

## **THE EFFECTIVENESS OF PLATFORM PUZZWORD GAME TO INCREASE STUDENTS' VOCABULARY MASTERY AT SMP NEGERI 2 SONDER**

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**Abstract:** This research aims to increase students' vocabulary mastery and evaluating Platform Puzzleword's performance as a tool for increasing students' vocabulary and identifying whether using the platform makes a discernible impact on vocabulary development. The subject of the research was 9th-grade students of SMPN 2 SONDER, consisting of 13 students. The research utilized a pre-experimental design with a one-group pre-test and post-test. The findings revealed that students' vocabulary mastery has increased. This increase can be seen from the results of the mean post-test score which only got 52.61, and the mean post-test score which got 75.69. Additionally, the obtained significant value was 0.000, indicating it is smaller than alpha 0.05. Therefore, H<sub>0</sub> was rejected, and H<sub>1</sub> was accepted or in other words a hypothesis which states that There was no a significant of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder is rejected and hypothesis which states that There was a significant of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder is accepted. Based on these findings, the researcher concluded that the Puzzleword game is effective in increasing students' vocabulary mastery

**Keywords:** *Effectiveness, Puzzleword Games, Vocabulary, Student, Increase.*

### **INTRODUCTION**

Education is increasingly utilizing technology, including application-based educational games, to enhance learning and motivate students. One important area of focus within language learning is vocabulary development. Having a rich and broad vocabulary enables students to better understand and communicate ideas (Maru et al., 2021); (Maru et al., 2018); (Maru et al., 2020). By fostering vocabulary development through technology and interactive learning approaches, students' language proficiency, communication skills, and academic achievements can be significantly enhanced. In order to communicate, everybody has automatically learned their native language through their social environment since they were

children. However, at the international level, we are demanded to be able to communicate well not only in our own language but also by using an international language like English (Liando, 2019); (Maru et al., 2022); (Karisi et al., 2021). Application-based educational games provide an engaging platform for students to practice and reinforce their vocabulary skills. These interactive tools make vocabulary learning enjoyable and immersive, allowing students to grasp nuanced meanings and choose appropriate words

However, the problem that often arises is the lack of interest and motivation of students in learning new vocabulary. Monotonous and unattractive learning methods often result in students losing interest in learning new vocabulary. Students' interest and motivation will decline if they are steadfastly focused on dry, uninteresting teaching strategies. It might be claimed that teaching English to students is challenging. According to Liando (2009) Teaching English is seen by many educators and teachers as a neutral activity. According to Delli Sabudu (2019), The ease or difficulty with which we can retain words from word lists depends on a variety of factors. Because we have prior knowledge or experience relating to the words we memorize, words are easily retained in our memory and retrievable. Because we have no prior understanding of the words, they are simple to forget. According to Liando (2017), when the learners and teachers have a good performance in speaking English, they can easily share the information.

Therefore, an innovative and interesting learning approach is needed for students to increase their motivation and interest in learning vocabulary. In addition, Educational experts such as Gardner (2006) stated that variations in learning strategies are important for covering a variety of learning styles, while Marzano (2007), highlighted the importance of using technology, games, and physical activity to maintain students' interest in learning. Both emphasize that the use of various techniques and strategies can enhance students' learning experiences and promote better academic achievement. Language planning covers a range of orientations. The activities which include the selection of languages, where and how languages are to be taught, and how they are to be standardized are part of the process of language-in-education Liando (2023) One interesting alternative is to use application-based educational games, especially puzzle games. According to (Zhu et.al 2018)

application-based educational games have the potential to improve vocabulary growth and language acquisition in a number of ways. With the help of these games, students can learn language in context, which can help them comprehend it more fully and improve their recall. Additionally, game-based learning can give students quick feedback, enabling them to track their development and modify their learning tactics as necessary. The Puzzleword platform is a word puzzle game specially designed to introduce new words and reinforce existing ones through engaging gameplay. It presents players with a challenge to guess a hidden word or phrase based on a set of clues or hints. These games are not only fun but also provide opportunities for students to expand their vocabulary in an interactive and challenging way.

Previous research has shown the benefits of using educational games to increase student motivation and achievement. However, there is still little research that specifically focuses on using the Puzzleword Platform to increase students' vocabulary at the junior high school level. Therefore, this study aims to test the effectiveness of using the Puzzleword Platform in increasing students' vocabulary at SMP Negeri 2 Sonder.

By conducting this research, it was hoped that empirical evidence had been found to support the use of puzzle games such as the Puzzleword Platform as an effective tool for increasing students' vocabulary. The results of this study can make a positive contribution to the development of interesting and effective learning methods in the educational context at the junior high school level, especially in developing students' vocabulary.

