



The Effect of Contextual Clues on the Eleventh Grade Students' Reading Comprehension of Explanation Text at Senior High School

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Article Info	Abstract
Received: 2026-06-08 Revised: 2026-09-11 Accepted: 2026-09-15 Keywords: contextual clues, reading comprehension, explanation text, quasi-experimental research, EFL reading DOI: 10.24256/ideas.v14i2.11127 Corresponding Author: Nuraswadi nuraswadi1987@gmail.com English Education Study Program, Postgraduate Program Universitas Negeri Makassar	<i>This study investigated the effect of contextual clues on the eleventh-grade students' reading comprehension of explanation texts at SMAN 2 Budong-Budong. Reading comprehension is an essential skill in English learning because it enables students to understand written information, infer meaning, identify text structure, and interpret ideas within academic texts. However, preliminary observation showed that many students experienced difficulties in understanding explanation texts due to limited vocabulary, overdependence on dictionaries, word-for-word translation, and lack of effective reading strategies. This research employed a quantitative approach with a quasi-experimental non-equivalent control group pre-test-post-test design. The sample consisted of 41 eleventh-grade students: 21 students in the experimental class and 20 students in the control class. The experimental class was taught using contextual clues, while the control class was taught using conventional instruction. The instrument was a reading comprehension test consisting of 30 multiple-choice items based on explanation texts. The data were analyzed using descriptive statistics, normality testing, homogeneity testing, independent sample t-test, and effect size analysis. The findings showed that the experimental class achieved greater improvement than the control class. The mean score of the control class increased from 44.00 to 57.00, while the mean score of the experimental class increased from 48.41 to 71.11. The independent sample t-test showed a significance value of 0.001, which was lower than 0.05, indicating a significant difference between the two groups. The effect size value was 0.60, categorized as a moderate effect. Therefore, contextual clues significantly improved students' reading comprehension of explanation texts.</i>

1. Introduction

Reading is one of the most important skills in English language learning because it enables students to access information, understand written messages, expand vocabulary, and develop academic knowledge. In English as a Foreign Language (EFL) contexts, reading becomes especially important because students often have limited opportunities to use English in daily communication. Through reading, students can gain exposure to

vocabulary, grammar, text organization, and ideas that support their language development. Grabe and Stoller (2013) explain that reading is a complex cognitive process that requires readers to recognize words, process linguistic structures, connect textual information with prior knowledge, and construct meaning from written texts.

In senior high school English learning, reading comprehension is not limited to pronouncing words or translating sentences. It involves the ability to understand explicit information, infer implicit meaning, identify main ideas, recognize supporting details, and interpret the relationship among ideas. Snow (2002) defines reading comprehension as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. This means that comprehension occurs when readers actively interact with the text, not when they only decode words mechanically.

Reading comprehension is also closely related to vocabulary knowledge. Students who do not understand important words in a text may struggle to understand the whole passage. Nation (2013) argues that vocabulary knowledge is a central component of reading comprehension because word meaning supports the interpretation of sentences and paragraphs. When students encounter many unfamiliar words, they often stop reading, lose concentration, or rely too heavily on dictionaries. This problem is common among EFL learners because their vocabulary exposure is usually limited.

The importance of reading comprehension is highly relevant in the Indonesian school context. English is taught as a foreign language, and students are expected to understand different text types required by the curriculum. One of these text types is explanation text. Explanation text is a genre that explains how and why natural, social, scientific, or cultural phenomena occur. It usually contains a general statement followed by a sequence of explanations. Explanation texts often use cause-and-effect relationships, technical vocabulary, passive voice, action verbs, and sequence connectors. Because of these characteristics, explanation texts require students to understand not only vocabulary but also logical relationships among ideas.

Explanation texts are important for senior high school students because they help develop academic literacy. Students need to understand texts about natural phenomena, social processes, scientific concepts, and real-life events. According to Derewianka and Jones (2016), genre-based learning helps students understand how texts are organized to achieve particular social purposes. In explanation texts, students learn how information is structured logically to explain processes and causal relationships. Therefore, comprehension of explanation texts can support students' scientific understanding, critical thinking, and academic reading competence.

