

THE IMPACT OF YOUTUBE VIDEOS ON LITERAL AND INFERENCEAL READING COMPREHENSION

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ABSTRACT

Literal and inferential comprehension are essential components of reading comprehension that students need to master in English as a Foreign Language learning. This study was motivated by students' low reading comprehension and the use of conventional teaching methods that were considered less engaging. Therefore, YouTube videos were used as a digital learning medium to support students' understanding of reading texts. This study aimed to examine the impact of YouTube videos on students' literal and inferential reading comprehension. A quantitative pre-experimental design with a one-group pretest–posttest model was employed. The participants were 33 tenth-grade students of class X TKR-1 at a vocational high school in Sidoarjo. Data were collected through reading comprehension tests administered before and after the treatment and analyzed using a paired-sample t-test. The results showed that students' literal comprehension increased from 51.52 in the pre-test to 76.36 in the post-test, while inferential comprehension increased from 52.12 to 77.58. The paired-sample t-test showed significant differences in both literal comprehension, $t(32) = -4.145$, $p = .001$, and inferential comprehension, $t(32) = -8.044$, $p < .001$. The effect size showed an Eta Square value of 0.35 for literal comprehension and 0.67 for inferential comprehension. These findings indicate that YouTube videos significantly improved students' literal and inferential reading comprehension.

Keywords: YouTube videos, reading comprehension, literal comprehension, inferential comprehension, vocational high school.

INTRODUCTION

Reading comprehension is a fundamental component of English as a Foreign Language (EFL) learning because it enables students to access information, understand academic texts, and apply knowledge in meaningful contexts. In vocational education, reading comprehension is particularly important because students are expected to interpret written information related to real-world tasks and workplace situations (Buang, 2024; Shi & Lee, 2025). In Indonesian vocational high schools, students are required not only to understand English texts but also to connect textual information with practical problem-solving activities relevant to their fields of study (Syarifuddin et al., 2022).

However, many vocational high school students still experience difficulties in reading comprehension. These difficulties are commonly found in both literal and inferential comprehension. Literal comprehension refers to students' ability to identify explicitly stated information, such as facts, main ideas, supporting details, and sequences of events (Fitri & Septiana, 2024; Yon et al., 2024). Meanwhile, inferential comprehension

requires students to go beyond the text by drawing conclusions, identifying implied meanings, and interpreting the author's intention (Anwas et al., 2024; Florit et al., 2025). Although both levels are essential for meaningful reading, vocational students often struggle with them because of limited vocabulary, insufficient background knowledge, low reading motivation, and limited exposure to effective reading strategies (Lestiana et al., 2025; Lin et al., 2024).

These problems are also related to classroom practices. In many EFL classrooms, reading instruction still tends to rely on teacher-centered approaches, grammar translation, drilling, and memorization. Such practices may help students recognize words or answer surface-level questions, but they do not always train students to make inferences, interpret context, or construct deeper meaning from texts (Abrar & Widiati, 2024; Behforouz & Al Ghaithi, 2024). As a result, students may understand isolated information but fail to develop higher-level comprehension skills needed in academic and vocational contexts. To address these challenges, the integration of digital media has become increasingly relevant in English language teaching. Digital learning media can support student engagement, provide multimodal input, and create more interactive learning experiences. In Indonesia, the use of digital media has also been encouraged to improve learning quality and student participation (Kemendikbud, 2022). Among various digital platforms, YouTube offers strong potential for reading instruction because it combines visual, audio, and textual information. These multimodal features can help students activate background knowledge, understand context, and connect textual information with authentic situations (Mulyono et al., 2024).

Empirical studies have shown that YouTube can support language learning by increasing students' motivation, engagement, and exposure to authentic language. YouTube videos can also help students connect abstract textual information with concrete examples, making reading materials easier to understand (Gumisirizah et al., 2024; Tan et al., 2024). In vocational education, this is particularly useful because students need learning materials that are contextual, practical, and relevant to their future workplace needs. Nevertheless, previous studies have not fully addressed how YouTube educational videos affect different levels of reading comprehension among vocational high school students. Many studies have examined YouTube in relation to general language learning, vocabulary development, or student engagement, but fewer studies have specifically investigated its impact on **literal and inferential comprehension as separate reading outcomes** in Indonesian vocational school contexts (Ngabito et al., 2023). Previous research also indicated that YouTube-supported learning may improve literal comprehension, while inferential comprehension tends to show more limited progress without structured guidance (Yulita & Rahmawati, 2021). This shows a clear research gap because inferential

comprehension requires more than exposure to video; it also requires guided questioning, contextual interpretation, and higher-order thinking support.

