THE EFFECT OF USING KIM'S MEMORY GAME TOWARDS VOCABULARY MASTERY AT THE 4TH GRADE OF SD IT INSAN KAMIL

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ABSTRACT

The rationality of the research is based on that the students have difficulty in remembering and understanding the meaning of English words, the teacher still use conventional strategy in the class, and many students are not able to understand the words conveyed by the teacher orally in English. This research aimed to find out the effect of KIM Memory Game toward students' vocabulary mastery. This research emphasized quantitative approach with experimental design. The sample of this study consisted of 54 students. Pre- test were given to the students in experimental and control class before any treatment. The experimental class were treated by using Kim's Memory Game while control class were not. After the treatment, both classes were given post-test. The test consisted of 15 multiple choice items. The research found that there was a significant effect of using Kim's memory game towards students' vocabulary mastery which was proved by the sig value is smaller than alpha (0.000 < 0.05). Then, it was also found there is differences of students' vocabulary mastery of those who were taught by using Kim's memory game and those that were not taught. This was also proved by the sig.value smaller than alpha (0.000 < 0.05). As the conclusion, the Kim's Memory Game affected the students' vocabulary mastery and it was proved to be better than the students who were not using it.

Keywords : *Kim's Memory Game, Vocabulary Mastery*

INTRODUCTION

Good vocabulary acquisition is crucial for elementary school students as it forms the foundation for their language development (Escobar & Escudero, 2024; Purwitasari, 2022). By expanding their vocabulary, students are able to understand and express ideas more clearly and interact effectively in various situations. Mastery of vocabulary also supports reading and writing skills, allowing them to better comprehend texts and express their thoughts creatively. Furthermore, a strong vocabulary base can boost students' confidence in communication and learning, making it a fundamental skill for their academic and social success in the future.

The vocabulary that elementary school students need to master encompasses various categories to ensure they have a strong foundation in communication and text comprehension (Baskoro, 2020; Widyawulandari & Indriayu, 2019). Basic vocabulary includes everyday terms, names of objects, numbers, colors, as well as commonly used verbs and adjectives in social interactions and daily activities. Additionally, students need to be familiar with vocabulary related to school topics, such as the names of stationery items, terms used in math lessons, and words frequently found in reading materials. Mastering this vocabulary not only helps them understand instructions and lesson content but also enriches their reading, writing, and speaking abilities. With a broad and varied vocabulary, students can easily adapt to new contexts and improve their academic and social skills.

Vocabulary plays a crucial role in language development, without vocabulary, language cannot exist. It refers to a collection of words that students must learn in order to form sentences and communicate effectively in English. Having enough vocabulary is essential because it forms the foundation for using English. Once learners make progress in building their vocabulary, they are capable of producing at least simple sentences and applying them in everyday situations. According to Hornby in Aisyah, vocabulary is a the total number of the words which make up a language, all the words known to a person or used in particular book, and a list of words with their meaning (Haidara, 2014; Hasibuan, 2019). In short, vocabulary is a set of words that known by a person, has meaning, and can be used to communicate.

Common issues in elementary school students' vocabulary often revolve around the lack of their ability to identify things around them in English (Muna et al., 2021). Students frequently struggle to connect new vocabulary with their everyday experiences or situations, making it difficult for them to use these words accurately in sentences or conversations.. Other issues include a lack of motivation or interest in learning new vocabulary, which can lead to low engagement in learning activities. These factors together can impede their language development, making it crucial to find effective strategies for introducing and reinforcing new vocabulary at an early age.

One of the ways to make the students learn vocabulary in a fun way is by using games. Most games encourage learners to use vocabulary without focusing too much on correct forms (Roza & Khairani, 2019). Many learners find memorization techniques boring, but games provide an enjoyable break from the usual vocabulary lessons. Games are engaging and offer motivation to students, presenting challenges that make them take ownership of their learning in a fresh way. They promote interaction by naturally creating opportunities for students to engage with one another. Additionally, games help learners better understand information, tools, materials, and even their peers (Irwandy et al., 2018). In short, using games to teach vocabulary makes learning enjoyable, motivating, and interactive. They provide a fun alternative to traditional strategies,

encouraging students to actively participate, collaborate, and better understand both the material and their peers.