Thus, this research is important to conduct because it has direct implications for the teaching and learning of students' vocabulary at SMP Negeri 2 Sonder and can provide valuable insights for educators, researchers, and curriculum developers.

## **RESEARCH METHOD**

### ***Research Design***

One-Group Pretest-Posttest Design: In this type of design, the outcome variable is measured in one group both before and after the therapy or intervention. Within the same group, it enables comparisons of the pre- and post-intervention scores.

### **Research Variable**

1. Variable X

The independent variable in this research is "Puzzleword Game"

2. Variable Y

The dependent variable in this research is the students of SMPN 2 SONDER

### **Subject of the Research**

The subject of the research is students of 9th grades of SMPN 2 SONDER, Data Collection, Research Procedure Pre-test, The research procedure for studying the effectiveness of the platform Puzzleword game to increase students' vocabulary at SMP Negeri 2 Sonder can follow the following general steps:

1. Research Design
2. Sample Selection
3. Pre-test
4. Post-test

### **Data Analysis**

In this research the type of experimental research with the form of Pre-Experimental Designs. Design his research is One Group Pretest-Posttest Design. The first step is to provide a pre-test utilizing a puzzle game to determine the starting condition prior to receiving treatment. The following stage of learning is addressed using a Puzzleword game The next step is followed by a post-test to evaluate the state of the students' learning outcomes following the application of the Puzzleword game

$$O_1 \quad X_j \quad O_2$$

#### **Notes:**

O<sub>1</sub> : Pre-test results

X<sub>j</sub> : The treatment will be applied using a Puzzleword game

O<sub>2</sub> : Post-test results

1. To find out the mean score with the formula:

$$\bar{x} = \frac{\sum x}{n}$$

Notes:

$\bar{x}$  : Mean

$\sum x$  : Total Score

(Gay, 2006)

n: Sample

2. To find out the significant between Pre-Test and Post-Test with use SPSS 23

## FINDINGS AND DISCUSSION

### *Finding*

#### *Computing Pre-Test Mean Score*

No.	Name	Pre-Test Score
1	Aurel Sumolang	44
2	Christio Gerungan	48
3	Farel Jonatan Koyo	40
4	Ferel Efraim Walewangko	44
5	Gichella Wayongkere	56
6	Keysie Pangalila	52
7	Kirey Koyo	68
8	Leonardo Koyo	64
9	Nehemia Noel Gampamole	60
10	Prisa Alice Rumokoy	64
11	Razel Yonatan Rumagit	52
12	Rizal Samuel Rumagit	48
13	Rosa Piong	44
Total Mean Score :		52.61

$$\bar{x} = \frac{684}{13}$$

#### *Computing Post-Test Mean Score*

No.	Name	Post-Test Score
1	Aurel Sumolang	72
2	Christio Gerungan	76
3	Farel Jonatan Koyo	80
4	Ferel Efraim Walewangko	72
5	Gichella Wayongkere	72
6	Keysie Pangalila	80
7	Kirey Koyo	72
8	Leonardo Koyo	72
9	Nehemia Noel Gampamole	80
10	Prisa Alice Rumokoy	84
11	Razel Yonatan Rumagit	72
12	Rizal Samuel Rumagit	72
13	Rosa Piong	80
Total Mean Score:		75.69

$$\bar{x} = \frac{984}{13}$$

## DATA SPSS 23

### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	52.6154	13	9.06953	2.51544
	Posttest	75.6923	13	4.46065	1.23716

Based on the output table above, it shows that the mean Post test score is higher than the pre test where the pre test score is 52.61 and the post test score is 75.69.

### Paired Samples Test

	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	23.07692	10.08680	2.79758	-29.17232	16.98153	8.249	.000

Based on the significant test output table above, the sig value is obtained 0.000 which means it is smaller than alpha 0.05. Thus H<sub>0</sub> is rejected and H<sub>1</sub> is accepted or in other words a hypothesis which states that There was no a significant of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder is rejected and hypothesis which states that There was a significant of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder is accepted.

### ***Hypothesis Testing***

The hypothesis is formulated as follow:

Null Hypothesis (H<sub>0</sub>): There is no effective of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder.

Alternative Hypothesis (H<sub>1</sub>): There is effective of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder.

H<sub>0</sub>: rejected if sig.< α (0.05)

H1: accepted if sig. <  $\alpha$  (0.05)

### DATA SPSS 23

#### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
1	Pretest	52.6154	13	9.06953	2.51544
	Posttest	75.6923	13	4.46065	1.23716

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#### Paired Samples Test

	Paired Differences					T	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
1	pretest - posttest	23.07692	10.08680	2.79758	-29.17232	16.98153	8.249	2	.000

Based on the significant test output table above, the sig value is obtained 0.000 which means it is smaller than alpha 0.05. Thus, H0 is rejected and H1 is accepted or in other words a hypothesis which states that There was no a significant of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder is rejected and hypothesis which states that There was a significant of using Puzzleword Game to increased students' vocabulary mastery at SMP Negeri 2 Sonder is accepted.

