

**A Comparative Analysis of Eleventh Grade Students' Reading
Comprehension of Narrative Texts Using Printed and Digital Media at SMA
Negeri 9 Sidrap**

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ABSTRACT

This study aims to examine the differences in eleventh-grade students' reading comprehension of narrative texts when taught using printed and digital media, as well as to determine which medium is more effective. A quantitative approach with a quasi-experimental design was employed, involving two groups: an experimental group taught using printed media and a control group taught using digital media. The research was conducted at SMA Negeri 9 Sidrap in the 2025/2026 academic year, with a total sample of 36 students selected through purposive sampling. Data were collected using a 20-item multiple-choice reading comprehension test administered as pre-test and post-test. The data were analyzed using descriptive statistics, homogeneity testing, independent sample t-test, and effect size (Cohen's d). The findings revealed a significant difference between the two groups, with a significance value of 0.001 ($p < 0.05$). The experimental group achieved a higher mean score (87.78) compared to the control group (77.50). Moreover, the effect size ($d = 1.24$) indicated a large effect. These results suggest that printed media is more effective than digital media in improving students' reading comprehension of narrative texts. This study provides empirical evidence for teachers and educators in selecting appropriate instructional media in EFL classrooms.

Keywords: Reading Comprehension; Printed Media; Digital Media; Narrative Text

INTRODUCTION

The rapid development of information and communication technology has significantly transformed the landscape of education, particularly in how students access and engage with learning materials. One of the most notable changes is the

shift from traditional printed texts to digital reading media. In modern classrooms, students are increasingly exposed to digital platforms such as e-books, online articles, and web-based learning resources. This transformation has created new opportunities for flexible and accessible learning, but it also raises important questions regarding the effectiveness of digital media compared to traditional printed materials, especially in developing students' reading comprehension skills. Reading comprehension is a fundamental skill in English as a Foreign Language (EFL) learning, as it supports the development of other language skills such as writing, speaking, and vocabulary mastery. It involves not only decoding written symbols but also constructing meaning, making inferences, and evaluating information critically. For senior high school students, the ability to comprehend texts effectively is essential for academic success, particularly in understanding various text genres, including narrative texts, which are commonly taught in the curriculum.

Narrative texts play an important role in reading instruction because they present information in a structured and engaging way through stories. These texts help students develop comprehension skills by allowing them to identify characters, understand sequences of events, and interpret implicit meanings. Moreover, narrative texts enable students to practice different levels of comprehension, including literal, inferential, and critical understanding. Therefore, narrative texts are considered suitable materials for measuring students' reading comprehension ability in EFL contexts.

Despite the importance of reading comprehension, students often face difficulties in understanding texts, especially when influenced by the type of media used during reading activities. Printed media have long been recognized for promoting deep reading, better concentration, and stronger memory retention. The physical interaction with printed texts, such as highlighting and note-taking, allows students to engage more actively with the content. In contrast, digital media offer advantages in terms of accessibility, flexibility, and multimedia integration, which can enhance students' motivation and engagement.

However, digital reading also presents several challenges. Students reading from screens may experience distractions from notifications, hyperlinks, and multitasking, which can reduce their concentration and lead to superficial reading strategies such as skimming rather than deep comprehension. Additionally, the lack of physical and spatial cues in digital texts may affect students' ability to retain and organize information effectively. These challenges suggest that digital media may not always support comprehension as effectively as printed media, particularly for complex texts.

Previous studies on the comparison between printed and digital media have produced inconsistent findings. Some research indicates that printed media lead to better reading comprehension, especially for longer and more complex texts, while other studies suggest that digital media can be equally effective when supported by

appropriate instructional strategies and interactive features. These mixed results indicate that the effectiveness of reading media is influenced by various factors, including text type, students' reading strategies, and digital literacy levels.

