



The Effect of Using Padlet in Think-Pair-Share Strategy on EFL Senior High School Students' Reading Comprehension and Critical Thinking Skills

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Abstract: This study was conducted to investigate the impact of integrating Padlet into the Think-Pair-Share strategy on EFL senior high school students' reading comprehension and critical thinking skills. A pre-experimental design employing a one-group pretest-posttest approach was used in this study. The participants consisted of 36 tenth-grade students selected from one intact class at a senior high school in Bali. Data were collected through a pretest and a posttest and analyzed using descriptive and inferential statistics with the assistance of IBM SPSS Statistics. The findings revealed that the mean posttest score (82.19) was higher than the mean pretest score (62.47). Furthermore, the paired-samples t-test indicated a statistically significant difference between the pretest and posttest scores (Sig. (2-tailed) = .000 < .05). These findings suggest that the implementation of Padlet-integrated Think-Pair-Share was associated with improvements in students' reading comprehension and critical thinking skills. However, because the study employed a one-group pretest-posttest design without a control group, the findings should be interpreted with caution, and the observed improvements cannot be attributed solely to the treatment. Future studies employing more rigorous experimental designs with control groups are recommended to provide stronger evidence regarding the effectiveness of this instructional approach.

Keywords: Think-Pair-Share; Padlet; Reading Comprehension; Critical Thinking

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Introduction

Reading is a fundamental skill in language learning that enables EFL learners to comprehend written texts, expand their vocabulary, and support the development of other language skills (Anaktototy & Lesnussa, 2022). Beyond language acquisition, reading comprehension contributes to learners' cognitive and academic development and serves as a foundation for lifelong learning (Aditomo & Hasugian, 2018; Iftanti et al., 2023). As learners engage with texts, they are required not only to understand information but also to analyze and interpret meanings critically. Therefore, fostering reading comprehension among EFL learners is essential for supporting both language proficiency and higher-order thinking development.

Beyond its central role in language learning, reading comprehension is closely intertwined with the development of critical thinking skills. Both are widely recognized as essential competencies for 21st-century learners (Paige et al., 2024). Critical thinking refers to the capacity to inquire, analyze, draw inferences, resolve problems, and make sound decisions (Akatsuka, 2020). As learners engage with reading texts, they are expected to interpret the text at a deeper level, a process that demands higher-order thinking skills to analyze, interpret, and synthesize information, thereby enriching their comprehension. Moreover, reading comprehension and critical thinking share a reciprocal relationship, whereby improvement in one area is closely associated with advancement in the other.

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Hence, simultaneously developing both competencies is essential in language learning as it enables learners to engage more deeply with texts and strengthens their overall language proficiency.

Despite the importance of reading comprehension and critical thinking, preliminary observations conducted at the research site indicated that many tenth-grade students still experienced difficulties in comprehending reading texts and responding to higher-order thinking questions. Based on discussions with the English teacher and classroom observations, students tended to rely on literal understanding, showed limited participation during reading activities, and encountered difficulties in analyzing and evaluating information from texts. These problems were further compounded by the continued reliance on conventional teaching strategies, resulting in low engagement during reading lessons. Similar challenges have also been reported in previous studies, which found that Indonesian EFL learners often struggle with reading comprehension and critical thinking due to ineffective instructional strategies (Diasti & Murniati, 2023). Therefore, there is a clear need for more effective and innovative instructional approaches to strengthen both reading comprehension and critical thinking skills in the Indonesian EFL context.

To address these challenges, an instructional strategy that actively engages students in reading and discussion is needed. Cooperative learning, which emphasizes collaboration and active participation, has been widely recognized as an effective approach for improving students' learning outcomes (Kagan & Kagan, 2009). Among various cooperative learning strategies, Think-Pair-Share (TPS) is particularly relevant because it provides students with opportunities to think independently, discuss their ideas with a partner, and share their understanding with the class. This structured learning process encourages learners to analyze texts, justify their responses, and refine their understanding through peer interaction, thereby supporting both reading comprehension and critical thinking development (Silva et al., 2022; Kurjum et al., 2020). Previous studies have also demonstrated the effectiveness of TPS in enhancing reading comprehension and critical thinking among EFL learners (Pratolo et al., 2025; Fiqhiyah et al., 2025; Rosalia & Candraloka, 2023; Kurjum et al., 2020; Dwigustini et al., 2020). Given these advantages, TPS was selected as the instructional strategy in this study. Originally developed by McTighe and Lyman (1988), TPS consists of three sequential stages—think, pair, and share—and its flexible structure allows it to be adapted to various instructional contexts, including technology-enhanced learning environments (Kagan & Kagan, 2009). In line with the flexible nature of Think-Pair-Share, the rapid

