

HUNTER JOURNAL

Hunter Journal: Vol. 1 No. 1 March 2025

E-ISSN: xxxx-xxxx


STUDENTS' VOCABULARY MASTERY USING VISUAL MEDIA AT SMPN 40 MAKASSAR

Khairul Mujaddid¹, Samtidar², Geminastiti Sakkir³

English Education, Faculty of Language and Literature, Universitas Negeri Makassar^{1,2,3}

Jalan Mallengkeri Raya UNM Parangtambung, 90224, Makassar, Indonesia^{1,2,3}

Correspondence Email: geminastitisakkir@unm.ac.id

Article Info	Abstract
<p>Keywords: <i>Media, Visual, Vocabulary.</i></p> <hr/> <p>The Authors (s): This is an open-access article under the This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.</p> 	<p>This research aims to determine the use of visual media in the form of pictures as an alternative strategy to improve students' vocabulary mastery in learning English. This study used a pre-experimental approach with a total sample of 20 students of class VIIIa 2 at SMPN 40 Makassar. In this study, data collection was carried out by conducting pre-test and post-test. The results of the data analysis showed that the use of visual media as an alternative strategy can improve students' vocabulary mastery. This can be proven by the t-test value lower than P ($0.000 < 0.05$) which means that this study is rejected and is accepted. So, it can be concluded that the use of visual media can improve students' vocabulary in class VIIIa 2 at SMPN 40 Makassar.</p>

1. INTRODUCTION

Vocabulary is the basic foundation in learning English because a broad and comprehensive vocabulary allows students to understand and use English more effectively and efficiently in various communications. Vocabulary is a critical component of language development that students must master since it influences their abilities in speaking, reading, listening and writing. In Indonesia itself, the first foreign language used is English. English is considered a foreign language in Indonesia because Indonesians do not use it for daily communication (Mandasari and Oktaviani, 2018). In addition, English is also one of the subjects taught at school.

In English language learning, vocabulary plays a very important role. It is the foundation of the English language and also the component that connects the four language skills of speaking, reading, listening and writing. Vocabulary itself is the combination or unity of letters that become word/s. It is also considered an important aspect to improve speaking skills. Vocabulary is one of the most important components of language and the initial area of focus for applied linguists (Harmer, 2001).

Vocabulary mastery is an important feature of language learning, particularly in English as a foreign language. Vocabulary mastery is the ability to understand the meaning of words and match each term with a synonym or comparable word in their language (Nation, 1990). Learning vocabulary can help students communicate their thoughts more effectively, both orally and in writing. This indicates that vocabulary mastery focuses on meaning and words. Vocabulary mastery can facilitate students in speaking since it helps students to understand, remember, and use various kinds of words or sentence development effectively. However, many students struggle to expand their vocabulary. Some impacting factors include restricted classroom time, a lack of learning resources, and students' disinterest in learning new vocabulary.

Conventional methods, such as memorizing word lists, are often unproductive and boring for students, necessitating the development of more imaginative and engaging methods to assist them in mastering vocabulary. Conventional teaching approaches, which are sometimes boring and decontextualized, make it difficult for many students to expand their vocabulary. There are several methods to help students improve their vocabulary mastery, one of which is to use digital because it is supported by the development of the digital era. Digital era now, technology has become an essential element of daily life, including education. The growth of digital technology has produced substantial changes in the realm of education. Learning using interactive media can improve student engagement and accelerate the learning process (Clark and Mayer, 2011).

Visual media is one of the media aids or alternative teaching aids that can be used in the learning process and can be enjoyed through the five senses of the eye. There are many forms of visual media such as videos, pictures, posters, cartoons, and many more. Visual media refers to various forms of visual representations generated or displayed through digital technology for educational purposes. And visual media includes various forms such as images, videos, animations, and infographics that can be accessed through digital devices. In addition, the use of visual media with digital technology offers greater flexibility in learning. It can be accessed through digital devices such as computers, tablets and smartphones, as well as online platforms such as websites, apps and educational software. Visual media using digital technology is more practical when presented in the form of soft files.