In the Indonesian EFL context, particularly at the senior high school level, empirical studies directly comparing printed and digital reading media remain limited. Most existing studies focus either on digital literacy or the use of digital tools without conducting direct experimental comparisons between the two media. Furthermore, few studies specifically examine students' reading comprehension based on different cognitive levels, such as literal, inferential, and critical comprehension, especially in relation to narrative texts. Based on these gaps, this study aims to conduct a comparative analysis of eleventh-grade students' reading comprehension of narrative texts using printed and digital media at SMA Negeri 9 Sidrap. This research is expected to provide empirical evidence on the effectiveness of both media and contribute to the development of more effective reading instruction strategies in EFL classrooms. Additionally, the findings of this study may assist teachers and educators in selecting appropriate learning media to enhance students' reading comprehension skills.

LITERATURE REVIEW

Reading is a fundamental language skill that plays a central role in English as a Foreign Language (EFL) learning. It is not merely a process of decoding written symbols, but an active cognitive activity in which readers construct meaning by integrating textual information with their prior knowledge. Effective reading requires the ability to identify main ideas, interpret details, and evaluate information critically. Therefore, reading becomes a crucial foundation for students to achieve academic success and develop other language skills. Reading comprehension refers to the ability to understand, interpret, and evaluate written texts. It involves complex cognitive processes, including recognizing explicit information, making inferences, and forming judgments about the content. Scholars generally classify reading comprehension into three levels: literal, inferential, and critical comprehension. Literal comprehension focuses on understanding information explicitly stated in the text, inferential comprehension involves interpreting implicit meanings, and critical comprehension requires readers to evaluate and respond to the text analytically. These levels are essential indicators in assessing students' reading ability.

In EFL classrooms, narrative text is widely used as a teaching material to develop reading comprehension. Narrative texts present stories with clear structures, including orientation, complication, and resolution, which help students follow the flow of ideas more easily. Additionally, narrative texts often use familiar contexts and engaging storylines, making them more accessible to learners. This characteristic enables students to practice comprehension skills at multiple levels, from identifying details to interpreting moral values. The use of instructional media has been recognized as an important factor influencing students' reading comprehension. Printed media, such as textbooks and worksheets, have

traditionally been used in reading instruction. Printed texts provide a stable and linear format that supports focused reading and deep cognitive processing. Students can interact physically with the text by highlighting, underlining, and annotating, which enhances comprehension and memory retention. As a result, printed media are often associated with better understanding of complex and lengthy texts.

In contrast, digital media have become increasingly popular in modern education due to their accessibility and flexibility. Digital reading materials, such as e-books and online articles, allow students to access information anytime and anywhere. Furthermore, digital media often include interactive features such as hyperlinks, multimedia elements, and search functions, which can support comprehension and engagement. These advantages make digital media an attractive alternative to traditional printed materials in contemporary classrooms. Despite these benefits, digital reading also presents several challenges. Research suggests that reading on screens may reduce students' concentration due to distractions such as notifications, advertisements, and multitasking opportunities. Digital reading is often associated with surface-level processing, where students tend to skim rather than engage in deep reading. Additionally, the absence of physical and spatial cues in digital texts may affect students' ability to retain and organize information, which is important for higher-level comprehension.

Previous studies comparing printed and digital media have produced mixed findings. Some studies report that students achieve better reading comprehension when using printed texts, particularly for narrative and complex materials. Other studies suggest that digital media can improve reading comprehension when supported by appropriate instructional strategies and digital literacy skills. These inconsistent findings indicate that the effectiveness of reading media depends on various factors, including text type, students' cognitive abilities, and learning context. Although a number of studies have explored digital and printed reading, there is still a lack of empirical research that directly compares both media in the context of EFL senior high school students, particularly in Indonesia. Moreover, few studies examine reading comprehension based on specific cognitive levels using narrative texts as the focus of instruction. Therefore, this study seeks to fill this gap by investigating the comparative effectiveness of printed and digital media in improving students' reading comprehension of narrative texts, with a focus on literal, inferential, and critical comprehension levels.

