

The Effectiveness of Using Youtube Videos as Learning Media in English Vocabulary Mastery

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Abstract

This research investigates the effectiveness of using YouTube videos to enhance English vocabulary mastery among second-grade students at SMA Negeri 3 Palu. A quantitative approach with a pre-experimental design was used, involving one group without a control group. Data were collected through a pre-test and post-test, each consisting of 20 multiple-choice questions focusing on verbs and adjectives. The findings revealed a significant improvement in students' vocabulary mastery after the use of YouTube videos. The average pre-test score was 62.3, which increased to 78.9 in the post-test, showing a gain of 16.6 points. Data analysis employed the Wilcoxon Signed-Rank Test, appropriate for non-normally distributed paired data. The test resulted in a statistical value of 0.0 and a p-value of 0.0728 ($p < 0.05$), indicating a significant difference between the pre-test and post-test scores. Consequently, the null hypothesis was rejected, and the alternative hypothesis was accepted, confirming that using YouTube videos significantly improves students' English vocabulary mastery. Based on these results, it is recommended that English teachers integrate YouTube videos into their instruction to create a more engaging and effective learning experience for students. This approach not only builds vocabulary but also increases students' motivation and participation in learning activities.

Keywords: *YouTube Videos, Vocabulary Mastery, Descriptive Text.*

INTRODUCTION

Vocabulary is one of the most fundamental components in acquiring a new language, especially in the context of learning English as a foreign language. It serves not only as the basis for communication but also as a supporting element for other language skills such as speaking, listening, reading, and writing. According to Alqahtani, (2015), vocabulary plays a significant role in helping learners express their thoughts, understand messages, and develop proficiency in various communicative contexts. Without sufficient vocabulary, learners find it difficult to grasp even basic language structures, making it nearly impossible to achieve communicative competence. For senior high school students, particularly those at SMA Negeri 3 Palu, vocabulary mastery is crucial in enabling them to participate in classroom discourse and complete academic tasks in English.

Despite its importance, many students still experience significant challenges in expanding their English vocabulary, and this issue has been observed directly

through discussions and interviews with English teachers and students at SMA Negeri 3 Palu. The problem lies not only in the quantity of words known by the students but also in the lack of understanding regarding word usage, context, and meaning. As noted in the findings of Purwanto and Despita (2022), monotonous teaching strategies, such as those relying on dictionary definitions and memorization, tend to result in lower levels of vocabulary retention, particularly in the long term. These traditional approaches are no longer sufficient in motivating students to actively engage with English vocabulary learning, especially in an era where students are highly exposed to digital content.

In response to this challenge, there is an urgent need to adopt innovative, engaging, and interactive teaching strategies that appeal to students' learning preferences and habits. One such strategy is the use of YouTube videos as a learning medium, which has been shown to combine visual, auditory, and textual information in ways that stimulate learners' cognitive processes and support retention. As explained by Kaboocha & Elyas (2018), YouTube provides a multimodal learning experience that allows students to acquire new vocabulary through real-life contexts and meaningful exposure to authentic language use. Additionally, Hariyono (2020) highlights that students become more enthusiastic and motivated when YouTube is integrated into their English learning environment, leading to greater participation and improved outcomes in vocabulary acquisition.

The relevance of YouTube as a pedagogical tool is further supported by Mayer's (2001) Cognitive Theory of Multimedia Learning, which states that learners understand and retain information more effectively when it is presented using both visual and auditory channels simultaneously. This theoretical basis is directly applicable to the use of YouTube in language education, where learners benefit from seeing words in use while hearing them spoken, thus enhancing comprehension and recall. According to Faizi (2018), YouTube's dynamic and multimodal features enable students to grasp complex concepts, reduce dependence on outdated instructional methods, and promote autonomous learning. These qualities position YouTube as a valuable supplement to traditional classroom materials and as a means of bridging the gap between formal instruction and real-world language usage.

Although several studies have been conducted to evaluate the impact of YouTube on language learning, there remains a research gap in examining its specific effects on vocabulary mastery in the context of Indonesian senior high schools. For instance, research by Hia (2021) and Maulana (2023) showed that YouTube videos improved vocabulary comprehension and student motivation; however, these studies were conducted at different education levels and settings, using either quasi-experimental designs or mixed methods. Unlike those previous works, the current study focuses on a pre-experimental design with a single group of eleventh-grade students at SMA Negeri 3 Palu, making it unique in its focus and methodology.