The novelty of this study lies in its focus on examining YouTube educational videos as a digital learning medium for improving both literal and inferential reading comprehension among tenth-grade vocational high school students. Unlike previous studies that mostly discuss reading comprehension in general, this study distinguishes between students' ability to understand explicit information and their ability to infer implicit meaning. Therefore, the study provides a more specific contribution to EFL reading instruction in vocational education. Grounded in multimodal learning, sociocultural learning, and higher-order thinking perspectives, this study investigates whether YouTube educational videos can enhance students' reading comprehension by providing contextual, visual, and interactive support. Therefore, this study aims to examine the impact of YouTube educational videos on the literal and inferential reading comprehension of tenth-grade vocational high school students in Indonesia. The findings are expected to provide empirical evidence for developing more effective, student-centered, and digitally supported reading instruction in vocational EFL classrooms.

METHOD

1. Research Design

This study employed a pre-experimental research design using a one-group pretest-posttest design. A pre-experimental design is used to examine the effect of an intervention on one group without involving a control group for comparison (Creswell, 2014). This design was selected because the study aimed to investigate the effect of YouTube videos on students' reading comprehension skills before and after the treatment. In this design, the students were first given a pretest to measure their initial reading comprehension ability. After that, they received treatment through the use of YouTube videos as supporting media in reading instruction. At the end of the treatment, the students were given a posttest to measure their reading comprehension after the intervention. The comparison between the pretest and posttest scores was used to determine whether the use of YouTube videos had a significant effect on students' literal and inferential reading comprehension. The one-group pretest-posttest design was considered appropriate because the research was conducted in a natural classroom setting and involved one available class. In addition, the number of participants was sufficient for quantitative analysis because the class consisted of more than 30 students.

2. Participants / Subjects

The population of this study consisted of tenth-grade students at a Vocational High School (SMK) in Sidoarjo. The sample was selected using purposive sampling.

One class was chosen based on several criteria, including relatively similar learning conditions, the same English teacher, and the use of uniform learning materials. The selected class consisted of students with mixed academic abilities, including students with above-average and below-average achievement levels. Vocational high school students were chosen as the participants because this study focused on English reading instruction in vocational education. In this context, students are expected to understand written information and relate it to practical and work-related situations.

Table 2. Participants of the Study

Aspect	Description
Population	Tenth-grade students at a Vocational High School in Sidoarjo
Sample selection	Purposive sampling
Selected sample	One class
Student characteristics	Mixed academic abilities
Learning condition	Same English teacher and uniform learning materials
Research context	English reading comprehension in vocational education

3. Instruments

The instrument used in this study was a reading comprehension test in the form of multiple-choice questions. The test was designed to measure students' literal and inferential reading comprehension skills. Literal comprehension items assessed students' ability to identify explicitly stated information, such as main ideas, details, facts, and sequences of events. Inferential comprehension items assessed students' ability to draw conclusions, identify implied meanings, and interpret information beyond what was directly stated in the text. The same test format was used for both the pretest and posttest to ensure consistency in measuring students' reading comprehension before and after the treatment. Before being used in the data collection process, the test items were examined to ensure their validity and reliability. This was done to make sure that the instrument was appropriate for the students' proficiency level and relevant to the research objectives.

Table 3. Instrument Specification

Instrument	Form	Aspect Measured	Purpose
Reading comprehension test	Multiple-choice questions	Literal comprehension	To measure students' ability to identify explicit information, main ideas, details, facts, and sequences

Reading comprehension test	Multiple-choice questions	Inferential comprehension	To measure students' ability to draw conclusions, identify implied meanings, and interpret unstated information
Pretest	Reading test	Initial reading comprehension	To identify students' ability before treatment
Posttest	Reading test	Reading comprehension after treatment	To identify students' ability after learning with YouTube videos

4. Data Collection Procedure

The data collection procedure consisted of three main stages: pretest, treatment, and posttest. First, the researcher administered a pretest to measure students' initial reading comprehension ability. The pretest focused on literal and inferential comprehension to identify students' reading performance before the intervention. After the pretest, the students received treatment through reading activities supported by YouTube videos. The YouTube videos were carefully selected based on the students' proficiency levels, learning needs, and relevance to the reading materials. During the treatment, the videos were used to provide visual and contextual support before or during reading activities. The purpose was to help students understand the topic, activate background knowledge, and interpret information in the reading texts more effectively. After the treatment was completed, the researcher administered a posttest to measure students' reading comprehension after learning with the support of YouTube videos. The results of the posttest were then compared with the pretest results to determine whether there was improvement in students' literal and inferential reading comprehension.