However, reading explanation texts is often challenging for EFL students. Explanation texts usually contain unfamiliar terms, complex sentence structures, and sequential or causal relationships. Students who do not have sufficient vocabulary or reading strategies may find it difficult to understand the text. They may translate every word, depend on dictionaries, or wait for the teacher's explanation. These habits can slow down reading and prevent students from understanding the overall meaning of the passage.

This problem was also found at SMAN 2 Budong-Budong. Based on the thesis data, many eleventh-grade students experienced difficulty in reading English texts, especially explanation texts. The students struggled to understand unfamiliar vocabulary, identify the main idea, interpret sentence meaning, and comprehend the overall message of the text. Some students tended to stop reading when they encountered difficult words. Others relied on word-for-word translation, which made reading slow and less meaningful. These conditions indicated that students needed a reading strategy that could help them infer meaning independently.

One strategy that can help students overcome vocabulary difficulties in reading is the contextual clues strategy. Contextual clues are hints found in sentences, paragraphs, or passages that help readers infer the meaning of unfamiliar words. Gunning, as cited in Efendi (2020), explains that contextual clues enable readers to use surrounding textual information to guess the meaning of unknown words. Similarly, Blachowicz and Fisher (2015) state that using context helps students become more independent readers because they learn to infer word meaning instead of immediately depending on dictionaries or teacher explanation.

Contextual clues may appear in several forms, such as definition clues, synonym clues, antonym clues, example clues, inference clues, cause-and-effect clues, and structural clues. For example, when a sentence defines a difficult word directly, students can use the definition as a clue. When a sentence provides examples, students can infer the general meaning from those examples. When a sentence presents contrast through words such as however or but, students can infer meaning from the opposite idea. These clues help students develop vocabulary inference ability and support comprehension.

The contextual clues strategy is relevant to reading comprehension because it encourages active reading. Instead of reading passively or translating every word, students are guided to observe the surrounding context, identify clues, make predictions, and verify meaning. This process promotes strategic reading. Brown (2007) emphasizes that effective reading instruction should help students use strategies to construct meaning from texts. In this sense, contextual clues can train students to become more analytical, independent, and confident readers.

The strategy is also related to schema theory and interactive reading theory. Schema theory suggests that readers use prior knowledge to understand new information in a text (Anderson, 1984). When students use contextual clues, they connect textual information with their background knowledge to infer meaning. Interactive reading theory also views reading as an interaction between bottom-up processing and top-down processing. Students recognize words and sentence structures while also using prediction, inference, and prior knowledge to construct meaning (Grabe, 2009). Therefore, contextual clues support both linguistic and cognitive aspects of reading.

Previous studies have shown that contextual clues can improve students' reading comprehension. Studies reviewed in the thesis indicate that the context clues strategy has been effective in improving reading comprehension among students at different educational levels. For example, research by Oclarit and Casinillo (2021) found that context clues improved students' comprehension, while Indriana, Aminah, and Dewi (2021) showed that the strategy significantly improved junior high school students' reading comprehension. Other studies also reported that contextual clues helped students understand unfamiliar vocabulary and improve reading scores.

Nevertheless, there is still a research gap. Many previous studies focused on descriptive texts, junior high school students, or general reading comprehension. Fewer studies have examined contextual clues in relation to explanation texts at the senior high school level. Explanation texts are more complex because they involve cause-and-effect relationships, technical vocabulary, and structured processes. Therefore, examining the effect of contextual clues on eleventh-grade students' comprehension of explanation texts is important.

The present study was conducted to address this gap. It investigated whether contextual clues significantly improved eleventh-grade students' reading comprehension of explanation texts at SMAN 2 Budong-Budong. It also examined whether there was a significant difference between students taught using contextual clues and those taught

using conventional instruction. The findings are expected to provide empirical evidence for English teachers, especially in designing reading instruction that helps students infer meaning, reduce dictionary dependence, and understand explanation texts more effectively.