Visual media helps students easily accelerate receiving learning materials, attract attention, and strengthen students' memories so that students do not forget and ignore the material that has been delivered. In addition, visual media enables more interactive and participatory learning. Digital vocabulary games, interactive quizzes, and multimedia projects allow students to actively participate in the learning process. This method not only boosts students' learning motivation but also allows them to learn independently and at their own pace. Students are expected to absorb learning information more profoundly when visual media is used, resulting in better comprehension. The inclusion of visual elements in learning can help students grasp and retain knowledge better. Images and videos give a visual context that allows students to correlate new words with real-world objects or situations (Mayer, 2009), making it easier for them to recall and use the vocabulary in appropriate scenarios. This case corresponds to the problems found in SMPN 40 Makassar and accordance with the implementation of visual media to improve students' vocabulary mastery.

SMPN 40 Makassar is a junior high school located in Makassar city. Like other junior high schools in general, this school teaches English as a compulsory subject. The problem that occurs at SMPN 40 Makassar for English is a vocabulary problem. Based on the observations conducted by the researcher, it shows that most of the students have problems mastering vocabulary. The problem is influenced by the learning method taught by the teacher, which is less interesting for students to learn. So that it makes students feel bored and less motivated to

participate in English learning. Therefore, visual media is one of the learning media that can attract students' interest in the English learning process.

2. THEORETICAL BASIS

2.1 Vocabulary

Vocabulary is one of the language skills. According to Hornby (2015), vocabulary is the total number of words used or understood by a person in a specific language. Vocabulary itself is the combination or unity of letters that become word/s. According to Linse (2005:121), vocabulary is the set of terms that a person is familiar with, Without the acquaintance of vocabulary, language wouldn't exist. Vocabulary constructs words that have an impact on developing ideas and the means of enhancing people's thoughts.

According to Hatch and Brown (1995:370), receptive vocabulary and productive vocabulary are the two categories of vocabulary that have been distinguished. According to Mardianawati (2012:11), there are five aspects of vocabulary which are needed to be learned by the students. They are (1) Meaning; (2) Spelling; (3) Pronunciation; (4) Word Classes and (5) Word Use.

Vocabulary is important for students to support their four language skills (David, 1991: 9). So, it is for this reason that it is very important to teach vocabulary to students. Vocabulary knowledge is often seen as an important tool for foreign language learners as a limited vocabulary in a foreign language will hinder successful communication. Underscoring the importance of vocabulary mastery. The importance of vocabulary is demonstrated every day in and out of school. In the classroom, high-achieving students have the most vocabulary.

According to Schmitt (2000), vocabulary mastery includes not only the ability to memorize words, but also an understanding of various aspects of their meaning and use in everyday conversation. According to Cameron (2001), vocabulary mastery includes understanding the meaning of words, their application in grammatical structures, and their relationship with other vocabulary. Mastery of vocabulary is important for learning English because the potential for wider knowledge can be known by mastering vocabulary (Schmitt, 2000: 5). Furthermore, according to Vossoughi and Zargar (2009: 80), a lack of command of vocabulary and a lack of grasp of meaning will make communication difficult and meaningless. Vocabulary mastery is an important feature of language development since it is a foundational component that supports language skills including reading, writing, speaking, and listening.

According to Nation (2001), Vocabulary mastery is crucial in language learning for a number of reasons: (1) Effective communication: A large vocabulary enables people to express ideas, opinions, and feelings more accurately and clearly, (2) Reading skills: Learners with a strong command of vocabulary will find it simpler to comprehend difficult texts and gain new knowledge through reading, (3) Improved writing skills: Having a large vocabulary allows students to write richer and more expressive writings, (4) Improved speaking skills: With a larger vocabulary, students can communicate more successfully in both official and casual settings. This means that improving one's vocabulary will improve one's ability to communicate effectively as well as articulate thoughts.