The primary objective of this study is to determine the effectiveness of using YouTube videos as a learning medium in improving English vocabulary mastery, particularly verbs and adjectives, among second-grade students at SMA Negeri 3 Palu. The hypothesis of this research posits that the integration of YouTube videos

in vocabulary instruction significantly enhances students' vocabulary knowledge. This assumption is grounded not only in cognitive learning theories but also in Sweller's (1998) Cognitive Load Theory, which states that reducing cognitive overload through clear visual aids and contextualized explanations can enhance learning outcomes.

The implications of this study are both theoretical and practical. Theoretically, it contributes to the growing body of research that supports the use of multimedia tools in foreign language learning. Practically, it offers educators concrete strategies to enhance vocabulary instruction by integrating accessible and engaging digital content. As such, the findings of this study are expected to help teachers at SMA Negeri 3 Palu and similar institutions adopt more effective teaching methods that align with students' digital literacy and learning needs. Ultimately, the integration of YouTube into vocabulary instruction not only improves academic achievement but also fosters a more dynamic and student-centered learning environment

METHOD

Research Design

This research applied a quantitative method with a pre-experimental design, specifically the one-group pre-test and post-test design. This design is commonly used in educational research to measure the effect of an intervention on a single group by comparing performance before and after the treatment is applied. No control group was used in this study, meaning that all participants experienced the same treatment. This design allows researchers to observe the impact of the intervention—in this case, the use of YouTube videos as learning media—on students' vocabulary mastery. The students were first given a pre-test to measure their existing vocabulary knowledge. After a series of instructional sessions using YouTube videos, the same students took a post-test to determine any improvements in vocabulary skills. The research design is presented in the following table:

Table 1. One-Group Pre-Test and Post-Test Design

Group	Pre-Test (O ₁)	Treatment (X) using YouTube	Post-Test (O ₂)
Experiment	✓	✓	✓

This table shows that the same group (Class XI B1) underwent the testing process before and after the treatment. The treatment (X) involved learning vocabulary through selected educational YouTube videos, specifically focused on descriptive texts.

Participants and Sampling Procedure

The participants in this study were second-grade students (Class XI) of SMA Negeri 3 Palu, with a total population of 540 students distributed across 15 classes. The sample consisted of 36 students from Class XI B1, selected through purposive sampling based on recommendations from the English teacher, who considered the class appropriate for the intervention due to their learning needs. This sampling method allowed the researcher to focus on a group that would potentially benefit the most from the use of multimedia learning tools. To ensure ethical standards, permission to conduct the study was obtained from the school principal, and the English teacher assisted in coordinating the class schedule. Participants were informed about the purpose of the study, and their participation was voluntary. The researcher also ensured that the content delivered was educational and age-appropriate. The following table presents the distribution of the population:

Table 2. Population Distribution at SMA Negeri 3 Palu

No	Class	Number of Students
1	XI A1	36
2	XI A2	36
3	XI A3	36
4	XI A4	36
5	XI A5	36
6	XI B1	36
7	XI B2	36
8	XI B3	36
9	XI B4	36
10	XI B5	36
11	XI C1	36
12	XI C2	36
13	XI C3	36
14	XI C4	36
15	XI C5	36
Total		540

Data Collection

A total of 40 test items were selected as valid to measure students' vocabulary mastery, with a specific focus on the aspect of word meaning. These items had

Corrected Item-Total Correlation values of 0.300 or higher, indicating sufficient correlation with the total test score and meeting the criteria for validity. Furthermore, the reliability analysis showed that none of the items, if deleted, would significantly improve the overall reliability, confirming that all retained items contributed positively to the instrument's consistency. The test achieved a Cronbach's Alpha value of 0.938, reflecting a very high level of internal consistency and ensuring that the instrument was highly reliable for assessing students' understanding of word meanings in descriptive texts.

The data were collected using a multiple-choice vocabulary test focused on word meaning, as it is considered fundamental to vocabulary mastery. The pre-test and post-test, each consisting of 20 items (10 verbs and 10 adjectives), were drawn from an initial pool of 70 questions. All items reflected vocabulary commonly found in descriptive texts about people, animals, places, and nature. To ensure validity and reliability, the test was piloted on a similar group and analyzed using SPSS through Corrected Item-Total Correlation and Cronbach's Alpha.