advancement of technology in 21st-century learning has opened opportunities for integrating digital platforms into its implementation (Lionenko & Huzar, 2023). One such platform is Padlet, a digital board designed for posting, organizing, and sharing content, which enhances the collaborative and interactive dimensions of Think-Pair-Share (Muslimah et al., 2020). In the think phase, Padlet functions as an individual learning space where learners independently record their thoughts and reflections. During the pair phase, learners collaborate by responding to their partners' posts, prompting them to analyze texts, identify key information, and summarize ideas, which deepens reading comprehension (Reyes & Alvarado, 2024). In the share phase, pairs present their collaboratively constructed ideas to the whole class through Padlet, providing visible evidence of students' comprehension and analytical thinking on a shared digital platform (Muslimah et al., 2020). Previous studies have also confirmed the effectiveness of Padlet in supporting reading instruction and fostering higher-order thinking abilities (Bayu et al., 2025; Dewi & Budiarsa, 2024; Hossain, 2023; Rathakrishnan & Ahmad, 2018). Therefore, the integration of Padlet into Think-Pair-Share demonstrates strong potential to optimize reading comprehension instruction while simultaneously fostering critical thinking development.

Furthermore, several studies have examined the integration of digital platforms into Think-Pair-Share, demonstrating positive outcomes across various learning contexts (Muslimah et al., 2020; Lobo-quintero, 2025; Putri & Dewi, 2025). However, there remains a limited number of studies that specifically examine the integration of Padlet and Think-Pair-Share for teaching EFL reading and fostering critical thinking. To address this gap, the present study aims to investigate whether the use of Padlet integrated into the Think-Pair-Share strategy has a significant effect on EFL senior high school students' reading comprehension and critical thinking.

Method

The present study employed a pre-experimental design with a one-group pretest-posttest approach. This design involves a single group serving as the experimental group, which is administered a pretest before the treatment, exposed to the treatment, and subsequently given a posttest upon completion of the treatment (Hoy & Adams, 2016). The study was conducted at one of the senior high schools in Bali. This school was selected as the research setting given its supportive environment for the implementation of digital tools in the learning process. The population of this study was tenth-grade students in the academic year of 2025/2026, while the sample consisted of one intact

class comprising 36 tenth-grade students. The class was selected by the English teacher based on the school's academic schedule and served as the experimental group.

Before the treatment, the experimental group completed a pretest consisting of 35 multiple-choice items designed to assess students' reading comprehension and critical thinking skills. Following the pretest, the students participated in four instructional sessions in which Padlet integrated into the Think-Pair-Share strategy was implemented using narrative texts as the learning materials. Upon completion of the treatment, the students were administered a posttest comprising the same number of multiple-choice items to measure changes in their reading comprehension and critical thinking performance.

The data obtained from the pretest and posttest were subsequently analyzed using both descriptive and inferential statistics with the assistance of IBM SPSS Statistics. Descriptive statistics were employed to calculate the mean and standard deviation of the collected data. The inferential statistics, specifically the dependent samples t-test (paired-samples test), were then conducted to measure the significant difference between the mean pretest score and the mean posttest score, as well as to determine whether the null hypothesis of the study was accepted or rejected. The null hypothesis of this study stated that there was no significant difference between the mean pretest and posttest scores in students' reading comprehension and critical thinking before and after the treatment using Padlet integrated into the Think-Pair-Share strategy. Prior to conducting the paired-samples test, a normality test was performed as part of data screening to verify that the data were normally distributed. The normality of the data was examined using the Shapiro-Wilk test. In addition, Cohen's d was calculated to determine the magnitude of the treatment effect. The effect size was interpreted based on Cohen's (1988) criteria, where 0.20 represents a small effect, 0.50 a medium effect, and 0.80 or above a large effect.

Result and Discussion

The pretest and posttest scores were examined through descriptive and inferential statistics methods.

The descriptive findings summarized in Table 1 below. As shown in the above table, the mean posttest score was 82.19, considerably higher than the mean pretest score which was 62.47. The standard deviation for the pretest was 5.112, greater than the results in posttest which was 4.254. It implies more consistent performance post-treatment. Based on these descriptive statistics, it can be inferred that the difference between the two means would be significant.