2. Method

This study employed a quantitative approach with a quasi-experimental research design. Specifically, the study used a non-equivalent control group pre-test–post-test design. This design was selected because the researcher used existing classes and did not randomly assign individual students into experimental and control groups. Creswell (2012) explains that quasi-experimental designs are appropriate in educational research when random assignment is difficult or impossible, but the researcher still aims to examine the effect of a treatment.

The research was conducted at SMAN 2 Budong-Budong. The population consisted of all eleventh-grade students in the academic year in which the research was conducted. The sample was selected using cluster random sampling because the population was already organized into classes. Two classes were selected as the research sample. Class XI.1, consisting of 21 students, was assigned as the experimental group, while Class XI.2, consisting of 20 students, served as the control group. Therefore, the total sample consisted of 41 students.

The independent variable in this study was the contextual clues strategy. This strategy refers to the use of contextual information in a sentence or passage to infer the meaning of unfamiliar words. The dependent variable was students' reading comprehension of explanation texts. Reading comprehension was measured through students' scores on a reading comprehension test.

The research instrument was a reading comprehension test in the form of multiple-choice questions. The test consisted of 30 items based on explanation texts. The test was designed to measure students' literal comprehension, inferential comprehension, vocabulary mastery through contextual clues, vocabulary inference ability, recognition of explanation text structure, interpretation of implicit meaning, and understanding of cause-and-effect relationships. Multiple-choice tests were used because they allowed the researcher to measure students' reading comprehension consistently and objectively.

The data collection procedure consisted of three stages: pre-test, treatment, and post-test. First, the pre-test was administered to both the experimental class and the control class to measure students' initial reading comprehension ability before the treatment. Second, the experimental class was taught using the contextual clues strategy. During the treatment, students were guided to identify contextual clues, infer the meaning of unfamiliar words, and understand explanation texts based on definitions, synonyms, antonyms, examples, explanations, and cause-and-effect clues. Meanwhile, the control class was taught using conventional instruction, in which students relied more on teacher explanation and dictionary use. Third, the post-test was administered to both groups to measure students' reading comprehension after the treatment.

The data were analyzed using descriptive and inferential statistics. Descriptive statistics were used to calculate mean scores, standard deviations, minimum scores, maximum scores, and gain scores. Inferential statistics were used to test the research hypothesis. Before hypothesis testing, normality and homogeneity tests were conducted. The Shapiro–Wilk test was used to test normality because the sample size in each group was less than 50. Levene's test was used to examine the homogeneity of variance. After the data met the assumptions of normality and homogeneity, an independent sample t-test was

conducted to determine whether there was a significant difference between the post-test scores of the experimental and control groups. Pallant (2020) states that an independent sample t-test is appropriate for comparing the mean scores of two independent groups.

The significance level used in this study was 0.05. If the significance value was lower than 0.05, the alternative hypothesis was accepted and the null hypothesis was rejected. In addition, effect size analysis was conducted using Cohen's d to determine the magnitude of the treatment effect. Cohen (1988) explains that an effect size of 0.20 is considered small, 0.50 is moderate, and 0.80 or above is large. SPSS was used to support the data analysis process.

3. Result

The findings of this study are presented in five parts: the descriptive statistics of the control class, the descriptive statistics of the experimental class, the comparison of mean scores between the two classes, the prerequisite tests, and the hypothesis testing with effect size analysis.

The control class consisted of 20 students. The descriptive statistics showed that the mean score of the control class increased from 44.00 in the pre-test to 57.00 in the post-test. This indicates that the students in the control class experienced improvement after receiving conventional instruction. The standard deviation increased from 10.52 in the pre-test to 12.56 in the post-test, showing that students' post-test scores became more varied. The minimum score increased from 26.66 to 36.66, while the maximum score increased from 63.33 to 80.00. These results show that both low-achieving and high-achieving students in the control class improved after instruction.

However, the improvement in the control class was still limited. The mean gain score of the control class was 13.00 points. Although conventional instruction contributed to students' learning progress, the level of improvement was not as strong as that achieved by the experimental class. This suggests that teacher explanation and conventional reading activities may help students understand texts, but they may not be sufficient to train students to independently infer meaning from context.