Table 3. Valid Vocabulary Test Items

No.	Item Number	Corrected Item-Total Correlation
1	Question 1	0.546
2	Question 4	0.537
3	Question 5	0.387
4	Question 6	0.517
5	Question 7	0.499
6	Question 8	0.608
7	Question 9	0.618
8	Question 10	0.323
9	Question 11	0.487
10	Question 13	0.613
11	Question 14	0.552
12	Question 17	0.728
13	Question 18	0.629
14	Question 19	0.381
15	Question 20	0.335
16	Question 23	0.621

17	Question 29	0.593
18	Question 31	0.77
19	Question 32	0.588
20	Question 34	0.494
21	Question 35	0.622
22	Question 36	0.529
23	Question 37	0.573
24	Question 39	0.771
25	Question 40	0.493
26	Question 41	0.781
27	Question 43	0.753
28	Question 45	0.398
29	Question 46	0.335
30	Question 47	0.35
31	Question 50	0.347
32	Question 51	0.642
33	Question 54	0.336
34	Question 55	0.459
35	Question 56	0.722
36	Question 58	0.707
37	Question 59	0.441
38	Question 63	0.359
39	Question 65	0.648
40	Question 68	0.614

A total of 70 multiple-choice vocabulary questions were initially developed and analyzed using Corrected Item-Total Correlation in SPSS to determine their validity. The analysis showed that 43 items met the validity criteria with correlation values of 0.300 or higher. From these, 40 items were selected to construct the final test instrument based on their statistical validity and relevance to descriptive texts about people, animals, places, and nature. These 40 valid items, consisting of 20

verbs and 20 adjectives, were then equally divided into the pre-test and post-test, ensuring a balanced and reliable measure of students' vocabulary mastery.

Table 4. Reliability Test Result

Type of Test	Result
Cronbach's Alpha	0.930

The Cronbach's Alpha value of 0.930 indicates excellent reliability of the test instrument. This high value suggests a strong internal consistency among the items in the test, meaning that the questions are measuring the same underlying concept consistently. A value above 0.90 generally reflects that the instrument is highly reliable and suitable for use in the study, ensuring that the test provides consistent and trustworthy results.

Intervention

The intervention in this study involved the use of YouTube videos as the main instructional medium for teaching English vocabulary. The treatment was conducted over four meetings between the pre-test and post-test sessions. Each meeting featured a different thematic video relevant to descriptive text, including topics such as people, places, animals, and nature. The procedure followed a structured teaching outline where students:

1. Watched selected YouTube videos with rich descriptive content.
2. Took notes on new vocabulary, particularly focusing on verbs and adjectives.
3. Participated in guided tasks, including matching words to meanings and using them in context.
4. Wrote short descriptive texts based on what they learned from the videos.

The videos were chosen to match the students' curriculum and were delivered in English with clear visuals and narration to support vocabulary acquisition. Students were encouraged to discuss the new words, identify their meanings through context, and use them in sentence construction. No control group was included in the study, as the research aimed to evaluate the outcome of one instructional method rather than compare it with others.

RESULTS

Descriptive Statistics of Pre-Test and Post-Test Scores

To evaluate the effectiveness of YouTube videos in enhancing vocabulary mastery, a descriptive analysis of pre-test and post-test scores was conducted. The average pre-test score was 62.3 (range: 40–80), while the post-test average rose to

78.9 (range: 65–95), indicating a significant improvement in students' vocabulary, especially in verbs and adjectives, after the YouTube-based intervention.

Tabel 5. Comparison of Students' Pre-Test and Post-Test Scores

Test Type	Minimum Score	Maximum Score	Mean Score	Score Gain
Pre-Test	40	80	62.3	-
Post-Test	65	95	78.9	16.6

Source: Data adapted from Sundanis (2025)

Students Learning Outcomes

In this research, the researcher applied the Wilcoxon Signed-Rank Test, which is one of the non-parametric statistical methods used to analyze the difference between two related samples when the data are not normally distributed. The Wilcoxon Signed-Rank Test was chosen to test the hypothesis regarding the effect of using YouTube videos on students' vocabulary mastery by comparing the pre-test and post-test scores of the same group. The results of the Wilcoxon Signed-Rank Test can be seen in the following table:

Tabel 6. Wilcoxon Signed-Rank Test Result

Test	Z-Value	p-Value	Interpretation
Wilcoxon Signed-Rank	0.0	0.0728	Significant (p < 0.05)

Based on the results shown in the table, the Wilcoxon Signed-Rank Test produced a Z-value of 0.0 and a p-value of 0.0728 ($p < 0.05$). This extremely low p-value indicates a statistically significant difference between the pre-test and post-test scores. It suggests that the use of YouTube videos had a positive and significant effect on students' vocabulary mastery. Therefore, the null hypothesis (H_0), which states that YouTube videos do not have a significant effect on vocabulary mastery, is rejected, and the alternative hypothesis (H_a) is accepted.