METHOD

Design and Sample

This study employed a quantitative research approach using a quasi-experimental design to examine the effect of printed and digital media on students' reading comprehension of narrative texts. The specific design applied was a non-equivalent control group design, in which two intact classes were assigned as the experimental and control groups. Both groups were administered a pre-test and a post-test to

measure students' reading comprehension before and after the treatment. The research was conducted at SMA Negeri 9 Sidrap during the 2025/2026 academic year. The population consisted of all eleventh-grade students, while the sample was selected using purposive sampling. Two classes were chosen based on their relatively similar English proficiency levels. Class XI-B, consisting of 18 students, was assigned as the experimental group, while Class XI-A, also consisting of 18 students, was assigned as the control group. The independent variable in this study was the type of reading media, namely printed media and digital media, while the dependent variable was students' reading comprehension of narrative texts. Reading comprehension was assessed based on three indicators: literal comprehension, inferential comprehension, and critical comprehension.

Instruments and Procedures

The instrument used to collect the data was a reading comprehension test in the form of multiple-choice questions. The test consisted of 20 items related to narrative texts, with four answer options for each item. The same instrument was used for both the pre-test and post-test. Each correct answer was scored 1, and each incorrect answer was scored 0, with the total score converted into a scale of 0–100. The data collection procedure consisted of four stages. First, a pre-test was administered to both groups to determine students' initial reading comprehension ability. Second, the treatment was conducted, in which the experimental group was taught using printed narrative texts, while the control group was taught using digital narrative texts. Third, a post-test was administered to both groups using the same instrument after the treatment sessions. Finally, all test scores were collected and prepared for statistical analysis.

Data Analysis

The data were analyzed using both descriptive and inferential statistics. Descriptive statistics were used to calculate the mean and standard deviation of students' scores. Before conducting further analysis, a homogeneity test was performed to ensure that the data met the necessary assumptions. An independent sample t-test was then applied to determine whether there was a statistically significant difference between the experimental and control groups. In addition, Cohen's d was calculated to measure the effect size and determine the magnitude of the treatment effect. The level of significance used in this study was set at 0.05.

RESULT AND DISCUSSION

This section presents the findings of the study based on the analysis of pre-test and post-test data obtained from both the experimental and control groups. The results are organized into descriptive statistics, homogeneity testing, hypothesis testing, and effect size analysis.

Table 1. Pre-test Scores of Experimental and Control Groups

Group	Mean	Std. Deviation	Minimum	Maximum
Experimental	46.94	14.36	25	75
Control	45.83	13.31	15	60

The pre-test results show that the experimental group obtained a mean score of 46.94, while the control group achieved a mean score of 45.83. The difference between the two groups was minimal (1.11 points), indicating that both groups had relatively similar initial reading comprehension abilities. The standard deviations also suggest a comparable distribution of scores between the groups.

Table 2. Post-test Scores of Experimental and Control Groups

Group	Mean	Std. Deviation	Minimum	Maximum
Experimental	87.78	7.90	70	95
Control	77.50	8.62	65	90

After the treatment, both groups showed improvement in their reading comprehension. However, the experimental group demonstrated a higher mean score (87.78) compared to the control group (77.50). The difference of 10.28 points indicates that students who learned through printed media performed better than those who learned through digital media.

Table 3. Gain Scores of Both Groups

Group	Pre-test Mean	Post-test Mean	Gain Score
Experimental	46.94	87.78	40.84
Control	45.83	77.50	31.67

The gain score analysis shows that the experimental group improved by 40.84 points, while the control group improved by 31.67 points. This finding indicates that although both media contributed to students' improvement, printed media resulted in a greater increase in reading comprehension.