This study will utilize web-based games as a medium for learning English vocabulary (Aydoğan & Akbarov, 2014; Roza & Yenti, 2020; Tuan & Mai, 2015). The platform offers numerous categories relevant to students' surroundings and includes various types of games, allowing students to learn enjoyably. It also simplifies the teacher's task of introducing new topics, making it easier for students to comprehend concepts because the learning objects are familiar to them.

The Kim's Memory Game is used in students' vocabulary learning because it combines engaging gameplay elements with effective memory reinforcement techniques. In this game, students are asked to match cards containing pictures and words, actively involving them in the learning process (Nation, 2001; Nguyen & Khuat, 2003). This activity not only makes vocabulary learning more enjoyable and interactive but also helps enhance their memory and cognitive skills through repetition and concentration. In this way, new vocabulary is more effectively absorbed and easier to remember, as students learn while playing, which in turn can boost their motivation and engagement in the learning process. This approach creates a positive learning environment and encourages students to be more active in expanding their vocabulary.

Based on the preliminary research that was conducted in SD IT Insan Kamil on 18th March 2024 by using observation, there were found some problems. First, the students have difficulty in remembering and understanding the meaning of words. Students often struggle to remember and understand the meanings of words due to several factors. One key challenge is the lack of contextual connections, where students cannot easily link new words to familiar experiences or concepts, making remembering the words difficult. Additionally, if the words are not frequently used or reinforced in various contexts, they may quickly be forgotten. Cognitive overload can also play a role, where the sheer volume of new vocabulary overwhelms their ability to process and retain information. Without consistent practice and meaningful application, students may find it challenging to fully grasp and recall the meanings of new words, which can hinder their overall language development and comprehension skills.

Second, the teacher still used conventional strategy in the class. Many teachers continue to use conventional strategies in the classroom, often relying on traditional strategy such as rote memorization, lecture-based instruction, and standardized testing. While these approaches have been long-established and can be effective for certain types of learning, they may not fully engage students or cater to the diverse learning styles present in a modern classroom. Conventional strategies often emphasize passive learning, where students are recipients of information rather than active participants in their education. This can limit opportunities for critical thinking, creativity, and collaboration, which are essential skills in today's rapidly changing world. As educational needs evolve, there is a growing need for teachers to incorporate more innovative, student-centered approaches that foster deeper understanding, engagement, and a love for learning.

Third, the students did not understand about the words conveyed by the teacher orally. Students often struggle to fully understand the verbal instructions or explanations given by their teachers. This difficulty may stem from various factors, such as unfamiliar vocabulary, the speed at which information is delivered, or a lack of clear context. When students do not grasp the spoken words, it can lead to confusion and a decrease in their overall engagement in the lesson. Furthermore, without a solid understanding of the teacher's verbal communication, students may find it challenging to follow instructions, participate in discussions, or complete assignments

accurately. This highlights the importance of teachers using clear and accessible language, as well as checking for comprehension to ensure that all students are on the same page. Based on the interview to the students, they said that they tend to be silent while being asked several question in English rather than answering the question because they did not understand about the words.

Based on the explanation above, several problems arise in young students in mastering vocabulary. Some strategies can solve the problem. However, the researcher is interested in using Kim's Memory Game strategy to improve students' vocabulary mastery abilities. From this idea, the researcher wants to experiment with 4th grade students at SD IT Insan Kamil and wants to find out the effect of using using Kim's Memory Game towards students' vocabulary mastery.

METHOD

The research employed a quantitative experimental design to investigate the effect of Kim's Memory Game on vocabulary mastery among 4th-grade students at SD IT Insan Kamil. Using cluster sampling, 54 students were divided into experimental and control groups. The experimental group utilized Kim's Memory Game, while the control group followed conventional teaching methods. Data collection involved pre-tests and post-tests consisting of 15 multiple-choice questions measuring vocabulary in terms of form, meaning, and usage. Statistical analysis, including Mann-Whitney U-tests, revealed a significant positive impact of Kim's Memory Game on students' vocabulary mastery, confirming its effectiveness as an engaging instructional tool (J. Creswell & Creswell, 2018; J. W. Creswell & Poth, 2018) .