The experimental class consisted of 21 students who were taught using the contextual clues strategy. The descriptive statistics showed that the mean score increased from 48.41 in the pre-test to 71.11 in the post-test. This indicates a substantial improvement in students' reading comprehension after the implementation of contextual clues. The standard deviation decreased slightly from 11.81 to 11.32, suggesting that students' scores became more consistent after the treatment. The minimum score increased from 26.67 to 50.00, while the maximum score increased from 73.33 to 93.33. These findings show that students across different achievement levels benefited from the strategy.

The comparison between the control and experimental classes showed a clear difference. The control class improved by 13.00 points, while the experimental class improved by 22.70 points. The higher gain score of the experimental class indicates that contextual clues produced greater improvement in students' reading comprehension than conventional instruction. This improvement suggests that students who were trained to use contextual clues became more capable of understanding unfamiliar words and interpreting explanation texts.

The post-test mean score of the experimental class was also higher than that of the control class. The control class obtained a post-test mean score of 57.00, while the experimental class obtained a post-test mean score of 71.11. The mean difference between the two classes was 14.11 points. This difference indicates that students taught using

contextual clues achieved better reading comprehension performance than students taught using conventional instruction.

Before conducting hypothesis testing, prerequisite tests were administered. The normality test was conducted using the Shapiro–Wilk test. The results showed that all data were normally distributed because all significance values were greater than 0.05. The control class obtained significance values of 0.760 for the pre-test and 0.245 for the post-test. The experimental class obtained significance values of 0.882 for the pre-test and 0.468 for the post-test. These results indicate that the data met the normality assumption required for parametric testing.

The homogeneity test was conducted using Levene's test. The results showed that the significance value of the pre-test was 0.667 and the significance value of the post-test was 0.892. Since both values were higher than 0.05, the data were considered homogeneous. This means that the variances of the control and experimental groups were relatively equal. Therefore, the independent sample t-test could be used to test the research hypothesis.

The independent sample t-test was conducted to determine whether there was a significant difference between the post-test scores of the control and experimental classes. The result showed that the t-value was 3.783 with a degree of freedom of 39. The significance value was 0.001. Since 0.001 was lower than 0.05, the alternative hypothesis was accepted and the null hypothesis was rejected. This means that there was a statistically significant difference between the students who were taught using contextual clues and those who were taught using conventional instruction.

The effect size analysis showed a Cohen's d value of 0.60. This value is categorized as a moderate effect. The moderate effect size indicates that contextual clues did not only produce statistical significance but also had practical importance in improving students' reading comprehension. In other words, the strategy had a meaningful contribution to students' ability to comprehend explanation texts.

Overall, the results show that contextual clues had a positive and significant effect on students' reading comprehension. Students in the experimental class achieved higher post-test scores, greater mean gain, more consistent score distribution, and better reading comprehension achievement than students in the control class. The strategy helped students infer the meaning of unfamiliar words, understand sentence relationships, and comprehend explanation texts more effectively.

4. Discussion

The findings of this study show that contextual clues significantly improved the eleventh-grade students' reading comprehension of explanation texts at SMAN 2 Budong-Budong. The experimental class achieved a higher improvement than the control class, as shown by the increase in mean score from 48.41 to 71.11. In contrast, the control class improved from 44.00 to 57.00. The greater improvement in the experimental class indicates that contextual clues were more effective than conventional instruction in supporting students' reading comprehension.

This finding is consistent with the theory that reading comprehension depends strongly on vocabulary understanding and strategic processing. Grabe (2009) states that successful reading comprehension involves word recognition, syntactic processing, meaning construction, inference, and the use of background knowledge. When students encounter unfamiliar words, their comprehension may be interrupted. Contextual clues help students overcome this problem by using textual information to infer word meaning. As a result, students can continue reading and understand the text more effectively.

The improvement in the experimental class suggests that students became more active readers. In conventional reading instruction, students often rely on the teacher or dictionary when they encounter difficult vocabulary. This may help them understand individual words, but it does not always develop independent reading strategies. In contrast, contextual clues train students to observe surrounding words, identify hints, predict meanings, and verify their interpretations. This process helps students become more autonomous and strategic readers.