2.2 Visual Media

Visual media is a media that conveys messages or information through visual elements, such as images, animations, videos, graphics, and videos. According to Heinich, Molenda, Russell, and Smaldino (2002), visual media are tools or materials that use visual features to transmit messages, such as images, graphs, infographics, movies, and three-dimensional models. The

use of media is meant to help students understand, learn faster, and retain more information. Moreover, Mardianti & Eliza (2022) also stated that visual media comprised tangible objects that could be seen and felt, such as playing cards, realia maps, and pictures. In addition, visual media uses the sense of sight to better deliver messages, and it is frequently paired with text or sound to clarify information.

Heinrich et al. (2002) define many types of visual media that are commonly utilized in education. The book *Teaching Media* describes the following forms of visual media: Still pictures, graphics, poster, model, maps, globe, transparencies, film and video, and interactive multimedia.

Using visual media to learning vocabulary was very useful and important. Words from different cultures or nations make up vocabulary. It took a long time for students to remember them completely. teacher needed to provide content that their students could learn and remembered over time. When teaching vocabulary, the visual media used could help students to remember what they have learnt. In addition, visual media enables more interactive and participatory learning. There are various advantages to using visual media in vocabulary mastery, including: (1) Attracts Students' Attention: Visual media is more interesting than text, so it can increase students' interest and motivation in learning vocabulary (Mayer, 2009). (2) Facilitate Comprehension: Pictures and videos help students understand the meaning of new words by providing a clear visual context (Paivio, 1990). (3) Improves Retention: Information conveyed through visual media is more easily remembered by students (Clark & Lyons, 2010). (4) Reduces Cognitive Load: Visual media helps students understand complex concepts in a simpler and more structured way (Sweller, 1994). (5) Supports Independent Learning: Visual media allows students to learn independently and at their own pace (Heinich et al., 2002).

3. RESEARCH METHODS

This study used a pre-experimental design of research to determine whether using visual media as an alternative strategy can significantly increase student learning. According to Creswell (2009), pre-experimental designs involve the researcher studying a single group and implementing an intervention during the experiment. The research was conducted using one group or class as the subject. There were pre- and post-tests conducted before the assignment was given out. The researcher conducted research in class VIII at SMPN 40 Makassar odd semester of the 2024-2025 school year the researcher conducted research at SMPN 40 Makassar which is located at Jalan Aroeppala, Kec. Rappocini, Makassar City, South Sulawesi the participants in this research were class VIII/2 students. The sampling technique used by the researcher in this research is the cluster random sampling technique to obtain samples.

In this study, the research instrument used is a vocabulary test, which will consist of questions relating to specific examples. The test will consist of 20 question topics for the pre-test and post-test, with each question topic on both tests having the same level of difficulty. After conducting the pre-teist, learning will be conducted using visual media in the form of pictures that are displayed through digital, namely projectors.

In collecting data, researchers used pre-test and post-test. Pre-test was given to the subjects before visual media was applied. Meanwhile, the post-test was given after visual media was applied to English learning. Researchers used pre-test and post-test which included three stages, namely pretest, treatment, and post-test.

- a. Pre-test: Before the students receive the treatment, the researcher will provide a pre-test. A multiple-choice test with twenty-five questions will be administered by the researcher to students as part of a vocabulary assessment. This pre-test attempts to assess the students' baseline vocabulary.

- b. Treatment: In this treatment, the researcher gave treatment to students. The treatment was conducted in four meetings.
- c. Posttest: After treatment, the post-test will be administered at the last meeting. The researcher will employ a student vocabulary test in the post-test, which will be administered as a multiple-choice exam with twenty-five question types. The purpose of the post-test is to gather information about students' vocabulary knowledge following treatment.

After collecting data, the researcher analyzes the data to draw conclusions from all the data that has been obtained. The data analyzed by researchers are the results of distributing pre test and posttest to students so that researchers can see the results of students' ability to visual media in vocabulary mastery. The data collected from the pre-test and post-test will be examined by the researcher. To evaluate the data, SPSS (Statistical Package for Social Sciences) will be used. Scoring the student correct of pre-test and post-test was obtained by calculating as below:

$$students\ score = \frac{the\ number\ of\ student\ correct\ answer}{total\ score} \times 100$$

This formula will be used to determine the frequency and percentage of the students' scoring rate on the pre- and post-tests:

$$P = \frac{f}{N} \times 100\%$$

- P : Percentage
- F : Frequency
- N : Total Number of Sample

(Gay,2006)

The t-test is used below to measure the significant difference between the pre- and post-test results:

$$\bar{D} = \frac{\sum D}{N}$$

- \bar{D} : The mean score of deviation
- $\sum D$: The total score of difference
- N : The total number of students

4. RESULTS AND DISCUSSION

This section states the analyzed data which is tabulated statistically. It presents the frequency and rate percentage of the pre-test and post-test scores, Normality test, student paired samples statistics, and students T-test of pre-test and post-test.