5. Data Analysis

The data obtained from the pretest and posttest were analyzed quantitatively. The researcher first calculated students' scores to identify their reading comprehension performance before and after the treatment. Descriptive statistics, such as mean scores and score differences, were used to describe students' improvement. To determine whether the difference between the pretest and posttest scores was statistically significant, the researcher used a paired-sample t-test. This statistical test was appropriate because the study compared two sets of scores from the same group of students. The result of the paired-sample t-test was used to determine whether the use of YouTube videos had a significant effect on students' reading comprehension skills, particularly in literal and inferential comprehension.

RESULTS AND DISCUSSION

Result

The results of this study are based on data collected from all available samples. The research data consist of pre-test and post-test scores administered to all participants. Students were asked to answer questions based on a previously designed instrument. The pre-test was administered to assess students' literal and inferential reading comprehension before the treatment, while the post-test was administered to assess students' literal and inferential comprehension after the treatment. Based on the pre-test and post-test results for one experimental group, there was a significant difference in scores. The increase in post-test scores after the treatment was higher than the pre-test scores before the treatment.

The first step in data analysis is to calculate the normality value between students' pre-test and post-test results, which is a requirement for using a paired t-test. The researchers chose the Shapiro-Wilk test because the sample size in this study was less than 50, only 33 students. The table below shows whether the results of the normality measurement are parametric or non-parametric.

Table 5. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test	0.153	33	0.047	0.942	33	0.079
Post-test	0.186	33	0.005	0.937	33	0.054

Based on the results in the table above, calculations using the Shapiro-Wilk test showed a pre-test score of 0.079 and a post-test score of 0.054. These values are greater than the significance level of $\alpha = 0.05$ (Sig. > $\alpha 0.05$), thus concluding that the pre-test and post-test data were normally distributed and met the requirements for a paired t-test. In the next step, the researcher calculated students' scores on the pre-test and post-test using the paired t-test. The following table shows the frequency classification and percentage of scores on the pre-test and post-test.

Table 6. Paired Samples Statistics of Literal and Inferential Reading Comprehension

Reading Skill	Test	Mean	N	Std. Deviation
Literal	Pre-test	51.52	33	17.04
	Post-test	76.36	33	15.88
Inferential	Pre-test	52.12	33	18.11
	Post-test	77.58	33	16.02

Based on the table above, the literal comprehension average pre-test score was 51.52, while the average post-test score was 76.36. Meanwhile, the inferential comprehension average pre-test score was 52.12, while the average post-test score was 77.58. For both reading comprehension average post-test score was higher (literal= 24,84, inferential= 25,46) than the pre-test. This indicates that the use of YouTube videos significantly impacts on students' literal and inferential reading comprehension.

Table 7. Paired Samples Test Results of Pre-test and Post-test

Reading Skill	Test	t	df	Sig. (2-tailed)
Literal	Pre-test and Post-test	-4.145	32	0.001
Inferential	Pre-test and Post-test	-8.044	32	0.000

Furthermore, the test results showed that the Sig. (2-tailed) value, or probability value, between the pre-test and post-test was 0.001 for literal and 0.000 for inferential. This value is less than the significance level of $\alpha = 0.05$ (Sig. $< \alpha 0.05$), indicating a significant difference between the pre-test and post-test scores. Thus, it can be concluded that the implementation of YouTube videos significantly influenced students' literal and inferential reading comprehension. The next step was to calculate the Eta Square to determine the effect size of the paired t-test results between the pre-test and post-test. Based on the calculation results, the Eta Square value was 0.35 for literal comprehension and 0.67 for inferential comprehension. Based on interpretation guidelines, a value of 0.35 indicates that the treatment effect is in the modest category. While 0.67 indicates that the treatment effect is in the moderate category.