RESULTS AND DISCUSSIONS

Result

Description of the Research

The score of the students' vocabulary pre-test score can be seen on the following table:

Table 1. Vocabulary Pre-test Score

Control			Experiment		
No	**Name**	**Score**	**No**	**Name**	**Score**
1	AHK	73.33	1	AWA	86.67
2	AK	66.67	2	AAF	80.00
3	AZA	80.00	3	ARG	80.00
4	AH	80.00	4	AZ	80.00
5	AYA	66.67	5	ADS	80.00
6	AYM	73.33	6	ASF	93.33
7	ADH	80.00	7	DGSA	86.67
8	AF	60.00	8	FH	86.67
9	CRA	73.33	9	FAA	80.00
10	FMA	60.00	10	HAA	86.67
11	SS	66.67	11	IKA	100.00
12	FMS	80.00	12	MYAAPH	100.00

13	FR	93.33	13	MFH	93.33
14	GA	60.00	14	MZN	80.00
15	GMS	86.67	15	MFAN	86.67
16	HSN	73.33	16	MSR	93.33
17	MAR	80.00	17	QLAE	86.67
18	NSA	93.33	18	RZR	100.00
19	NG	86.67	19	RA	93.33
20	NA	73.33	20	RSP	93.33
21	NRS	80.00	21	RLP	86.67
22	RHA	80.00	22	RAR	80.00
23	SAD	73.33	23	SNA	80.00
24	SS	93.33	24	SCA	93.33
25	SAZ	93.33	25	SA	86.67
26	TA	80.00	26	ZAH	93.33
27	VGR	66.67	27	HHM	100.00
Mean		**76.79**			**88.40**

Furthermore, the data above was analyzed and categorized by using Sturges formula such as below:

J = Max-Min
K = 1+ (3.3 log N)
= 8~
P = J/K
= 8~

The categorization can be seen on the following table

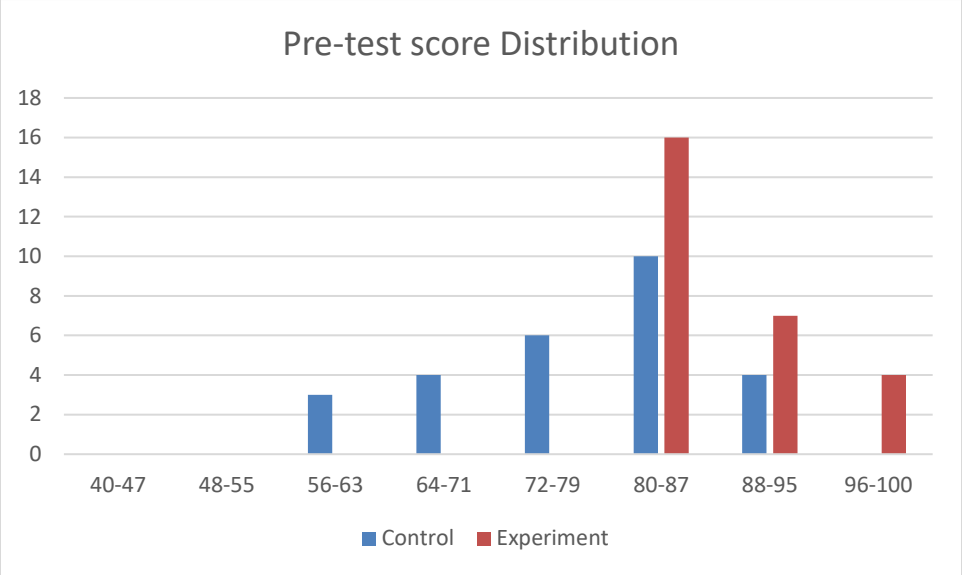
Table 2. Pre-test Score Distribution

	Pre-test Score	
Range	**Control**	**Experiment**
40-47	0	0
48-55	0	0
56-63	3	0
64-71	4	0
72-79	6	0
80-87	10	16
88-95	4	7
96-100	0	4
Total	**27**	**27**

Based on the table above, in the control class, for the pre-test scores, there are no students in the score ranges of 40-47 or 48-55. There are 3 students in the score range of 56-63, 4 students in the score range of 64-71, 6 students in the score range of 72-79, 10 students in the score range

of 80-87, and 4 students in the score range of 88-95. No students scored within the range of 96-100. Meanwhile, in the experimental class, no students scored in the ranges of 40-47, 48-55, 56-63, 64-71, or 72-79. However, there are 16 students in the score range of 80-87, 7 students in the score range of 88-95, and 4 students in the score range of 96-100.