### **Discussion**

From the existing data it can be concluded that research using the puzzleword game can be declared effective, as can be seen from the lower pre-test scores and increased post scores.

We can infer from the facts at hand that using a Puzzleword game for research has shown to be successful. This conclusion is confirmed by the finding that although

participants' post-test scores showed a considerable rise, their pre-test scores were comparatively low before playing the Puzzleword game.

The Puzzleword game appears to have had a beneficial effect on the participants' performance because their scores increased from the pre-test to the post-test. This shows that the game significantly improved their comprehension, knowledge, or expertise in the subject being studied.

The lower pre-test results before the Puzzleword game were introduced show that participants initially lacked subject matter proficiency. But after playing the game, their post-test results improved, suggesting that the game had improved their comprehension of the material or their capacity to apply the principles they had learned.

These results strongly imply that the Puzzleword game has value and is a useful instrument for learning or conducting research. The size and makeup of the research sample, the length of the study, and any potential restrictions that would limit the applicability of these findings should all be taken into account, though. Additional investigation could be done to bolster the proof proving.

## **CONCLUSION**

In conclusion, the use of the Puzzleword game was successful in increasing students' vocabulary mastery, according to the research findings. The mean score of the post-test was significantly higher than the pre-test, indicating a considerable improvement between the pre- and post-test results. The Puzzleword game had a favorable effect on increasing students' vocabulary skills, which may be concluded by rejecting the null hypothesis and accepting the alternative hypothesis.

## **REFERENCES**

- Gardner, H. (2006). *Multiple intelligences: New horizons*. Basic books.
- Karisi, Y., Pelenkahu, N., & Maru, M. G. (2021). Students' perception Of The Use Of Youtube In Translation Class. *SoCul: International Journal of Research in Social Cultural Issues*, 1(2), 126-138.
- Liando, Nihta V.F. 2009. Success In Learning English As A Foreign Language. Universitas Negeri Manado, LITERA Vol. 8, No 2.



- Liando, Nihta V.F. (2009). Language Learning from Its Policy Perspectives. Universitas Negeri Manado, CV Bintang Semesta Media.
- Liando, Nihta V.F. (2009). English Major Students' Perceptions Towards Watching English Movies In Listening And Speaking Skills Development. Universitas Negeri Manado, *Advances in Social Sciences Research Journal – Vol. 5*.
- Liando, Nihta V.F. (2017). Students' Personal Initiative towards their Speaking Performance. Universitas Negeri Manado, Canadian Center of Science and Education, *International Education Studies*; Vol. 10, No. 8; 2017.
- Maru, M. G., Tamowangkay, F. P., Pelenkahu, N., & Wuntu, C. (2022). Teachers' perception toward the impact of platform used in online learning communication in the eastern Indonesia. *International Journal of Communication and Society*, 4(1), 59-71.
- Maru, M. G., Pikirang, C. C., Setiawan, S., Oroh, E. Z., & Pelenkahu, N. (2021). The internet use for autonomous learning during COVID-19 pandemic and its hindrances. *International Journal of Interactive Mobile Technologies*, 15(18), 65-79.
- Maru, M. G., Pikirang, C. C., & Liando, N. (2020, October). Integrating Writing With Listening in EFL Class: A Systematic Review. In *3rd International Conference on Social Sciences (ICSS 2020)* (pp. 222-226). Atlantis Press.
- Maru, M. G., Ratu, D. M., & Dukut, E. M. (2018). The Use the T-Ex Approach in Indonesian EFL Essay Writing: Feedbacks and Knowledge Exploration.
- Maru, M. G., Pikirang, C. C., Ratu, D. M., & Tuna, J. R. (2021). The Integration of ICT in ELT Practices: The Study on Teachers' Perspective in New Normal Era. *International Journal of Interactive Mobile Technologies*, 15(22), 44-67.
- Marzano, R. J. (2007). The art and science of teaching: A comprehensive framework for effective instruction. Association for Supervision and Curriculum Development.
- Sabudu, Delli. (2019). The Investigation Into Primary Effect On Student's Vocabulary Memorization. Universitas Negeri Manado, *Celtic: A Journal of Culture, English Language Teaching, Literature and Linguistics*.
- Sugiyono. (2015). Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif dan R&D). Bandung: Alfabeta Bandung.
- Sugiyono. (2015). Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif dan R&D). Bandung: Alfabeta Bandung.

Zhu, X., Chen, Y., & Lian, Y. (2018). Application-based educational games: Promoting language learning and vocabulary development. *Educational Technology & Society*, 21(3), 238-249