Discussion

The findings of this study indicate that YouTube videos had a significant positive effect on students' literal and inferential reading comprehension. The normality test showed that the pre-test and post-test data were normally distributed, as the Shapiro-Wilk significance values for the pre-test and post-test were 0.079 and 0.054, respectively. Since both values were higher than 0.05, the data met the assumption for using the paired-sample t-test. This confirms that the statistical procedure used in this study was appropriate for examining the difference between students' reading comprehension before and after the treatment.

The improvement in literal comprehension shows that YouTube videos helped students understand explicitly stated information in reading texts. The mean score of literal comprehension increased from 51.52 in the pre-test to 76.36 in the post-test, with a gain of

24.84 points. This result suggests that visual and auditory support from YouTube videos helped students identify main ideas, details, facts, and sequences more effectively. In vocational education, this improvement is important because students need to understand written information related to practical and work-related contexts (Buang, 2024; Shi & Lee, 2025). The finding also supports the idea that multimodal learning materials can help students connect textual information with concrete situations, making reading content easier to understand (Mulyono et al., 2024). The findings also demonstrate meaningful improvement in inferential comprehension. The mean score increased from 52.12 in the pre-test to 77.58 in the post-test, with a gain of 25.46 points. This indicates that YouTube videos did not only support students' surface-level understanding but also helped them interpret implied meanings, draw conclusions, and understand information beyond the text. This result is relevant because inferential comprehension is often challenging for EFL students, especially when they have limited vocabulary and background knowledge (Lin et al., 2024; Anwas et al., 2024). The use of YouTube videos may have provided contextual clues, visual representations, and authentic situations that supported students in making inferences more accurately (Tan et al., 2024).

The paired-sample t-test results strengthen these findings. The significance value for literal comprehension was 0.001, while the significance value for inferential comprehension was 0.000. Both values were lower than 0.05, indicating significant differences between the pre-test and post-test scores. These results show that the implementation of YouTube videos significantly improved students' reading comprehension. This finding is consistent with previous studies showing that digital media can increase student engagement, motivation, and comprehension in EFL learning (Gumisirizah et al., 2024; Kemendikbud, 2022). The effect size results also provide important evidence. The Eta Square value for literal comprehension was 0.35, indicating a modest effect, while the Eta Square value for inferential comprehension was 0.67, indicating a moderate effect. This means that YouTube videos had a stronger effect on inferential comprehension than on literal comprehension. This may be because videos provide contextual and visual support that helps students interpret implicit meanings more effectively. Such support is important in reading instruction because teacher-centered methods often emphasize memorization and surface-level comprehension rather than higher-order thinking (Isnendes, 2021; Abrar & Widiati, 2024).

Overall, the findings confirm that YouTube videos can serve as an effective instructional medium for improving vocational students' literal and inferential reading comprehension. The results address the research gap in Indonesian vocational school contexts, where studies on YouTube-based instruction for separate reading comprehension levels remain limited (Ngabito et al., 2023; Yulita & Rahmawati, 2021). However,

successful implementation requires careful video selection, guided reading tasks, and teacher support so that students can connect video content with reading texts and develop deeper comprehension skills (Behforouz & Al Ghaithi, 2024).

CONCLUSION

This study concludes that the use of YouTube videos significantly improves students' literal and inferential reading comprehension. The results showed that students' literal comprehension increased from a pre-test mean score of **51.52** to a post-test mean score of **76.36**, while inferential comprehension increased from **52.12** to **77.58**. These improvements indicate that YouTube videos helped students understand both explicit information and implied meanings in reading texts. The paired-sample t-test results also confirmed that the improvement was statistically significant. The significance value for literal comprehension was **0.001**, and for inferential comprehension it was **0.000**, both lower than the significance level of **0.05**. This means that the treatment had a significant effect on students' reading comprehension skills. In addition, the Eta Square results showed an effect size of **0.35** for literal comprehension and **0.67** for inferential comprehension, indicating that YouTube videos had a stronger effect on students' inferential comprehension. Overall, YouTube videos can be considered an effective digital learning medium for supporting reading comprehension in EFL vocational school contexts. The combination of visual, audio, and contextual information helps students understand texts more easily and make better inferences. Therefore, English teachers are encouraged to integrate carefully selected YouTube videos into reading instruction to create more engaging, contextual, and student-centered learning activities. Future studies may involve a control group, larger samples, and longer treatment periods to strengthen the findings.