Furthermore, it can also be viewed on the following graphic



Picture 1. Pre-test Score Distribution

a. Students' Vocabulary Post-test Score

The score of the students' vocabulary post-test score can be seen on the following table:

Table 3. Vocabulary Post-test Score

Control			Experiment		
No	**Name**	**Score**	**No**	**Name**	**Score**
1	AHK	80	1	AWA	93.33333
2	AK	80	2	AAF	93.33333
3	AZA	80	3	ARG	86.66667
4	AH	86.66667	4	AZ	93.33333
5	AYA	80	5	ADS	86.66667
6	AYM	80	6	ASF	100
7	ADH	93.33333	7	DGSA	100
8	AF	73.33333	8	FH	93.33333
9	CRA	73.33333	9	FAA	93.33333
10	FMA	66.66667	10	HAA	93.33333
11	SS	80	11	IKA	100
12	FMS	86.66667	12	MYAAPH	100
13	FR	100	13	MFH	100
14	GA	73.33333	14	MZN	93.33333
15	GMS	100	15	MFAN	93.33333

16	HSN	80	16	MSR	100
17	MAR	80	17	QLAE	93.33333
18	NSA	100	18	RZR	100
19	NG	100	19	RA	100
20	NA	80	20	RSP	100
21	NRS	93.33333	21	RLP	93.33333
22	RHA	80	22	RAR	93.33333
23	SAD	86.66667	23	SNA	86.66667
24	SS	100	24	SCA	100
25	SAZ	93.33333	25	SA	93.33333
26	TA	86.66667	26	ZAH	100
27	VGR	80	27	HHM	100
	Mean	84.93827			95.55556

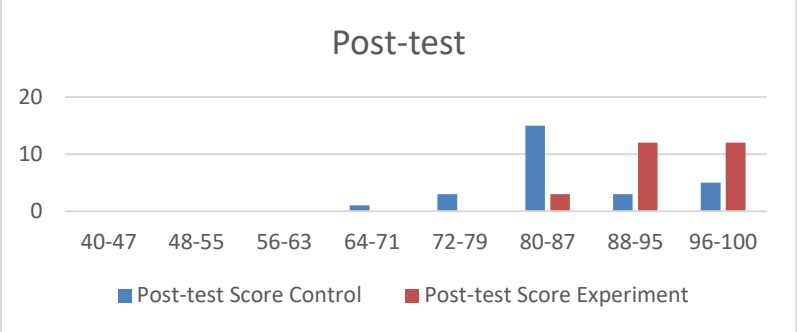
The categorization can be seen on the following table

Table 4. Post-test Score Distribution

Post-Test Score		
Range	**Control**	**Experiment**
40-47	0	0
48-55	0	0
56-63	0	0
64-71	1	0
72-79	3	0
80-87	15	3
88-95	3	12
96-100	5	12
Total	27	27

Based on the table above, in the control class, for the post-test scores, there are no students in the score ranges of 40-47, 48-55, or 56-63. There is 1 student in the score range of 64-71, 3 students in the score range of 72-79, 15 students in the score range of 80-87, 3 students in the score range of 88-95, and 5 students in the score range of 96-100. Meanwhile, in the experimental class, no students scored in the ranges of 40-47, 48-55, 56-63, 64-71, or 72-79. However, there are 3 students in the score range of 80-87, 12 students in the score range of 88-95, and 12 students in the score range of 96-100. Overall, both classes have a total of 27 students each.

Furthermore, it can also be viewed on the following graphic



Picture 2. Post-test Score Distribution

b. General Comparison Between Classes

In other to see the general comparison between both control and experiment class, the researcher measured their minimum score, maximum score, and pre-test score. It can be seen on the following table.

Table 5. Statistic Comparison

	Pre-test		Post-test	
	Control	**Experiment**	**Control**	**Experiment**
Minimum Score	60	80	66,67	86.67
Maximum Score	93.33	100	100	100
Mean Score	76.79	88.40	84.94	95.56

Based on Table 5, the comparison of pre-test and post-test scores show general differences between the control and experimental classes. For the pre-test, the control class showed improvement with a minimum score of 60, a maximum score of 93.33, and a mean score of 76.79. The experimental class exhibited a more significant improvement, with a minimum score of 80, a maximum score of 100, and a mean score of 88.40..