4.1. The Frequency and Rate Percentage of the Pre-test and Post-test Scores

Students' pre- and post-test scores were measured using a student rating system of excellent, good, fair, and poor. Student scores are classified as follows:

Table 1 Preii-test Scoreii Classification

No	Classification	Predicate	Score	Frequency	Percentage
1	Excellent	A	93-100	-	0%
2	Good	B	84-92	-	0%

3	Fair	C	75-83	-	0%
4	Poor	D	<75	20	100%
	Total	20	100	%	

The data in table 1 before the treatment the researcher gave a pre-test and the above shows that 0 students got very good scores (0%), 0 student got good scores (0%), 0 student got fair scores (0%), and 20 students poor scores (100%).

Table 2 Post-test Scoreii Classification

No	Classification	Predicate	Score	Frequency	Percentage
1	Excellent	A	93-100	9	45%
2	Good	B	84-92	8	40%
3	Fair	C	75-83	3	15%
4	Poor	D	<75	0	0%
	Total	20	100 %		

Based on the data in Table 2, After implementing the treatment, considerable improvements were seen in students' vocabulary mastery. It that 9 students got excellent scores (45%), 8 students got good scores (40%), 3 students got fair scores (15%), and there were not students who got poor scores (0%).

4. 2. Normality Test

The normality test is carried out on pretest and posttest data which aims to determine whether the data comes from a normally distributed population. In this test, the Shapiro-Wilk method was used with a significance level of 5% or 0.05. The hypothesis testing criteria are as follows:

If $[P] \text{ value} \geq 0,05$ then the data is from a normally distributed population

If $[P] \text{ value} < 0,05$ then the data is from a population that is not normally distributed

The results of the pretest and posttest data normality test and using IBM SPSS version 27 are presented in Table 3 below:

Tabel 3 SPSS Result of Normality Test

	Shapiro-Wilk		
	Statistic	df	Sig.
Pre-test	.920	20	.098
Post-teist	.910	20	.065

Based on Table 3, it can be seen that the sig value for pretest data is 0.098 indicating that $0.098 \geq 0.05$ and the sig value for posttest data is 0.065 indicating that $0.065 \geq 0.05$, so in accordance with the testing criteria, the posttest data comes from a normally distributed population.

4. 3. Students Paired Samples Statistics

Table 4 Paired Samples Statistics

Paired Samples Statistics					
	Meian	N	Std. Deviation	Std. Error Meian	
Pair	Prei-Teist	55.00	20	14.393	3.218
	Post-Teist	92.40	20	6.573	1.470

Examining Table 4, it is clear that the pre-test mean score was 55, with a standard deviation of 14.393. In contrast, the post-test mean score was 92.40, with a standard deviation of 6.573. These statistics show a significant improvement in students' vocabulary mastery ability after the implementation of learning using visual media. The marked increase in the post-test mean score, combined with the decrease in standard deviation, indicates a more consistent and higher level of performance among the students after receiving the treatment. Therefore, it can be concluded that the use of visual media in learning has a great and positive impact on improving students' vocabulary mastery.

