



## The Effect of Using Crosswords Puzzle Towards Students Vocabulary Mastery at SMP Al Razi Sinar Harapan

Suci Anggi Harianja<sup>1</sup>, M. Khalid<sup>2</sup>

<sup>1,2</sup> Universitas Muslim Nusantara Al Washliyah Medan, Indonesia

Corresponding Author: ✉ [sucianggharianja@umnaw.ac.id](mailto:sucianggharianja@umnaw.ac.id)

---

### ABSTRACT

This study aims to obtain empirical evidence regarding the effect of crosswords puzzle on students vocabulary mastery. This research was conducted on students class VII of SMP Al Razi Sinar Harapan. The method used in this research was a Quantitative with quasioner-experimental from total sample of 34 students as a sample of 112 populations which were divided into 2 classes, 17 students for the experimental class and 17 students for control class. Before giving treatment, the researcher gave a pre-test. Then the researcher tught the experimental class with the media crosswords puzzle and in the control class without media crosswords puzzle. After two meetings, the researcher gave post-test to both class. In the analysis of pre-test and post-test assessment data using thirty-five essay questions, after that it was analyzed using the t-test formula. The results of this study indicate that media crosswords puzzle are effective in learning vocabulary mastery in class VII of SMP Al Razi Sinar Harapan. This is based on the results of the t-test which shows that  $t_{\text{observed}} > t_{\text{table}}$  ( $3,01 > 2,03$ ). At 5% significance. This means that  $H_a$  is accepted and  $H_o$  is rejected. Therefore it can be concluded that the media crosswords puzzle has an effect on students vocabulary mastery.

---

### Kata Kunci

*Crosswords Puzzle, Media, Vocabulary*

---

## INTRODUCTION

Vocabulary is the foundation of language. If we do not master written material, we can not express and understand it properly. It is impossible for every individual to master a language if he does not learn vocabulary and word expressions that have a meaningful form of communication. Wardani (2015) said that vocabulary is an important aspect of language, because it appears in every language skill including listening, speaking, reading, and writing skills. From this statement it can be concluded that vocabulary is a major factor in a language, because it is needed in speaking, reading, and writing skills.

Mastery of vocabulary will affect the construction of sentences, suitability of content and expected explanations in English. As stated by Wilkins quoted by Thornbury (2002:16), "Without grammar very little can be conveyed, without vocabulary nothing can be conveyed." That means if students want to

convey their ideas then students need a lot of vocabulary. If students have an understanding of grammar but have a small vocabulary, it will make it difficult for them to convey their ideas in English. And if students have a large vocabulary and have little understanding of grammar, students can still convey their ideas.

Students are required to be able to have a lot of vocabulary, but some students in junior high school still have a lack vocabulary. Based on previous research said that there are several problems during the learning process that made students not have good vocabulary mastery. Such as the use of inappropriate media and teachers who are not innovative in the learning process. When the teacher explains English lessons, students find it difficult to understand what the teacher is saying. Students still have difficulties in using English. This makes students lazy in learning and does not pay attention to the teacher when the teacher explains the material in class. Sometimes they choose to be silent without responding to what the teacher says.

Teachers can look for media that makes students learn while playing, teachers must also be able to take student focus. When the teacher applies innovative media in the learning process, it will be easy for students to mastery vocabulary. The use of media will greatly assist teachers in the learning process. According to Fatria (2017: 136) media is anything that can be used to channel messages and can stimulate the mind, can arouse enthusiasm, attention and willingness of students so that it can encourage the learning process in students. One of the innovative learning media that can be used in the learning process of vocabulary mastery is the Crosswords Puzzle media. By using Crosswords Puzzle media students can improve vocabulary mastery. Case (1994: 5) states that crosswords puzzles are beneficial for language learners because fun, satisfaction, reflection, and games can focus learners' attention on language in a way. concentrated but not stressful way.

