

The Effect of Pop Up Book for Students' on Vocabulary Mastery

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Abstract

This research was aimed to find out whether learning by using Pop-up book significantly effects on students' vocabulary, or not. This research is quantitative method in pre experimental method. This research uses one group pre-test and post-test design. The instrument was used test. According to the result of the test, it was found that the students' score before learning by using pop-up book in SMP Negeri 1 Ujung Batu was classified to enough. The students' score after learning by using pop-up book in SMP Negeri 1 Ujung Batu was classified as good. So there was a significant effect using Pop-up book on students' vocabulary Mastery at grade VII SMP Negeri 1 Ujung Batu.

Keywords: Pop-up book, Vocabulary Mastery

Abstrak

Penelitian ini bertujuan untuk menemukan apakah pembelajaran dengan menggunakan buku pop-up berpengaruh signifikan terhadap kosakata siswa atau tidak. Penelitian ini merupakan metode kuantitatif dengan metode pra eksperimen. Penelitian ini menggunakan desain one grup pre-test dan post-test. Instrumen yang digunakan adalah tes. Berdasarkan hasil tes, diperoleh bahwa nilai siswa sebelum pembelajaran dengan menggunakan buku Pop-up di SMP Negeri 1 Ujung Batu tergolong cukup. Nilai siswa setelah pembelajaran dengan menggunakan buku pop-up di SMP Negeri 1 Ujung Batu tergolong baik. Jadi ada pengaruh yang signifikan dari penggunaan buku pop-up terhadap penguasaan kosakata siswa kelas VII SMP Negeri 1 Ujung Batu.

Kata Kunci: Buku Pop-up, Penguasaan Kosakata

INTRODUCTION

Vocabulary is the first thing to learn when learning English. Vocabulary defined as collection of words.¹ Vocabulary is one of

the most important parts in English.

Vocabulary is the core component of listening, speaking, reading, and writing.²

¹ Sri Nardani Hasibuan, Eka Sustri Harida, dan Fitri Rayani Siregar, "The Effect of Watching Film to Students' Vocabulary Mastery at Grade XI SMK Negeri 1 Padangsidimpuan," *English Education: English Journal for Teaching and Learning* 2, no. 1 (2014), <https://doi.org/10.24952/ee.v2i1.117>.

² Syafrizal Syafrizal dan Haerudin Haerudin, "The Implementation of Vocabulary Building Strategy in Teaching English Vocabulary to Young Learners," *Jo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa & Seni Prodi Pendidikan Bahasa Inggris IKIP* 5, no. 1 (30 Juni 2018): 40–48, <https://doi.org/10.33394/jo-elt.v5i1.2296>.

This indicates that vocabulary development is crucial, particularly in high school.

Vocabulary is needed by students because before a person is able to produce language, they have to know the smallest meaningful device of language which is words or vocabulary. Furthermore, the importance of vocabulary learning towards improving and developing students' language skills causes language learning to be increasingly urgent to be carry out more seriously and urgently.³ This is because in learning English, especially when learning the four language skills due the students' low ability to master English vocabulary.

Vocabulary mastery greatly affects language skills⁴. They were still confused about the meaning of those words. They often ask for words in a learning process. They have difficulties when the teacher asks them to make sentences using English to describe people. The problem the researcher found in the class was that they were less enthusiastic about carrying out the learning process. They have difficulty understanding what they read and listen to however, that is students make

mistakes in interpreting the meaning of words in the sentences. In the teaching vocabulary, the teacher must lead with the correct technique. The teacher can create a media that can be applied in the classroom.

Teacher often use media in the classroom because they help students reduce stress and pressure during the learning process. Sometimes students feel stressed because they have to study very hard to master the target language. They are stressed because they feel like they have to deal with words, grammatical structures, unfamiliar. Students often feel uncomfortable, affecting their ability to learn. Learn with media can help them more enjoyable and make them want to learn more. So, Teacher can use pop-up book to teach. Pop-up book can make students more interested in learning English instead of emphazing unfamiliar grammatical structures that students need to learn.

A pop-up book is a unique and interactive type of book that features movable, three-dimensional pages designed to engage readers of all ages. This form of paper engineering has been used for centuries

³ I. Nyoman Suparsa dan Ida Bagus Nyoman Mantra, "Covid-19 Terminologies: The Extent of Student's Vocabulary Acquisition During Learning From Home," *International Journal of Linguistics and Discourse Analytics* 2, no. 1 (1 September 2020): 41–47, <https://doi.org/10.52232/ijolida.v2i1.28>.