4. 4. Students T-test of Pre-test and Post-test

Table 5 T-test of Pre-test and Post-test

		Paired Sample Test							
		Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Differences	T	Df	Sig. (2-tailed)		
				Lower	Upper				
Pair 1	Pre-Test	- 37.400	13.975	3.125	- 43.941	- 30.859	- 11.968	19	.000
	Post-Test								

A t-test was used to determine whether there was a significant difference in student results before and after the test. The t-test's criteria state that any probability value greater than 0.05 is considered invalid. As seen in Table 4.6, the probability value, 0.000, is much less than the level of significance (0.05). As a result, the null hypothesis (H0) is strongly rejected, and the alternative hypothesis (H1) is accepted. Given these data, it is acceptable to conclude that the study's hypothesis H1 is accurate. This suggests that using visual media in English language learning can improve the vocabulary mastery of second-grade students of SMPN 40 Makassar.

4.5. Discussion

Based on the findings above, data from the analysis of the pre-experimental class can be presented as follows. The research findings indicate the use of visual media in learning can improve students' vocabulary mastery at SMPN 40 Makassar. The conclusion of this study is supported by the results of the pre-test and post-test of students, as well as the results of the hypothesis test obtained.

The researcher specifically chose visual media as an alternative method and this aligns with (Dongoran, 2024), visual media makes it simple for children to absorb information more quickly, grab their attention, and improve their memory. Meanwhile, visual media is one of the media aids or alternative teaching aids that can be used in the learning process and can be enjoyed through the five senses of the eye. Students can reinforce their learning with the use of visual aids. Images, for instance, can be used as a teaching tool to help students learn English and its vocabulary more quickly.

This study found a significant conclusion that the use of visual media in learning can improve students' vocabulary mastery. This method also increases students' motivation to learn and allows them to learn independently. When using visual media, students can absorb learning

information more deeply, leading to better understanding. By using visual media, researchers provide alternative learning strategies in English learning. In particular, the use of visual media has proven to be an engaging and memorable learning aid, helping students expand and hone their vocabulary in a fun and interactive way.

Vocabulary mastery is a key aspect of language learning, particularly for English as a foreign language. According to Merry Linus, and Smaldino (2017), vocabulary is a necessary part of language learning and teaching. Understanding a language will be tough unless you know or understand a particular amount of vocabulary. Learning vocabulary can help students communicate their ideas more effectively, both speaking and in writing. Vocabulary mastery can help students improve their speaking skills by allowing them to grasp, retain, and successfully apply various sorts of words or sentence structures.

In particular, attention was drawn to the significant increase in students' vocabulary mastery after using visual media. Data from Table 3 shows that the average pretest score of students before using visual media was 55.00. However, after receiving the treatment, the average post-test score increased significantly, reaching 92.40. This confirms that this learning strategy is able to improve students' vocabulary skills. In addition, attention to the comparison between the average scores of the initial post-test and pre-test in the experimental class shows a substantial increase.

The significance value found is 0.000, which is clearly lower than the significance limit of 0.005. This fact shows that the results obtained are not just coincidental, but reach a high level of statistical significance. Therefore, it can be concluded that visual media not only plays an important role in improving students' vocabulary mastery, but also provides strong empirical evidence of its effectiveness. These findings provide a strong foundation to support the further implementation of visual media in learning contexts, especially to improve students' vocabulary skills at the junior high school level.

The results of this study are supported by Parede, Mogeia, and Andreas (2022), with the research title "Improving Students' Vocab title with Visual Media," which aims to find out whether the use of graphics and images can help students learn good words or not. The results of their research show that the use of visual media images and cartoons can improve students' mastery of English words. The second research from Marzuki (2015) entitled "Improving Students' Vocabulary Mastery Using Picture Media" was conducted in class III at SDN 010 Kepenuhan. The results showed that picture media can improve students' vocabulary mastery at SDN 010 Kepenuhan. The difference between the results of this study in terms of the place of research, namely at the elementary and junior high school levels. The third research from Rahman, Hassan, and Manu (2024), entitled "The Use of Picture-Based English Materials to Improve Students' Vocabulary Mastery for States Elementary Schools." This study aims to find out how to use visual media in the form of images to help students be more proficient in improving their vocabulary. The results of this study show that the use of pictures as a teaching and learning tool can provide a positive reaction in the process of teaching and learning vocabulary and also increase students' learning motivation. And the last research from Dongoran (2024), the results of this study showed that the average value of the experimental class after using visual materials was higher than the average value of the control class. So that this research is said to be successful in helping the learning process in mastering vocabulary to be more effective and motivating teachers to use visual materials.