In this research, the researcher chose this media because crossword puzzles would make students play while learning. They will play games with crosswords puzzles but will still focus on learning. This media really requires students to know a lot of information and knowledge that aims to develop students' vocabulary mastery. This media also trains students' memory in vocabulary mastery, and students will be active in participating in the learning process.

## RESEARCH METHOD

This research was conducted using quantitative research, with a questioner technique. Suharsimi Arikunto (2019: 27) explains quantitative research as the

name implies, many are required to use numbers, starting from data collection, interpretation of the data, and the appearance of the results. The researchers used a pre-experimental design that resembles a one-group pre- and post-test design. The following is the experiment design.

**Table 1.**  
**Experimental Design**

No	Group	Pre-test	Treatment	Post-test
1	X1	✓	X1	✓
2	Y2	✓	-	✓

Where :

- XI : The experimental group, where the student are taught by using crossword puzzle in teaching vocabulary.
- Y2 : The control group, where the students are taught without using crossword puzzle in teaching vocabulary.
- ✓ : Do pre-test and post-test

Population in this research are seventh grade students of SMP Al Razi Sinar Harapan, with total 112 students. The sample in this research are 34 students from SMP Al Razi Sinar Harapan. Researcher take 30% from the population. There will be two groups in this research, the experimental group is the first, and the control group is the second, each group consist of 17 students, namely 17 students from class VII 2 as the experimental group and 17 students from class VII 4 as the control group.

In this research, There are two types of examinations. Pre-test and post-test are the two. The pre-test will be given before the word crossword puzzle technique is taught, and the post-test will be given after the crossword puzzle is taught. The t-test formula is then used to calculate the data. The findings demonstrate that the values obtained will then be consulted in order to interpret the data. The formula is:

$$T = \frac{MX - MY}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{nx + ny - 2}\right) \left(\frac{1}{nx} + \frac{1}{ny}\right)}}$$

Where :

- T = Total score
- Mx = Mean of experimental group
- My = Mean of control group
- $\sum y$  = Standard derivation of control group
- Nx = Total sample of experimental group

$N_y$  = Total sample of control group  
 (Arikunto, 2010:354)

## RESULT AND DISCUSSION

Students achievement data is divided into two types, namely experimental class and control class data obtained from the pre-test and post-test which are applied to both values.

**Table 2. T**  
**he Differences of Score Between Pre-test and Post-test**  
**of the Experimental Class**

No	Initial Name	Pre-Test T <sub>1</sub>	Post-Test T <sub>2</sub>	T <sub>2</sub> -T <sub>1</sub> (X <sub>2</sub> )
1	AR	76	95	19
2	ANP	70	86	16
3	EAM	49	78	29
4	KNH	64	82	18
5	DM	46	68	22
6	SAL	48	78	30
7	ASR	64	84	20
8	AS	74	88	14
9	TAR	76	97	21
10	MR	46	66	20
11	FCW	72	95	23
12	SDA	62	82	20
13	KT	68	80	12
14	ARA	46	65	19
15	HA	48	78	30
16	KR	49	77	28
17	AD	76	97	21
<b>TOTAL</b>				362

$$M_x = \frac{\sum X}{N}$$

$$M_x = \frac{362}{17}$$

$$M_x = 21,29$$

Based on the table above shows that, the deviation between the pre-test and post-test in the experimental class is 21,29.

**Table 3.**  
**The Differences of Score Between Pre-test and Post-test of the Control Class**

No	Initial Name	Pre-Test T1	Post-Test T2	T2 - T1 (Y2)
1	DJ	62	71	9
2	MSD	74	84	10
3	ACP	72	76	4
4	DRH	48	72	24
5	AZ	63	72	9
6	RS	38	50	12
7	KH	32	52	20
8	MI	28	56	28
9	SO	70	80	10
10	AF	52	70	18
11	NA	32	70	38
12	NF	56	66	10
13	GK	38	62	24
14	AK	70	77	7
15	AS	50	62	12
16	RP	38	56	18
17	AF	28	52	24
<b>TOTAL</b>				<b>277</b>

$$My = \frac{\sum y}{N}$$

$$My = \frac{277}{17}$$

$$My = 16,29$$

Based on the table above shows that, the deviation between the pre-test and post-test in the control class is 16,29.