⁴ Azizah Amal dan Herlina, "The Influence of Scrabble Games on Vocabulary Mastery in Children 5-6 Years at Taman PAUD Doa Ibu Makassar," *Proceeding of The Internation Conference on Science and Advanced Technology (ICSAT)*, 18 Juni 2023, 697–701.

to create visually captivating books that go beyond traditional flat illustrations. Pop-up books incorporate folding, cutting, and layering techniques to create dynamic, interactive elements that spring to life when the pages are turned.

Pop-up books come in a variety of styles, each offering a different type of interactive experience. Some feature pull-tabs, flaps, rotating wheels, and hidden compartments, while others create elaborate 3D structures that rise from the pages. These books are widely used in children's literature, educational materials, and artistic storytelling, making learning and reading more engaging.

Throughout history, pop-up books have evolved, from their early use in scientific and religious texts to their modern-day popularity in children's books, fairy tales, and interactive storytelling. Their ability to capture attention and enhance visual and tactile learning makes them a valuable tool for both education and entertainment.⁵

Pop-up book has interesting 3D visualization with budging picture when the

user opens the page of the book. Then, the nice arrangement pictures form can illustrate a thing like its real appearance. Its' pictures are used to help students to illustrate the real object. Pop-up book produced for a large variety of audiences, from the youngest child to adults and for every subject area. Also any given pop-up book has multiple potential audiences, and increasingly publishers are aware of that fact.⁶

Thornbury said that it is ideal to use picture in teaching Junior high school. Pictures can be used to explain the meanings or concept in a simple way.⁷ Thornbury says that visualizing is the best way to teach new words for all subjects. It means that the teacher in teaching and learning process can use visual things as media namely Pop-up book that can develop and motivate the students to learn English easily including vocabulary. So, the students can visualize their ideas using the Pop-up book given. Therefore, the other researcher offered the types of pictures that were represented by using media namely Pop-up book.

⁵ Intan Tutik Hardiyanti, Tri Mulyati, dan Abdul Halim, "The Effect of Pop-Up Books on The Sentence Writing Achievement of The Eighth Grade Students' of SMPU Al-Anwari Banyuwangi," *LUNAR* 3, no. 2 (2019): 93–99, <https://doi.org/10.36526/ln.v3i2.1436>.

⁶ Nancy Larson Bluemel dan Rhonda Harris Taylor, *Pop-up Books: A Guide for Teachers and Librarians* (Bloomsbury: ABC-CLIO, 2012).

⁷ Scott Thornbury, *How to Tech Vocabulary* (New York: Bluestone Press, 2014).

Pop-up books, according to Hiebert, offer a thorough method of presenting lexical or vocabulary content because of its interactive and mechanical elements, which helps pupils comprehend and remember concepts.⁸ Pop-up book can combined with various English materials, offering a novel and engaging way to present vocabulary. Pop-up book serve as creative media that stimulate students' imagination, increase their appreciation for books, and enhance their creative mindset, The article argues that introducing pop-up books as a medium for learning is essential for providing students with a shared perspective on words and preventing misinterpretations.⁹

The use of pop-up books is regarded as an effective approach to addressing this issue. The incorporation of engaging and visually appealing English learning materials captures students' attention, making the learning process more enjoyable and interactive. By utilizing this medium, students are more likely to stay focused and actively participate in lessons.

Furthermore, the three-dimensional and dynamic elements of pop-up books enhance students' comprehension by providing a multisensory learning experience. The combination of visual, tactile, and cognitive engagement helps reinforce language concepts, making it easier for students to absorb and retain information. As a result, the material presented by the teacher is more effectively understood and internalized by the students, leading to improved learning outcomes.

METHOD

This study is a quantitative research with experimental research. The research was formed with a pre-experimental design one-group pre-test post-test design. One-Group Pre-test and Post-test Design in order to determine the significant impact of treatment on the class sample. There is a class as a sample of research. The class teach by using Pop-up book, a pre-test is carried out first before giving treatment. The population in this research all the seventh-grade students at SMPN 1 Ujung batu which consists of 1(one)

⁸ Helen Hiebert, *Playing with Pop-Ups: The Art of Dimensional, Moving Paper Designs* (Beverly: Quarry Books, 2014).

