Effectiveness of Using Story Maps in Improving Students' Reading Comprehension of Narrative Text

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Article Info	Abstract
	This study investigated the effectiveness of story mps in improving students' reading comprehension of narrrative texts at the vocational high school level. Many vocational students encounter difficulties in understanding narrative texts, particularly in identifying story elements such as characters, setting, plot, and resolution. Story maps were implemented as a visual learning strategy to assist students in organizing narrative information systematically. This research employed a quantitative approach using a quasi-experimental design. The participants consisted of two classes on eleventh-grade on vocational high school, divided into an experimental group and a control group. The experimental group received instruction using story maps, while the control group was taught using conventional reading methods. Data were collected through reading comehension tests administered as pre-test and post-test. The data were analyzed using normality testing, homogeneity testing, the Mann-Whitney U test, and effect size analysis. The result revealed that there weas no statistically significant difference between the experimental and control groups (p=0.279 > 0.05). However, the experimental group achieved a higher mean score than the control group, indicating a positive effect of story maps on students' reading comprehension. Although the effect was not statistically significant, the findings suggest that story maps can be an effective instructional strategy to support students' understanding of narrative texts. Therefore, integrating story maps with other reading strategies is recommended to enhance reading comprehension in vocational school contexts.

Artikel Info	Abstrak
	Penelitian ini bertujuan untuk mengetahui efektivitas penggunaan story maps dalam meningkatkan pemahaman membaca teks naratif siswa Sekolah Menengah Kejuruan (SMK). Banyak siswa SMK mengalami kesulitan dalam memahami teks naratif, terutama dalam mengidentifikasi unsur-unsur cerita seperti tokoh, latar, alur, dan penyelesaian. Story maps digunakan sebagai strategi pembelajaran visual untuk membantu siswa mengorganisasi informasi cerita secara sistematis. Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi-eksperimen. Subjek penelitian terdiri atas dua kelas XI SMK yang dibagi menjadi kelompok eksperimen dan kelompok kontrol. Kelompok eksperimen diajar menggunakan story maps, sedangkan kelompok kontrol menggunakan metode pembelajaran membaca konvensional. Data dikumpulkan melalui tes pemahaman membaca yang diberikan pada pre-test dan post-test. Analisis data dilakukan menggunakan uji normalitas, uji homogenitas, uji Mann-Whitney U, dan perhitungan effect size. Hasil penelitian menunjukkan bahwa tidak terdapat perbedaan yang signifikan secara statistik antara kelompok eksperimen dan kelompok kontrol (p=0,279 > 0,05). Meskipun demikian, nilai rata-rata kelompok eksperimen lebih tinggi dibandingkan kelompok kontrol, yang menunjukkan adanya pengaruh positif penggunaan story maps terhadap pemahaman membaca siswa. Dengan demikian, story maps dapat digunakan sebagai strategi pembelajaran alternatif untuk membantu meningkatkan pemahaman membaca teks naratif untuk siswa SMK.

I. INTRODUCTION

Reading comprehension is an essential skill for vocational high school students, as it plays a crucial role in supporting academic achievement and preparing students for future professional demands (Elpiza, 2024). However, many vocational school students experience difficulties in understanding English narrative texts. These difficulties are often related to limited vocabulary mastery, low reading motivation, and challenges in identifying key narrative elements such as characters, setting, plot, and resolution (Jameel, 2022). As a result, students frequently fail to construct a complete comprehensive

understanding of narrative texts when conventional reading instruction is applied.

Conventional teaching methods in reading comprehension tend to emphasize answering comprehension questions without providing sufficient guidance to help students organize information from the text (Mayer, 2021). This condition highlights the need for instructional strategies that actively engage students and support them in understanding the structure of narrative texs. One instructional strategy that can address this issue is the use of the story maps. Story maps function as visual organizers that help learners identify and connect essential elements of a story in a systematic manner (Albufalasa, 2019).

Story maps have been widely recognized as an effective instructional tool for improving students' comprehension of narrative texts (Grabe & Stoller, 2019). By visually mapping story component, students are encouraged to read more actively and meaningfully. Several previous studies have reported positive outcomes related to the use of story maps and other graphic organizers in reading instruction. For instance, Boulineau et al. (2004) found that students taught using story maps demonstrated a better understanding of narrative structure and improved reading comprehension compared to those who received conventional instruction. Similarly, Albufalasa (2019) reported that graphic organizers positively affected studnets' reading comprehension by helping them identify key narrative elements more effectively.