**Table 4.**  
**The Standart Deviation of the Experimental Class**

No	T <sub>2</sub> - T <sub>1</sub> (X <sub>2</sub> )	D <sub>x</sub> (X-21,29)	D <sub>x</sub> <sup>2</sup>
1	19	-2,29	5,24
2	16	-5,29	27,98
3	29	7,71	59,44
4	18	-3,29	10,82
5	22	0,71	0,50
6	30	8,71	75,86
7	20	-1,29	1,66
8	14	-7,29	53,14
9	21	-0,29	0,08
10	20	-1,29	1,66
11	23	1,71	2,92
12	20	-1,29	1,66
13	12	-9,29	86,30
14	19	-2,29	5,24
15	30	8,71	75,86
16	28	6,71	45,02
17	21	-0,29	0,08
TOTAL			453,46

**Table 5.**  
**The Standart Deviation of the Control Class**

No	T <sub>2</sub> - T <sub>1</sub> (Y)	D <sub>y</sub> (Y-16,29)	D <sub>y</sub> <sup>2</sup>
1	9	-7,29	53,14
2	10	-6,29	39,56
3	4	-12,29	151,04
4	24	7,71	59,44
5	9	-7,29	53,14
6	12	-4,29	18,40
7	20	3,71	13,76
8	28	11,71	137,12
9	10	-6,29	39,56
10	18	1,71	2,92
11	38	21,71	471,32

12	10	-6,29	39,56
13	24	7,71	59,44
14	7	-9,29	86,30
15	12	-4,29	18,40
16	18	-1,71	2,92
17	24	7,71	59,44
TOTAL			1305,46

The data above than was calculated by applying t-test formula as follows :

$$T = \frac{MX - MY}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{nx + ny - 2}\right) \left(\frac{1}{nx} + \frac{1}{ny}\right)}}$$

$$T = \frac{21,29 - 16,29}{\sqrt{\left(\frac{453,46 + 1305,46}{17 + 17 - 2}\right) \left(\frac{1}{17} + \frac{1}{17}\right)}}$$

$$T = \frac{5}{\sqrt{\left(\frac{1758,92}{32}\right) \left(\frac{2}{34}\right)}}$$

$$T = \frac{5}{\sqrt{(54,97) (0,05)}}$$

$$T = \frac{5}{\sqrt{2,75}}$$

$$T = \frac{5}{1,66}$$

$$T = 3,01$$

Based on the calculating of the t-test above, it was found that t-test 3,01. The researcher used the 5%(0,05) alpha elevel of significant as usually educational research. Determining degree of freedom (df), with formula :

$$\begin{aligned} Df &= (Nx + Ny) - 2 \\ &= (17 + 17) - 2 \\ &= 32 \end{aligned}$$

So, in the table ( $t_t$ ) is 2,036 for 5%

The research facts show that the t-observed is higher than the t-table (3,01 > 2,03). Therefore,  $H_a$  is accepted and  $H_o$  s rejected, in other words teaching vocabulary using media crosswords puzzle is more effective than without media crosswords puzzle.

## CONCLUSION

Based on data analysis, it can be concluded that the mastery of students vocabulary by using media crosswords puzzle has a significant effect than in a class that does not apply media crosswords puzzle. The results of the t-test conclusion obtained the observation value 3,01 with degrees of freedom (df) = 32 higher than t-table value (2,03). In conclusion, the findings imply that the alternative ( $H_a$ ) : media crosswords puzzle on vocabulary mastery is accepted and the null hypothesis ( $H_o$ ) is rejected. Therefore, the effect of applying media crosswords puzzle has a significant effect on students vocabulary achievement.