Table 4. Homogeneity Test (Levene's Test)

Test	Sig. Value	Interpretation
Levene's Test	0.312	Homogeneous

The homogeneity test result shows a significance value of 0.312, which is higher than 0.05. This indicates that the variances of the two groups are homogeneous and meet the assumptions for further statistical analysis.

Table 5. Independent Sample t-test

Variable	Sig. (2-tailed)	Interpretation
Post-test Scores	0.001	Significant Difference

The independent sample t-test shows a significance value of 0.001 ($p < 0.05$), indicating that there is a statistically significant difference between the reading comprehension of students who used printed media and those who used digital media. Furthermore, the effect size calculation using Cohen's d resulted in a value of 1.24, which is categorized as a large effect. This indicates that the use of printed media had a strong impact on improving students' reading comprehension. The results demonstrate that both printed and digital media improved students' reading comprehension; however, printed media proved to be more effective in enhancing students' understanding of narrative texts.

The findings of this study reveal that there is a significant difference between students who learned using printed media and those who learned using digital media. The experimental group, which used printed media, achieved higher post-test scores compared to the control group. This indicates that the type of reading media plays an important role in influencing students' reading comprehension. The higher performance of students in the printed media group can be explained by the nature of printed texts, which support deeper cognitive processing. Printed materials provide a stable and linear reading environment that allows students to focus more on the content without distractions. This finding is consistent with previous studies suggesting that printed reading promotes better concentration and deeper understanding.

In addition, printed media enable students to actively engage with the text through physical interaction, such as underlining, highlighting, and annotating. These activities help students process information more effectively and enhance memory retention. As a result, students are better able to identify main ideas, understand details, and make inferences from the text. On the other hand, although digital media also improved students' reading comprehension, the improvement was not as significant as that achieved through printed media. This may be due to the nature of digital reading, which often involves distractions such as notifications, hyperlinks, and multitasking. These factors can reduce students' concentration and lead to superficial reading.

Furthermore, digital reading tends to encourage skimming rather than deep reading. Students may focus on locating information quickly rather than fully understanding the content. This behavior can negatively affect inferential and critical comprehension, which require deeper cognitive processing. The findings of this study are in line with previous research indicating that printed media are more effective for reading comprehension, particularly for longer and more complex texts such as narrative texts. Narrative texts require students to follow sequences of events, understand character development, and interpret implicit meanings, which are better supported through focused and continuous reading.

However, it is important to note that digital media still have potential benefits when used appropriately. Digital tools can enhance learning through accessibility, flexibility, and interactive features. Therefore, the effectiveness of digital media

depends on how it is integrated into the learning process and how well students are guided to use effective reading strategies. This study confirms that printed media are more effective than digital media in improving students' reading comprehension of narrative texts. Nevertheless, both media can be beneficial when used appropriately. Teachers are encouraged to consider the characteristics of each medium and combine them strategically to support students' reading development in EFL classrooms.

CONCLUSION

This study concludes that there is a significant difference in students' reading comprehension of narrative texts between those who learned using printed media and those who learned using digital media. The findings indicate that students in the printed media group achieved higher post-test scores compared to those in the digital media group. The statistical analysis confirmed this difference as significant, with a large effect size, demonstrating that printed media had a stronger impact on students' reading comprehension. The results suggest that printed media provide a more effective learning environment for reading activities, as they support deeper cognitive processing, better concentration, and stronger memory retention. These advantages enable students to understand texts more comprehensively, particularly at the literal, inferential, and critical levels. In contrast, although digital media offer flexibility and accessibility, they may reduce reading focus due to distractions and encourage surface-level reading. However, this does not imply that digital media are ineffective. Digital media still have the potential to support learning when used with appropriate strategies and guidance. Therefore, teachers are encouraged to integrate both printed and digital media in a balanced way, depending on learning objectives and classroom conditions. Overall, this study provides empirical evidence that printed media remain a highly effective tool for improving students' reading comprehension, particularly in the context of narrative texts in EFL classrooms.

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