The findings also support schema theory. Anderson (1984) explains that readers use prior knowledge to understand new information. Contextual clues encourage students to activate their background knowledge and connect it with textual clues. For example, when students read an explanation text about natural phenomena, they can use their prior knowledge of the topic and the surrounding sentences to infer the meaning of unfamiliar words. This connection between context and prior knowledge improves comprehension.

The results also support Nation's (2013) view that vocabulary learning and reading comprehension are closely related. Students who can infer word meanings from context may develop stronger vocabulary knowledge and better text comprehension. In this study, students in the experimental class were trained to infer meanings through definitions, synonyms, antonyms, examples, explanations, and cause-and-effect clues. These activities helped them understand the vocabulary used in explanation texts and improved their overall comprehension.

The significance value of 0.001 confirms that the difference between the experimental and control groups was statistically significant. This means that the improvement in the experimental class was not accidental. The contextual clues strategy had a real effect on students' reading comprehension achievement. This result supports previous studies that found contextual clues effective in improving reading comprehension. For example, Oclarit and Casinillo (2021) reported that context clues improved students' reading comprehension, while Indriana, Aminah, and Dewi (2021) found that the strategy significantly improved students' reading achievement.

The effect size value of 0.60 indicates a moderate effect. This finding is important because statistical significance alone does not show how strong the effect is. Cohen (1988) explains that effect size provides information about the magnitude of an intervention. In this study, the moderate effect shows that contextual clues had a meaningful impact on students' comprehension, although it was not the only factor influencing their achievement. Other factors, such as students' prior vocabulary knowledge, motivation, reading habits, and teacher guidance, may also have contributed to the results.

The contextual clues strategy was particularly suitable for explanation texts. Explanation texts often contain technical vocabulary and cause-and-effect relationships. Students who do not understand key vocabulary may fail to understand how a process occurs or why a phenomenon happens. Contextual clues help students infer meanings from surrounding information and understand the logical flow of the text. For example, cause-and-effect clues are highly relevant because explanation texts often use connectors such as because, therefore, as a result, and consequently. These connectors help students identify relationships among ideas.

The difference between the experimental and control classes can also be explained by the difference in classroom learning processes. In the control class, instruction relied more on conventional teaching, teacher explanation, and dictionary use. Students may have understood some vocabulary, but they were less trained to infer meaning independently. In the experimental class, students were guided to use contextual information actively. This

encouraged them to engage with the text, think about word meaning, and construct comprehension through analysis.

Contextual clues also reduced students' dependence on dictionaries. Excessive dictionary use can interrupt reading flow because students stop repeatedly to look up unfamiliar words. While dictionaries are useful, overdependence on them can prevent students from developing inference skills. The contextual clues strategy helps students continue reading and use the text itself as a source of meaning. This supports more fluent and efficient reading.

In addition, contextual clues helped students develop inferential comprehension. The reading test in this study measured literal and inferential comprehension. Literal comprehension involves understanding information explicitly stated in the text, while inferential comprehension requires students to interpret implied meaning. Contextual clues are closely related to inferential comprehension because students must use available clues to infer word meaning or sentence meaning. Therefore, the strategy trained students to move beyond surface-level reading.

The students' improvement may also be related to increased confidence. When students know how to infer meaning from context, they may feel less anxious when facing unfamiliar vocabulary. They no longer need to understand every word perfectly before continuing to read. This confidence can make reading more enjoyable and reduce frustration. Brown (2007) emphasizes that strategy instruction can support learners' confidence because it gives them tools to manage language learning difficulties.

The teacher's role was also important in the implementation of the strategy. Students need clear modeling before they can use contextual clues independently. Teachers should show how to identify clue types, how to make reasonable guesses, and how to confirm meaning based on context. Without guidance, students may make incorrect guesses or fail to recognize useful clues. Therefore, contextual clues should be taught explicitly through examples, guided practice, and independent reading tasks.