## REFERENCES

- Andriani, N. (2020). *Efektivitas Media Pembelajaran Crosswords Puzzle Dalam Meningkatkan Penguasaan Kosakata Bahasa Jepang Siswa SMA N 5 Semarang*. (Thesis). Fakultas Bahasa dan Sastra, Universitas Negeri Semarang.
- Arikunto, S. (2019). *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
- Ekayanti, A., Amrullah, & Thahir, L. (2019). *The Effectiveness of Using Crosswords Puzzle to Improve Students Vocabulary mastery*. Jurnal LISDAYA. Volume 15 Nomor 2. 148-154.
- Fachrozi, I. F., et al. (2021). *The Use of Crosswords Puzzles as the Way to Increase Students Vocabulary Mastery at SMA Tamansiswa Binjai*. Linguistic, English and Art (LEEA) Journal. Volume 4 Nomor 2. e-ISSN :2597-3819. p-ISSN :2597-9248.
- Hafizah, R., & Pratolo, B. W. (2022). *The Effectiveness of Using Crosswords Puzzle Games to Improve Vocabulary Mastery of the 7th Grade Students of SMP Muhammadiyah 2 Kalasan*. TEFL Journal, Vol. 1, No. 1. 1-2.
- Manullang, U., Lumban Raja, V., & Sari, A. S. P. (2020). *Improving Students Vocabulary Mastery Through Crossword Puzzle Game To the Eighth Grade Students of Smp Swasta Dharma Bakti Medan*. Kairos ELT Journal, 2(2), 128-142. <https://doi.org/10.54367/kairos.v2i2.729>.
- Norhidayah. (2020). *Meningkatkan Kemampuan Penguasaan Kosa-kata Bahasa Inggris Siswa Kelas VII B MTs Negeri 2 Tanah Laut Melalui Penerapan Metode Permainan Tebak Kata (petaka) Tahun Pelajaran 2018/2019*. Cross-Border. 346-356. <https://doi.org/10.31539/leea.v4i2.1851>.
- Nuryati. (2021). *The Use of Word Cross Game to Improve Students' Vocabulary in SMA Muhammadiyah 4 Makassar*. (Thesis). Faculty of Teacher Training and Education, Universitas Muhammadiyah Makassar.



- Profita, D. R., Susilohadi, G., & Sarosa, T. *Improving English Vocabulary Mastery by Using Crosswords Puzzle*. English Education Department of Teacher Training and Education Faculty Sebelas Maret University Surakarta.
- Puspitarini, Y. D., & Hanif, M. (2019). *Using Learning Media to Increase Learning Motivation in Elementary School*. *Antolian Journal of Education*. E-ISSN: 2547-9652. Vol 4, No 2, pp. 53-60.
- Rahayu, A. C., WL, M. Y., & Sophia, T. C. (2021, March). *The use of crossword puzzle in teaching English vocabulary*. In *Proceeding of English Teaching, Literature and linguistics (Eternal) Conference Vol. 1, No. 1*, pp. 271-283).
- Salawazo, I. S., etall. (2020). *Analysis of Students Vocabulary in Learning English*. English Education and Art (LEEA). Volume 3 Nomor 2. E-ISSN: 2597-3819, p-ISSN: 2597-9248. <https://doi.org/10.31539/leea.v3i2.1017>
- Silalahi, F. N., Sunarko, V., Haro, N., & Tarigan, S. N. (2019). *Effect of Crosswords Puzzle Teaching Strategy Towards Students Vocabulary Mastery*. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 3(2), 241-248.
- Tambaritji, V. N., & Atmawidjaja, N. S. (2020). *Improving Students Vocabulary Mastery Using Crosswords Puzzle*. PROJECT (Personal Journal of English Education). Volume 3, No. 5, p-ISSN 2614-6320, e- ISSN 2614-6258.