Discussion

The results of this research confirm the effectiveness of using YouTube videos as a medium to improve students' vocabulary mastery, specifically in descriptive texts. The significant increase in post-test scores compared to the pre-test suggests that the visual and contextual input from YouTube facilitated students' understanding of new vocabulary. This finding is supported by the study of Hafner

& Miller (2011), which emphasized that YouTube can promote autonomous vocabulary learning by engaging students in interactive content. The improved outcomes observed in this study provide empirical evidence that YouTube can be a valuable pedagogical tool in vocabulary instruction, particularly when focused on high-frequency and thematically organized word groups.

From a theoretical perspective, the observed effectiveness aligns with the principles of vocabulary acquisition outlined by Nation (2001), who categorized word knowledge into form, meaning, and use. The YouTube videos used in this study provided exposure to vocabulary items in context, allowing students to connect spoken forms with visual representations and appropriate usage. This connection is essential for developing not only surface-level recognition but also deeper vocabulary mastery. As suggested by Callow & Zammit (2012), multimedia learning especially using video encourages active engagement, which supports long-term vocabulary retention and comprehension, especially in foreign language learning environments.

Comparing the present study to previous research reveals consistent patterns. For example, research by Lestari et.al (2023) found that students who engaged with English YouTube videos regularly showed significant improvement in vocabulary comprehension, as well as in speaking, reading, and listening. Similarly, (Heriyanto, 2015) demonstrated that integrating YouTube into reading lessons could enhance students' vocabulary achievement. However, unlike those studies which used either control groups or mixed methods, this study applied a pre-experimental design with a single-group focus. Although this limits broader generalizability, the approach remains valid for preliminary exploration of intervention impact, particularly in real classroom conditions.

Despite the positive results, the study has limitations. The absence of a control group means that the improvement cannot be fully attributed to the use of YouTube. The sample being limited to one class (XI B1) also limits the generalisability of the findings. In addition, although a short treatment period showed improvement, a longer intervention might have produced stronger results. As suggested by Purwanto and Despita (2022), vocabulary retention is affected by teaching methods, time, and repetition. Future research is recommended to expand the sample size, extend the treatment duration, or compare multiple digital media.

In terms of implementation, the intervention succeeded in engaging students by presenting materials through a format that aligns with their daily digital exposure. The use of descriptive content on familiar topic such as people, animals, and places helped students connect vocabulary with concrete imagery. This approach mirrors the recommendations of Ruscandi et.al (2021), who stated that YouTube can serve as a bridge between students' media habits and formal language instruction. However, challenges such as internet stability and varied student access must be considered when applying this method more broadly, especially in rural or low-resource schools.

Ultimately, this research contributes practical insight into the integration of YouTube as a vocabulary learning tool. It confirms that audiovisual media not only fosters better retention and understanding of vocabulary but also boosts students' motivation and participation in class. As observed by Hariyono (2020), the

inclusion of YouTube in English lessons creates a more engaging learning environment that increases student enthusiasm. Therefore, the findings underscore the importance of aligning teaching strategies with students' learning preferences and the media landscape they interact with daily, making this study relevant both pedagogically and contextually.

Conclusion

This study examined the effectiveness of using YouTube videos as learning media to improve English vocabulary acquisition, particularly verbs and adjectives in descriptive texts among grade XI students at SMA Negeri 3 Palu. Using a pre-experimental design with one group pre-test and post-test, the results showed a significant increase in the mean score from 62.3 to 78.9. YouTube proved to be effective as it combined visual and audio input that aided the understanding of the meaning, usage, and context of words. In addition, it increased student motivation, engagement and participation. Despite limitations such as the absence of a control group and small sample size, this study suggests the use of YouTube to create interactive and contextualised learning. Future research is recommended to involve a wider sample and a comparative design to examine long-term vocabulary retention.

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