⁹ Nindy Susrianty, "The Effect of Pop-Up Books toward Students' Vocabulary Mastery," *ELP:*

Journal of English Language Pedagogy 9, no. 1 (3 Januari 2024): 29-42, <https://doi.org/10.36665/el.p.v9i1.856>.

class with 40 students. This research uses a population sample because the population of this study is small. So, the sample of this research is all the seventh-grade students at SMPN 1 Ujung batu which consists of 40 students. In analysing the data and to decide the hypothesis, this research used independent sample t-test.

RESULT AND DISCUSSION

This research aims to determine the effectiveness of using Pop-up books in enhancing students' vocabulary mastery. The study analyzes data by calculating the mean scores and conducting an independent test to examine the significance of the results. Through this analysis, the researcher seeks to identify whether there is a meaningful improvement in students' vocabulary knowledge after using Pop-up books compared to before.

The research process involves collecting students' test scores from both pre-test and post-test stages. These scores are then statistically analyzed to measure the extent of improvement. The study compares the mean scores from both tests to evaluate the effectiveness of the Pop-up book as a teaching tool. Furthermore, statistical tests are conducted to determine whether the

differences observed in students' vocabulary mastery are statistically significant or occurred by chance.

The results of the study are presented in the form of descriptive statistics, which include the mean scores and other relevant statistical measures. This presentation helps to clearly illustrate the differences in students' vocabulary mastery before and after learning with the Pop-up book. The following section provides a detailed description of the data findings.

Table I. Students Score

No	Descriptive Statistic	Pre-Test	Post-Test
		Score	Score
1	Mean	51.90	81.20
2	Standard Error	1.414	1.191
3	Median	56.00	80
4	Mode	60	80
5	Standard Deviation	8.944	7.535
6	Sample Variance	79.990	56.779
7	Range	32	24
8	Minimum	28	68
9	Maximum	60	92
10	Sum	2076	3248
11	Count	30	30

Based on the table above it can be seen that the difference between pre-test and post-test seem to be significant. The difference in this data description was showed by the mean score where the mean score in pre-test or

before treated by using Pop-up book in learning was lower than the mean score of the students post-test or after learning using Pop-up book. The difference between those mean score was 29.30 gotten from the post-test minus pre-test score (81.20-51.90).

The further explanation about the comparison of the pre-test and post-test of the students vocabulary mastery presented in the table comparison below to see the criteria of the enhancement in the students score.

Table 2. The Comparison Score Pre-Test and Post-Test

Pre Test	Post Test	Enhancement	Comparison Score
51.90	81.20	29.3	0.5

Based on the table above, the researcher found that the mean score in pre-test was 51.90 and mean score in post-test was 81.20. The Enhancement of pre-test and post-test was 29.3 and gain score was 0.5. Based on the criteria, the gain score of 0.5 is in the range of G intervals, which means that the gain that occurs in the pre-test and post-test is included in the high criteria.

For the whole view of the students result, the researcher showed it in the diagram. The comparison of pre-test and post-test showed in the diagram below:

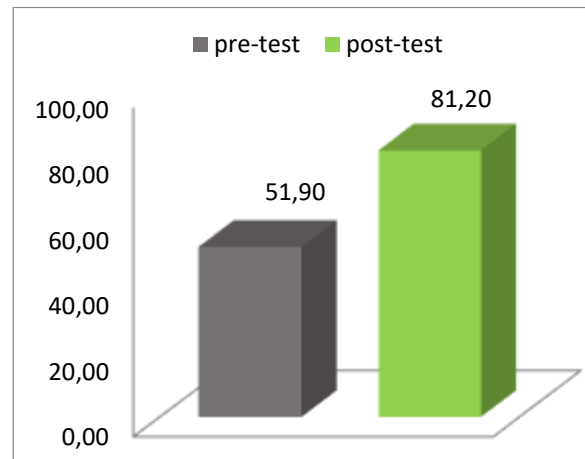


Figure I. Histogram of Comparisons Data of Vocabulary mastery

The diagram above illustrates the improvement in students' vocabulary mastery after the implementation of the Pop-up Book as a learning medium. This increase in students' performance suggests that the use of interactive and visually engaging materials has a positive impact on their ability to understand and remember new vocabulary.

To analyze the effectiveness of using Pop-up Books, the researcher conducted a series of tests, including both a pre-test and a post-test. After calculating the data from the post-test, the researcher found that the results of the pre-test and post-test were normally distributed and homogeneous. This means that the data met the statistical requirements for further hypothesis testing, ensuring that the results obtained were valid and reliable.