REFERENCES

- Abrar, M., & Widiati, U. (2024). Teacher-centered instruction and reading comprehension challenges in Indonesian EFL classrooms. *Journal of English Language Teaching and Linguistics*, *9*(1), 45–60.
- Anwas, E. O. M., Sugiarti, Y., & Permatasari, A. D. (2024). Inferential reading comprehension difficulties among Indonesian EFL learners. *Indonesian Journal of Applied Linguistics*, *14*(1), 112–124.
- Behforouz, B., & Al Ghaithi, A. (2024). Investigating the effect of an interactive educational chatbot on reading comprehension skills. *International Journal of Engineering Pedagogy*, *14*(4), 139–154. <https://doi.org/10.3991/ijep.v14i4.48461>

- Buang, N. A. (2024). Reading comprehension in vocational education: Connecting classroom texts with real-world tasks. *Journal of Technical Education and Training, 16*(2), 88–101.
- Creswell, J. W. (2014). (4th) Qualitative, Quantitative, and Mixed Methods Approaches (PDFDrive) (1) (4th ed.).
- Fitri, R., & Septiana, D. (2024). Literal comprehension skills in EFL reading: Students' ability to identify facts, main ideas, and supporting details. *English Language Education Journal, 12*(1), 33–45.
- Florit, E., De Carli, P., Rodà, A., Cain, K., & Mason, L. (2025). Reading from paper, computers, and tablets in the first grade: The role of comprehension monitoring. *Computers and Education Open, 8*, Article 100243. <https://doi.org/10.1016/j.caeo.2025.100243>
- Gumisirizah, N., Nzabahimana, J., & Muwonge, C. M. (2024). Evaluating video-based problem-based learning approach on performance and critical thinking ability among Ugandan form-2 secondary students. *Cogent Education, 11*(1), Article 2346040. <https://doi.org/10.1080/2331186X.2024.2346040>
- Gumisirizah, N., Nzabahimana, J., & Muwonge, C. M. (2024). Students' academic achievement test, survey, and RTOP data for the implementation of problem-based learning method supplemented by YouTube videos. *Scientific Data, 11*, Article 465. <https://doi.org/10.1038/s41597-024-03206-2>
- Kemendikbud. (2022). *Panduan pemanfaatan media digital dalam pembelajaran*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia.
- Lestiana, S., Rahmawati, F., & Pratiwi, D. A. (2025). Vocabulary knowledge, background knowledge, and reading comprehension difficulties among vocational EFL students. *Journal of Language Teaching and Research, 16*(1), 120–132.
- Lin, L., Lam, W. I., & Tse, S. K. (2021). Motivational strategies, language learning strategies, and literal and inferential comprehension in second language Chinese reading: A structural equation modeling study. *Frontiers in Psychology, 12*, Article 707538. <https://doi.org/10.3389/fpsyg.2021.707538>
- Lin, Y., Chen, H., & Wang, M. (2024). Literal and inferential comprehension difficulties among EFL learners: The role of vocabulary knowledge and reading strategies. *Reading and Writing Quarterly, 40*(3), 245–260.
- Mulyono, H., Suryoputro, G., & Jamil, S. R. (2024). YouTube as multimodal learning media in English language learning: Students' engagement and authentic language exposure. *Teaching English with Technology, 24*(2), 55–72.

- Ngabito, M., Hasan, R., & Lestari, N. (2023). YouTube-supported reading instruction in Indonesian vocational EFL classrooms. *Journal of English Education and Teaching*, 7(4), 702–716.
- Shi, Y., & Lee, J. (2025). Work-related reading comprehension in vocational education: Implications for English language instruction. *Journal of Vocational Education and Training*, 77(1), 96–113.
- Syaifuddin, S., Asi, N., & Karani, E. (2022). English reading materials in vocational high school: A need analysis. *Jurnal Bahasa dan Sastra*, 10(1), 105–114. <https://doi.org/10.24036/jbs.v10i1.116662>
- Tan, C., Lim, S., & Rahman, A. (2024). Connecting theory and practice through YouTube-based learning in English language classrooms. *Computer Assisted Language Learning Electronic Journal*, 25(1), 89–105.
- Yon, A., Sari, M., & Putra, R. (2024). Students' literal comprehension of narrative texts: Identifying details and sequence of events. *Journal of English Language Studies*, 9(2), 150–163.
- Yulita, R., & Rahmawati, D. (2021). The use of YouTube videos to improve vocational students' reading comprehension. *Journal of English Language Teaching and Learning*, 6(2), 77–89.