Although the findings were positive, the moderate effect size indicates that contextual clues should be combined with other reading strategies. Students still need practice in skimming, scanning, identifying main ideas, summarizing, questioning, and recognizing text structure. Explanation texts require students to understand both vocabulary and organization. Therefore, contextual clues can be integrated with genre-based instruction so that students understand the structure and language features of explanation texts.

The findings have practical implications for English teachers. First, teachers should introduce contextual clues explicitly as a reading strategy. Second, teachers should provide texts that contain different types of clues, such as definition, synonym, antonym, example, and cause-effect clues. Third, teachers should guide students to infer meaning before using dictionaries. Fourth, teachers should use explanation texts that are appropriate to students' proficiency levels. Fifth, teachers should provide repeated practice so that students can apply the strategy independently.

In general, the findings confirm that contextual clues are effective for improving reading comprehension of explanation texts. The strategy helps students deal with unfamiliar vocabulary, understand sentence meaning, identify relationships among ideas, and comprehend the overall text. For students at SMAN 2 Budong-Budong, contextual clues provided a practical and useful way to improve reading comprehension without depending fully on dictionaries or teacher translation.

5. Conclusion

This study examined the effect of contextual clues on the eleventh-grade students' reading comprehension of explanation texts at SMAN 2 Budong-Budong. The findings showed that the contextual clues strategy had a significant positive effect on students' reading comprehension achievement. The experimental class, which was taught using contextual clues, achieved greater improvement than the control class, which was taught using conventional instruction.

The mean score of the experimental class increased from 48.41 in the pre-test to 71.11 in the post-test, while the control class increased from 44.00 to 57.00. The mean gain score of the experimental class was 22.70, which was higher than the control class gain score of 13.00. The independent sample t-test showed a significance value of 0.001, which was lower than 0.05. Therefore, the alternative hypothesis was accepted and the null hypothesis was rejected.

The effect size value was 0.60, categorized as a moderate effect. This indicates that contextual clues had a meaningful practical contribution to students' reading comprehension improvement. The strategy helped students infer the meaning of unfamiliar words, reduce dependence on dictionaries, understand cause-and-effect relationships, and comprehend explanation texts more effectively.

In conclusion, contextual clues are an effective reading strategy for teaching explanation texts to senior high school students. English teachers are encouraged to integrate contextual clues into reading instruction by modeling clue identification, guiding students to infer meaning, and providing repeated practice with explanation texts. Future researchers may investigate the use of contextual clues with larger samples, different text types, longer treatment periods, or mixed-method designs to explore students' learning processes more deeply.

6. References

- Anderson, R. C. (1984). Role of the reader's schema in comprehension, learning, and memory. In R. C. Anderson, J. Osborn, & R. J. Tierney (Eds.), *Learning to read in American schools: Basal readers and content texts*. Lawrence Erlbaum Associates.
- Blachowicz, C. L. Z., & Fisher, P. J. L. (2015). *Teaching vocabulary in all classrooms* (5th ed.). Pearson.
- Brown, H. D. (2007). *Teaching by principles: An interactive approach to language pedagogy* (3rd ed.). Pearson Education.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Derewianka, B., & Jones, P. (2016). *Teaching language in context* (2nd ed.). Oxford University Press.
- Efendi, M. (2020). Contextual clues in reading comprehension instruction. *Journal of English Language Teaching and Learning*, 7(2), 88–99.
- Grabe, W. (2009). *Reading in a second language: Moving from theory to practice*. Cambridge University Press.
- Grabe, W., & Stoller, F. L. (2013). *Teaching and researching reading* (2nd ed.). Routledge.

- Indriana, A., Aminah, S., & Dewi, R. (2021). The use of context clues strategy to improve students' reading comprehension. *Journal of English Language Teaching*, 9(2), 120–132.
- Nation, I. S. P. (2013). *Learning vocabulary in another language* (2nd ed.). Cambridge University Press.
- Oclarit, R. P., & Casinillo, L. F. (2021). Improving students' reading comprehension through context clues strategy. *Journal of Education and Learning*, 15(3), 300–310.
- Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (7th ed.). Routledge.
- Snow, C. E. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. RAND Corporation.
- Wolf, M. (2018). *Reader, come home: The reading brain in a digital world*. Harper.