Based on these findings, the researcher applied statistical hypothesis testing to determine whether the improvement observed in students' vocabulary mastery was statistically significant. The alternative hypothesis (H_a) proposed in this study stated that: "There is a significant effect of using the Pop-up Book on students' vocabulary mastery at SMP Negeri 1 Ujung Batu." To test this hypothesis, the researcher conducted an independent sample t-test, comparing the mean scores of students before and after the intervention. This test aimed to measure whether the observed improvements were due to the use of the Pop-up Book or merely occurred by chance.

The results of the t-test are presented in the table below, providing detailed statistical evidence of the effectiveness of the Pop-up Book in enhancing students' vocabulary learning.

Table 3 The Result of T-Test

t-count	t-table
8.199	1.685

The hypothesis was 2 criteria. They are if $t\text{-count} < t\text{-table}$ means it was rejected and if $t\text{-count} > t\text{-table}$ means it was accepted. Based on the calculation of the researcher in post-test, the researcher found that t-count

higher than t-table with significance level $\alpha = 0.5$ and $df = n_1 - 1 = 29$. So it means that the hypothesis H_a was accepted and H_o was rejected. So, there was significant effect of using pop-up book on students' vocabulary mastery at grade VII SMP Negeri 1 Ujung Batu. Based on the explanation above, the researcher concluded that the hypothesis alternative (H_a) of this research was accepted where there was a significant effect of using Pop-up book on students' vocabulary mastery and the null hypothesis (H_o) of this research was rejected where there was no a significant effect of using Pop-up book on students' vocabulary mastery.

Based on the data analysis that had found by the researcher, it shown that there was significant effect of using Pop-up book on students' vocabulary mastery at grade VII SMP Negeri 1 Ujung Batu, where the result in pre-test higher than in post-test. In the pre-test, the mean score was 57.6. Meanwhile, in the post test the mean score was 74.3. It means there was significantly effect, because pop-up book is the media that can make students more interested in teaching learning was significant to this research. In other words, there was a significant effect of pop-up book on students' vocabulary mastery at grade VII SMP Negeri 1 Ujung Batu. This

was proved the theory from Thornbury that said it is ideal to use picture in teaching Junior high school. Pictures can be used to explain the meanings or concept in a simple way. Thornbury says that visualizing is the best way to teach new words for all subjects. It means that the teacher in teaching and learning process can use visual things as media namely Pop-up book that can develop and motivate the students to learn English easily including vocabulary.

There are some discussions or previous study about the effect of using Pop-up book on vocabulary mastery such as: The first is conducted by susrianty et. al, where the statement related with this research. it could be concluded that pop-up books gave significance effect on students' vocabulary mastery. Using pop-up books can also attract students' focus during teaching and learning process.¹⁰ Pop-up books gave students a new experience to discover the words and interacted with media.

The second is conducted by Riswalastika et. al, where the statement in the second list is about the level of education where pop-up books are a unique and engaging form of media that can be used to deliver information and promote learning in a fun and interactive way.¹¹ They are suitable for both children and adults and can be enjoyed independently or in a group setting.

The third is conducted by Yusroh, his statement about pop-up book as media related to this research, "vocabulary is the key to acquire the language in learning English. Teacher has to expand students' vocabulary as much as possible by using certain media and also strategies".¹²

The fourth is by Rinny Rorimpandey it can be seen concluded that pop-up book visual media is a suitable tool for teaching vocabulary because the use of pop-up book visual media can influence students' vocabulary development in English.¹³

The last is conducted by Aba and Pontoh, the use of appropriate and varied

¹⁰ Susrianty.

¹¹ Erva Riswalastika, Dias Andris Susanto, dan T. Sri Suwarti, "Using Pop-Up Book in E-Learning to Improve Students Vocabulary Mastery Student," *Edusia: Jurnal Ilmiah Pendidikan Asia* 3, no. 1 (10 Januari 2023): 15–27, <https://doi.org/10.53754/edusia.v3i1.184>.

¹² Yusroh Yusroh, "Developing Pop-Up Book to Teach Vocabulary," *Language-Edu* 9, no. 1

(14 Januari 2020), <https://jim.unisma.ac.id/index.php/LANG/article/view/5325>.