In the Indonesian educational context, studies have also shown that visual learning startegy can enhance students' engagement and comprehension in reading activities Sentyawati (2022). However, most previous research has foscused on general senior high school students, while studies involving vocational high school students remain limited. This gap indicates the need for futher investigation into the effectiveness of story mpas in vocational school settings.

Therefore, this study aims to examine the effectiveness of using as an instructional strategy to impprove vocational high school students' reading comprehension of narrative texts. This study employs a quantitative approach using a quasi-experimental design by comparing students taught using story maps with those received convensional reading instruction. The findings this study are expeccted to provide empirical evidence reganrding the potential contribution of story maps in enhancing reading comprehension among vocational school studentss.

II. METHOD

This study employed a quantitative research approach using a quasi-experimental design. This design was selected because random assignment of participants was not feasible in the school context (Cresswel, n.d., 2022). The study involved two intract eleventh-grade classes at vocational high school. One class was assigned as the experimental group, while the other served as the control group.

The experimental group received reading instruction using story maps, whereas the control group was taught using conventional reading instruction. The treatment was conducted over several instructional sessions during the 2025/2026 academic semester.

The research instrument was a reading comprehension test in the form of multiple-choice questions based on narrative texts. The tests were administered as pre-test and post-tests to both groups. The pre test was conducted to measure students' initial reading comprehension ability, while the post-test was administered to examine the effect of the instructional treatment.

Prior to data analysis, the data were examined for normality and homogeneity. Since the data were not not normally distributed, a non-parametric statistical test was applied. The Mann-Whitney U test was used to determine whether there was a significant differences in reading comprehension achievement between the experimental and control groups. In addition, effect size analysis was conducted to measure the magnitude of the effect of using story maps on students' reading comprehension.

The research instrument was a reading comprehension test consisting of 30 multiple-choice items based on narrative texts. The test was designed to measure students ability to identify main ideas, specific information, vocabulary in context, and narrative elements such as characters, setting, plot, and resolution.

The instrument was administered as a pre-test and post-test to both the experimental and control groups. Prior to its implementation, the instrument was examined to ensure its validity and reliability. Content validity was established through expert judgment to confirm that the test items were appropiate and aligned with the research objectives.

The reliability of the reading comprehension test was analysed using Cronbach's Alpha. The

result showed a reliable of α = 0.60. indicating that the instrument had a satisfactory level of internal consistency and was reliable for measuring studnets' reading comprehension.

III. RESULT AND DISCUSSION
A. Result

The result of the study were obtained from students' pre-test and post-test scores in reading comprehension of narrative texts in both the experimental and control groups. The data analysis focused on comparing students' reading comprehension achievement after the instructional treatment.

Table 1. Rank of Post Test Reading Comprehension

Group	N	Mean Rank	Ranks
Control Group	36	32.97	1187.00
Experimental Group	34	38.18	1298.00
Total	70		

Descriptive statistics showed that the experimental group achieved a higher mean rank in the post-test compared to the control group. The experimental group obtained a mean rank of 38.18, while the control group achive a mean rank of 32.97. This result indicates that students who were taught using story maps demostrated better reading comprehension performance than those who received conventional reading instruction.

Prior to hypothesis testing, a normality test was conducted to examine the distribtion of the post-test scores. The results of the Kolmogrov-Smirnov and Shapiro-Wilk test indicated that the data were not normally distributed ($p < 0.05$). Therefore, a non-parametric statistical test was considered apropiate for futher analysis.

Table. 2 Table of Normality Test

	Kelas	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil	Pre Test Control 1	.132	36	.114	.919	36	.012
	Post Test Control 1	.282	36	.000	.819	36	.000
	Pre Test Experimental 2	.124	34	.200*	.922	34	.018
	Post Test Expremental 2	.251	34	.000	.798	34	.000

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

A homogeneity test was conducted to examine whether the variance between the experimental and control groups was equal.