1. Analysis of the Data

Before conduction the data analysis, the researcher conducted classic assumption test consisted of normality test and homogeneity test. This was done in order to determine which test should be used to test the hypothesis. If the data is normal, t-test is used, and if the data is not normal u-test is used.

a. Normality Test

The normality test was conducted by using SPSS application. The result can be seen on the following table:

Table 6. Normality Test Result

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Pre_Cont	.154	27	.099	.929	27	.064
Pre_Exp	.189	27	.014	.866	27	.002
Post_Cont	.253	27	.000	.892	27	.009
Post_Exp	.281	27	.000	.774	27	.000

a. Lilliefors Significance Correction

Based on the table above, it can be seen only the post-test control data that is normal. The rest are not normal since the sig.value is smaller than alpha of 0.05. This means that the data are not distributed normally, hence u-test is used to test the hypotheses.

b. Homogeneity Test

The homogeneity test was also conducted using SPSS application. The result of the test can be seen on the following table

Table 7. Homogeneity Test Result

		Levene Statistic	df1	df2	Sig.
Score	**Based on Mean**	5.765	3	104	.001
	Based on Median	3.117	3	104	.029
	Based on Median and with adjusted df	3.117	3	78.532	.031
	Based on trimmed mean	5.716	3	104	.001

Based on the table above, the sig value is smaller than alpha or 0.001 < 0.05. this means that the data is not homogen, hence the t-test cannot be used, and u-test should be used to test the hypotheses.

c. Hypotheses Test

There are 2 hypotheses in this research, they are such as follow:

1) First Hypothesis

Ha: There is significant effect of using KIM memory Game toward students' vocabulary

H0: There is no significant effect of using KIM memory Game toward students' vocabulary

The first hypothesis test was done by using SPSS application using u-test or Mann Whiteney Test which specialized in finding out the significant different between 2 variable that is not normal. The result of the test can be seen on the following table:

Table 8. First Hypothesis test Result

	Post_Exp - Pre_Exp
Z	-4.231[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

Based on the table above, the sig.value is 0.000 which smaller than the alpha of 0.05. This means, H0 is rejected and Ha is accepted. In other word, there is significant effect of using KIM memory Game toward students' vocabulary

2) Second Hypothesis

Ha: There is significant different of the students' vocabulary that are taught by using KIM memory Game and those who are not taught by it

H0: There is no significant different of the students' vocabulary that are taught by using KIM memory Game and those who are not taught by it

The second test was also done by using Mann Whiteney test (u-test) using SPSS application. The result can be seen on the table below:

Table 9. Second Hypothesis test Result

	Score
Mann-Whitney U	138.000
Wilcoxon W	516.000
Z	-4.048
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Group	

Based on the table above, it can be seen that the sig value also smaller than the alpha (0.000< 0.05). This means H0 is rejected and Ha is accepted. In other word, there is significant different of the students' vocabulary that are taught by using KIM memory Game and those who are not taught by it.

Discussion

The findings of this research indicate a significant effect toward vocabulary for students that were taught by using Kim's Memory Game compared to those who were taught using traditional methods. This aligns with the idea that games can create a fun and engaging learning environment, as noted in the provided literature. Specifically, the experimental group demonstrated a higher mean score of 88.40 in the post-test compared to the control group's mean of 76.79, reflecting the effectiveness of this teaching strategy.

Kim's Memory Game, as described, enhances memory retention through activities that promote active recall and engagement. This aligns with the notion that learning strategies that make students actively participate and interact with the material can improve outcomes, as also supported by Tahan (2020), who found significant vocabulary achievement improvements through the game. Similarly, Meri Mulyani (2018) highlighted the game's impact on vocabulary mastery over multiple sessions, reinforcing the idea that consistent use can yield measurable benefits. Siti Hajar (2017) further emphasized the game's effectiveness across different motivation levels, showcasing its versatility.

This study highlight the KIM game is easy to be implementated and confirming its effect toward vocabulary, as evidenced by the higher scores across all statistic in the experimental group. These results proved that using KIM memory games into teaching strategies can not only enhance vocabulary but also create an engaging and interactive classroom environment.

Conclusions

Teachers are encouraged to integrate Kim's Memory Game into their lesson plans as an innovative approach to teaching vocabulary. This interactive and engaging method can enhance students' memory retention and motivation to learn. Readers, including parents, students, and education practitioners, should recognize the value of interactive teaching strategies like Kim's Memory Game as a way to make learning more enjoyable and effective. This study highlights the importance of using creative approaches to improve students' learning experiences and outcomes. Future researchers are advised to expand on this study by exploring the long-term effects of Kim's Memory Game on vocabulary retention and its application in other aspects of language learning, such as grammar, listening, or speaking skills. Additionally, examining its effectiveness across different age groups, cultural settings, and subjects could further demonstrate its potential.

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