirnov table is 0.200 in the pre-test value and 0.200 in the post-test value. The significance value at the pre-test value is 0.200 > 0.05 which means the data is normal, and the significance value at the post-test value is 0.200 < 0.05 it means H0 is rejected Ha is accepted which is normal data. It can be concluded that both pre-test and post-test values are normally distributed.

3.2.2 Homogeneity test of variance

Before computing the data, researchers also conducted a homogeneity test. This study aims to determine whether or not the research data is homogeneous distributed or not. Researchers use software called SPSS. The results presented here are as follows:

Table 3.2.2 Result of Homogeneity of Variance

		Test of Homogeneity of Variances			
		Levene Statistic	df1	df2	Sig.
Nama	Based on Mean	.227	1	40	.636
	Based on Median	.204	1	40	.654
	Based on Median and with adjusted df	.204	1	35.959	.654
	Based on trimmed mean	.228	1	40	.636

From the output results above, it can be seen that the significance value (sig.) based on the average is $0.636 > 0.05$, so it can be concluded that the two values are homogeneous.

3.2.3 Hypothesis testing

After obtaining the data, the researcher calculates the hypothesis with the data generated from the pre-test and post-test using SPSS version 20. It is from these results that the research can be seen whether there is a difference or not. The results presented here are as follows:

Table 3.2.3 Result of Hypothesis Testing

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pretest - posttest	-30.238	5.621	1.227	-32.797	-27.680	-24.654	20	.000

Based on the table above, the significance result is < 0.05 or $0.000 < 0.05$. This means that H_0 is rejected H_a is accepted. Therefore, it can be concluded that there is an effect of using board racing games on vocabulary mastery.

3.2.4 Discussion

In this discussion section, the researcher presents the discussion with the interpretation of the research findings obtained from the results of the data analysis that has been presented in the previous section. The description of data obtained from the results of student comprehension tests regarding students' vocabulary mastery before and after using the board race game has increased. This is supported by the average value and percentage of students in the pre test and post test. This can be proven by the average value in the calculation using SPSS (found in appendix 2 page 41) students' vocabulary mastery in the post test 73.86 is greater than the pre test 43.62. Based on these findings, the use of the board racing game is stated to be able to influence the students' average score which is greater in the post test than before being taught using board race game.

This finding has important implications in English language learning about vocabulary mastery in students, especially in MA Muhammadiyah 02 Banyutengah students. This research programme or activity can improve students' ability to understand and master new vocabulary in English. The activities in this study are carried out by playing together in groups so as to provide opportunities for students to learn vocabulary in a fun way. different from the previous research, in this study using VKS as a form of test in the per-test and post-test. In summary, the use of board racing games in the classroom has proven that board racing games can help to improve students' vocabulary recall. It can be seen from the large increase in scores from before the test and after the test.

The same thing was found in another study, conducted by (Muhaimin et al., 2024) The pretest and post-test results of 33 students were collected. Before using the Board Race Game, the mean score of the experimental class pretest was 54.39. The average score on the post-test after the treatment then increased to 88.64. As a result, the mean score of the post-test of the experimental class was higher than the initial pretest score of the same class. This shows that the students' vocabulary competence, which is usually at a decent level, has been positively affected. It is clear that the game has a significant impact in improving students' word comprehension.

This research has similarities with research conducted by (Pratiwi & Nur, 2019) Research related to this study proves this, where games are an effective teaching method. The results show a substantial difference between the pre- and post-

test, indicating the value and efficacy of using board games for races in English instruction, particularly for junior high school students. This is also the same as research conducted by (Octaviani et al., 2019), playing board games with students greatly increases their vocabularies. In conclusion, the researcher stated that the use of board games to improve vocabulary recall of grade 10 students at MA Muhammadiyah 02 Banyutengah is effective.

Based on this study, it can be concluded that the use of board race games can have a positive influence on grade 10 students in high school. This has similarities with several previous studies that discuss the use of board race games. (Octaviani et al., 2019) Students found it easy to comprehend and commit the spelling of new vocabulary to memory when the Board Race game was used as a vocabulary teaching tool. As in the research conducted by (Rahmadani & Pammu, 2021), students' memory improved when board racing games were used. This game is also a good way to build a good working relationship between students and researchers, where researchers get positive feedback from students by conducting this research. With the good interaction between the researcher and the students, it can be seen from the improvement of students' ability to understand the vocabulary that has been learnt. Using games is one of the interesting ways of teaching, especially in teaching foreign languages that are difficult for students to understand and memorise.

4. Conclusion

The main findings of this study offer significant insights into the effectiveness of implementing board race game for English vocabulary acquisition in grade 10 students at MA Muhammadiyah 02 Banyutengah. The essentialist nature of this intervention shows that the game used is able to arouse students' enthusiasm to learn and remember new vocabulary more vigorously. Almost most students were able to improve their ability to understand new vocabulary with this game, the researcher proposed a method to teach vocabulary, especially English vocabulary.

After conducting research with a pre-experimental design, referring to the pre-test and post-test results of students in class 10 at MA Muhammadiyah 02 Banyutengah, the researcher found a significant difference between the pre-test and post-test results. So, it can be concluded that there is a difference between using the board racing game method and the previous classroom learning method which still uses traditional methods. From this study, it can be seen that the comprehension of English vocabulary using the board racing game method has a very positive impact on students' abilities. So, the use of the board racing game method is very effective in improving students' ability to master English vocabulary in grade 10 students of MA Muhammadiyah 02 Banyutengah.

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