Finally, the results obtained from using visual media in the form of pictures to master vocabulary not only facilitated the learning process but also succeeded in creating an enjoyable learning experience for students. This overall experience confirms that the use of visual media is not just a learning tool but a means to increase students' interest, motivation, and engagement in the English learning process.

5. CONCLUSION

The research conducted using pre-test and post-test techniques in grade VIII-2 of SMPN 40 Makassar revealed that students' post-test scores were significantly higher than their pre-test scores. The average post-test score was 92.40, compared to 55.00 in the pre-test, with a T-test score of 0.000 indicating a significant improvement. These findings demonstrate that the use of visual media as a learning tool effectively enhances students' vocabulary mastery.

The study concludes that visual media significantly improves students' vocabulary mastery by actively involving them in the learning process. This approach not only helps expand and deepen their vocabulary but also fosters an interactive and enjoyable learning environment. Therefore, visual media serves as an effective alternative strategy for enhancing students' language skills and vocabulary mastery.

REFERENCE

- Abduh, A., Sakkir, G., Rosmaladewi, R., Andrew, M., & Yasdin, Y. (2022). Teachers' Perceptions of English Teaching Strategies in the Current Curriculum Change. *International Journal of Language Education*, 4(6), 437-444.
- Andrade, F. J., Sheilleiy, J. T., Weitzel, W. C., Weibb, M. R., Gamez, G., Ray, S. J., & Hieiftjei, G. M. (2008). Atmospheric pressure chemical ionization source. 1. Ionization of compounds in the gas phase. *Analytical chemistry*, 80(8), 2646-2653.
- Arista, W. J., & Sutarsyah, C. (2013). The Implementation of Projected Picture in Increasing Students' English Vocabulary Achievement (Doctoral dissertation, Lampung University).
- Atmowardoyo, H., Sakkir, G., & Sakkir, R. I. (2023). The Characteristics of Good Language Learners in Indonesia EFL Context. *ARRUS Journal of Social Sciences and Humanities*, 3(4), 565-569.
- Barbe, K., Sakkir, G., Syafitri, E., & Dollah, S. (2023). Using illustration images to enhance junior high school students' writing skills. *Journal of Language Learning and Assessment*, 1-8.
- Clark, R. C., & Lyons, C. (2010). *Graphics for learning: Proven guidelines for planning, designing, and evaluating visuals in training materials*. John Wiley & Sons.
- Clark, R. C., & Mayer, R. E. (2011). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. Pfeiffer.
- Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of mixed methods research*, 3(2), 95-108.
- David. (1991). *A Practical Handbook of Language Teaching*. London: Cassel.
- Dollah, S., Sehuddin, M., & Sakkir, G. (2021). Motivating EFL learners to write using Padlet application. *ELT Worldwide*, 8(2), 240-254.
- Gay, L.R., Mills, Geoffrey E., & Airasian, P. (2006). *Educational Research: Competencies for Analysis and Application*. Eight Edition. New Jearsey: Pearson Prentice Hall
- Harmer, J. (2001). *The practice of English language teaching*. Essex. Longman Preiss.
- Hernandez, TA (2008). Integrative motivation as a predictor of achievement in the foreign language classroom. *Applied Language Learning*, 18, 1-15.
- Hatch, E., & Brown, C. (1995). *Vocabulary, semantics, and language education*. Cambridge University Preiss, 40 West 20th Street, New York, NY 10011- 4211 (hardback: ISBN-0-521-47409-4; paperback: ISBN-0-521-47942-8)
- Heinich, R., Molenda, M., Russell, J. D., & Smaldino, S. E. (2002). *Instructional Media and Technologies for Learning*. Prentice Hall.
- Hornby, A. S., Wehmeer, S., & Ashby, M. (2000). *Oxford Advanced Learner's Dictionary*: Oxford University Preiss. New York City, US A.