¹³ Rinny Rorimpandey, "Application of Visual Media Pop-Up Book in English Learning in Elementary School," *Journal of English Culture, Language, Literature and Education* 11, no. 1 (6 Maret 2023): 106–24, <https://doi.org/10.53682/eclue.v11i1.5902>.

media namely pop-up book plays a very important role in increasing vocabulary mastery. Students are more enthusiastic and motivated to express words and sentences.¹⁴ The use of data hand media can also improve vocabulary Mastery. And high school teachers should be able to use teaching media according to age and environment situation, as well as materials or themes in the curriculum. Vocabulary is a very important part and vocabulary is also a science to study communication.

All of the discussion above is the statements that support (pro) to this research, where they have in common that pop-up book have significant effect on students' vocabulary mastery, on the other hand there are several discussion that do not support (con) to this research, The contra discusses about the weakness of using pop-up book in learning.

One of weakness conducted by Rorimpandey the weakness of the Visual Media Pop-up Book because some reasons, they are:

1. Processing time tends to be long
2. Demand accuracy
3. The costs incurred are more expensive than books in general.
4. Limited expertise in making the learning media.¹⁵

Kamal et al stated the weakness of pop-up book as follow:

1. Costs tend to be higher
2. The manufacturing process is difficult
3. Requires quite large capital investment
4. Takes more time in making it.¹⁶

Based on the discussion above, it can be concluded that the significant effect of using Pop-up book was bigger than the weakness of using Pop-up book on students' vocabulary mastery. It also can be seen from the students' score in the pre-test and the post-test. Above all the increasing and the improvement showed by the several research and also this research, the weakness may appears to this used of Pop-up book into learning. But those weakness seems to be solved by the appropriate used and the

¹⁴ La Aba dan Meylan Pontoh, "Mastery of English Vocabulary Through Pop Up Method," *Journal of English Teaching and Linguistic Issues (JETLI)* 1, no. 2 (31 Juli 2022): 94–103, <https://doi.org/10.58194/jetli.v1i2.211>.

¹⁵ Rorimpandey, "Application of Visual Media Pop-Up Book in English Learning in Elementary School."

¹⁶ Jana Kamal dkk., "Optimizing Smart Grid Integration: A Comprehensive Analysis Review of Load Flow and Advanced Optimization Strategies," *2024 21st Learning and Technology Conference (L&T)*, Januari 2024, 115–20, <https://doi.org/10.1109/LT60077.2024.10469403>.

appropriate management of the learning and procurement of the learning materials and equipments.

CONCLUSION

The effectiveness of using the Pop-up Book as a learning tool, particularly in enhancing students' vocabulary mastery, was proven to have a significant impact based on the findings of this research. The study provided clear evidence that the integration of Pop-up Books in the learning process contributed positively to students' ability to acquire and retain new vocabulary. The data analysis showed that students experienced a substantial improvement in their vocabulary mastery after being exposed to learning with Pop-up Books. The mean score of students before the treatment (pre-test) was 51.90, indicating that their initial vocabulary mastery was relatively low. However, after receiving the treatment (post-test), the mean score increased to 81.20, demonstrating a remarkable improvement. The total enhancement in students' vocabulary mastery was 29.3 points, placing them within the high proficiency criteria.

Furthermore, statistical analysis using the t-test confirmed the effectiveness of the Pop-up Book in vocabulary learning. The

hypothesis testing results revealed that the t-count (8.199) was greater than the t-table value (1.685), which indicates a statistically significant effect. Since the t-count exceeded the t-table value, the alternative hypothesis (H_a) was accepted, confirming that the use of Pop-up Books had a meaningful and positive impact on students' vocabulary acquisition.

These findings align with previous research emphasizing the importance of interactive and engaging teaching materials in language learning. The use of Pop-up Books provided students with a visually appealing and stimulating learning experience, making it easier for them to grasp and remember new vocabulary. Additionally, the interactive nature of Pop-up Books helped maintain students' focus and motivation, making the learning process more enjoyable and effective.

In conclusion, the results of this study highlight that implementing Pop-up Books in the classroom is a highly effective strategy for improving students' vocabulary mastery. The significant increase in students' test scores and the strong statistical evidence support the claim that Pop-up Books can serve as a powerful educational tool for vocabulary enrichment in English language learning. Teachers should consider

incorporating this method into their lessons to enhance student engagement, improve vocabulary retention, and create a more dynamic learning environment.

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