Table. 3 Test of Homoegeneity

Test of Homogeneity of Variance				
		Levene Statistic	df1	df2	Sig.
Hasil	Based on Mean	2.966	3	136	.034
	Based on Median	1.647	3	136	.182
	Based on Median and with adjusted df	1.647	3	109.388	.183
	Based on trimmed mean	2.601	3	136	.055

The test result showed that the significance value based on the mean was p = 0.034, which is lower than 0.05, indicating that the data were not homogeneous when analyzed based on the mean. However, the significance values based on median, adjusted median, and trummed mean were greather than 0.05, suggesting that the variance between groups were relatively homoheneous.

Based on these, the Mann-Whitney U test was used to test the research hypothesis.

Table. 4 Test Statistic of Mann-Withney U Test

Test Statistics	
	Result
Mann-Whitney U	521.000
Wilcoxon W	1187.000
Z	-1.082
Asymp. Sig. (2-tailed)	.279
a. Grouping Variable: Kelas	

The results of the Mann-Whithney U test showed that there was no statistically significant difference between the experimental and control groups in term of reading comprehension achievement (p = 0.279 > 0.05). Although the difference was not statistically significant, the experimental group achieved higher mean rank than the control group.

Futhermore, the effect size analysis revealed a value of r = 0.13, which is categorized a small effect. This finding indicates that the use of story maps had a positive, although small, effect on the students' reading comprehension of narrative texts.

$$r = \frac{-1.082}{\sqrt{70}} = 0.13$$

B. Discussion

This study aimed to examine the effectiveness of using story maps as an instructional strategy to improve vocational high school students' reading comprehension of narrative texts. The result indicated that although there as not statistically signifcant difference between the experimental group and control groups, students who were taught using using story maps achieved a higher mean rank in the post-test. This finding suggest that story maps had a positive tendency in supporting students' reading comprehension, even though the effect was not statistically significant.

The higher mean rank obtained by the experimental group indicates that the use of story maps helped students better understand students better understand narrative texts by guuiding them to identify and organize key story elements such as characters, setting, plot, and resolution. Through visual representation, story maps enabled students to structure information more clearly, which facilitated comprehension. This finding supports the view that reading compre-hension improves when learners actively organize textual information rather than merely respond to comprehension questions.

The effect size analysis revealed a small positive effect ($r = 0.13$), indicating that story maps had a beneficial influence on students' reading comprehension, although the magnitude of the effect was limited. This small effect size may be attributed to several factors, including the relatively short duration of the treatment and students' unfamiliarity with visual learning strategies. Vocational high school students may require more time and repeated practice to fully benefit from the use of story maps in reading instruction.

The findings of this tudy are consistent with previous research reporting that graphic organizers, including story maps, can support students' comprehension by making text structure more explicit (Grabe & Stoller, 2019). Previous studies have shown that story maps help students focus on important information and reduce cognitive load, which supports deeper comprehension of narrative texts (Boulineau et al., 2004; Albufalasa, 2019).

In the context of vocational education, where students often prioritize practical skills, the use of story maps can serve as a supportive instructional startegy to increase students' engagment. Although the statistical results did not demostrate a significant difference between the experimental and control group, the positive tendency observed in the experimental groups suggest that story maps can function as a complementary strategy when combined with other instructional approaches, such as vocabulary instruction or guided reading activities.

IV. CONCLUSIONS AND SUGGESTIONS

A. Conclusion

This study investigated the effectiveness of story maps to improvie vocational high school students' reading comprehension of narrative texts. The findings showed that students who were taught using story maps achieved higher reading comprehension performance than those who taught received conventional reading instruction. However, the statistical analysis indicated that the difference between the two groups was not statistically significant.

Despite the absence of a significant difference, the experimental group obtained a higher mean rank and a small ppositive effect size. These results suggest that story maps have a positive contribution to supporting students reading comprehension and can be considered a supportive instructional strategy in teaching narratuve texts at the vocational high school level.

B. Suggestion

Based on the findings of this study, it is recommended that English teachers at vocational schools consider using story maps as a supplementary instructional strategy to support students' reading comprehension of narrative texts. Teacher may combine story maps with other reading strategies, such as vocabulary instruction or guided reading activities, to achieve more effective learning outcomes,

Future research is encourage to envolve larger samples, longer treatments durations, and the integration of story maps with other instructional strategies to obtained more comprehensive results and futher explore their effectiveness in vocational high school contexts.

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