- Linsei, C. T. (2005). *Practical English language teaching: Young learners*. McGraw-Hill.
- Mandasari, B., & Oktaviani, L. (2018). English language learning strategies: an exploratory study of management and engineering students. *Premise: Journal of English Education and Applied Linguistics*, 7(2), 61-78.
- Mardianawati, L. I. Ei. S. (2012). *Vocabulary Teaching Strategies Used by Teachers of Junior High School*. Unpublished Bachelor Thesis, Purwokerto: Muhammadiyah University of Purwokerto, 11.
- Mardianti, N., & Eliza, Ei. (2022). The Use of Visual Media in Teaching Vocabulary. *Elp (Journal of English Language Pedagogy)*, 7(2), 52-61.
- Marzuki, H. (2015). *Improving students' vocabulary mastery by using pictures media at the third grade of sdn 010 Kepenuhan (Doctoral dissertation, Universitas Pasir Pengaraian)*.
- Mayer, R. Ei. (2009). *Multimedia Learning*. Cambridge University Preiss.
- Merchant, Z., Goetz, Ei. T., Cifuentes, L., Keeney-Kennicutt, W., & Davis, T. J. (2014). Effectiveness of virtual reality-based instruction on students' learning outcomes in K-12 and higher education: A meta-analysis. *Computers & education*, 70, 29-40.
- Muttaqien, F. (2017). *Penggunaan media audio-visual dan aktivitas belajar dalam meningkatkan hasil belajar vocabulary siswa pada mata pelajaran bahasa inggris kelas x (Quasi experiment: SMAN 8 Garut)*. *Jurnal Wawasan Ilmiah*, 8(1).
- Nation, I. S., (1990). *Teaching and Learning Vocabulary*. New York: Newbury House.
- Nation, I. S., & Webb, S. A. (2011). *Researching and analyzing vocabulary*. Boston, MA: Heinle, Cengage Learning.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. (No Title).
- Paivio, A. (1990). *Mental representations: A dual coding approach*. Oxford university press.
- Parede, M. R., Mogeia, T., & Andreias, F. A. (2022). Improving Students' vocabulary by Visual Media. *JoTELL: Journal of Teaching English, Linguistics, and Literature*, 1(9), 1049-1056.
- Rahman, A., Hassan, A. J., & Manu, S. M. T. (2024). The Use of Picture-Based English Materials to Improve Students' Vocabulary Mastery for States Elementary Schools. *Journal of Language and Literature Studies*, 4(1), 135-149.
- Ramadhan, K., & Zaharani, H. (2021). The Effect of Word Wall Media on Students' vocabulary Mastery. *Jurnal Mahasiswa Fakultas Ilmu Sosial dan Kependidikan*, 2(1), 31-40.
- Sakkir, G., & Syamsuddin, N. A. (2023). Students' perceptions of Duolingo Mobile assisted language learning (MALL) in learning English vocabulary. *EduLine: Journal of Education and Learning Innovation*, 3(3), 381-388.
- Sakkir, G., Trisnawati, I., & Nurfadhilah, A. S. (2023). The benefits of the Asynchronous Online Learning Model at Post-pandemic Covid-19: students' perception. *ELT Worldwide. Journal of English Language Teaching*, 10(2), 318-327.
- Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge: Cambridge University Preiss.
- Smith, A., & Watson, R. (2011). *"Eco-Innovation and Sustainability Management"*. Springer.
- Suhardi, N. A., Muliati, A., Sakkir, G., & Villarama, J. A. (2023). Increasing students' vocabulary using fairy tales at SMKN 6 Makassar. *Journal of Language Learning and Assessment*, 73-80.
- Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design. *Learning and instruction*, 4(4), 295-312.
- Vossoughi, H., & Zargar, M. (2009). *Using Word-Search-puzzle Games for Improving Vocabulary Knowledge of Iranian EFL Learners*. *Journal of Teaching English as a Foreign Language and Literature*, 80.

Weda, S., Sakkir, G., & Sakti, A. E. F. (2023). Students' English Learning Strategies in Dealing with Merdeka Belajar Kampus Merdeka (MBKM) Curriculum in Indonesia: Perceptions and Factors. *ELS Journal on Interdisciplinary Studies in Humanities*, 6(2), 343-356.