Table 1. The Findings of Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest Score	36	54.00	73.00	62.47	5.112
Posttest Score	36	75.00	91.00	82.19	4.254
Valid N (listwise)	36				

Furthermore, a paired-samples test was employed as the inferential statistical method to determine whether a significant difference existed between the mean pretest and posttest scores of the students. Prior to conducting the paired-samples test, a normality test was performed to verify that the data followed a normal distribution. The normality of the data was assessed using the Shapiro Wilk since the sample size was less than 50. The corresponding results are presented in Table 2.

Table 2. The results of Normality Test

	Tests of Normality		
	Statistic	df	Sig.
Pretest Score	.969	36	.410
Posttest Score	.970	36	.438

Based on Table 2, the results indicated that the Sig. value of the pretest score was .410 and the Sig. value of the posttest score was .438. Since both values exceeded .05, it could be concluded that the data from both pretest and posttest scores were normally distributed. Therefore, the paired-samples test could be proceeded. The findings of paired-sample test could be seen as Table 3 below.

Table 3. The Results of Paired Samples Test

	Paired Differences						t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference					
				Lower	Upper				
Pair 1 Pretest Score - Posttest Score	-19.72222	.94449	.15742	-20.04179	-19.40265	-125.288	35	.000	

Based on Table 3, it was clear that the Sig. (two-tailed) value was .000, which was lower than the significant level of .05. It indicates that the null hypothesis was rejected. There was a significant difference between the mean of pretest score and posttest score in students' reading comprehension and critical thinking before and after being taught using Padlet integrated into Think-Pair-Share strategy. Hence, it could be concluded that there was a significant increase in students' reading comprehension and critical thinking from the pretest to the posttest after the treatment was applied.

Following the paired-samples t-test analysis, the effect size was calculated to determine the magnitude of the treatment effect on students' reading comprehension and critical thinking skills. Cohen's *d* was employed as the measure of effect size, and the calculation was performed using the Effect Size Calculator developed by Dr. Lee A. Becker.

Group 1	Group 2
M_1	M_2
91.13	86.25
SD_1	SD_2
7.512	9.981
Compute	
Reset	
Cohen's <i>d</i>	effect-size <i>r</i>
0.552461770150568	0.266259344385064

Figure 1. Results of Effect Size Calculation

Based on the results, Cohen's *d* was found to be 0.60, indicating a medium effect size. This suggests that the integration of Padlet into the Think-Pair-Share strategy had a moderate practical effect on students' reading comprehension and critical thinking skills. According to Madsen, Sayre, and McKagan (2016), a medium effect size indicates that the instructional intervention had a meaningful educational impact on students' learning outcomes. However, the medium effect size also implies that the observed improvement cannot be attributed solely to the intervention, as other factors may have contributed to the students' reading comprehension and critical thinking development. The results of data analysis show that the use of Padlet integrated into Think-Pair-Share strategy is proven to be effective in enhancing tenth-grade students' reading comprehension and critical thinking. The effectiveness could be proven through the results of students' pretest and posttest scores. The results of this study were in agreement with the statement of Muslimah et al. (2020), who assert that Padlet enhances the collaborative and interactive elements of Think-Pair-Share, which in turn supports students' engagement and comprehension in

the learning process. In line with this statement, Rathakrishnan and Ahmad (2018) state that the integration of Padlet in language learning is particularly effective in strengthening students' critical thinking skills through questioning, reasoning, and making connections between concepts. Moreover, the results of the study were also in line with Kagan and Kagan (2009) who state that Think-Pair-Share is one of the cooperative learning strategies that is flexible to be implemented for teaching different grade levels or any content area including reading and critical thinking development.

There were also several reasons that could be highlighted for why Padlet integrated into Think-Pair-Share was effective in enhancing students' reading comprehension and critical thinking. During the think phase, Padlet functioned as an individual learning space where students could independently record their initial thoughts and reflections about the reading material, encouraging them to take ownership of their ideas and construct personal understanding of the text. In the pair phase, students engaged in collaborative discussion by responding to and building upon their partners' posts on Padlet, which prompted them to analyze the text, identify key information, and summarize essential ideas, thereby deepening their reading comprehension (Reyes & Alvarado, 2024). Furthermore, the visual and interactive features of Padlet supported meaningful discussions and increased active participation among learners, as students explained, compared, and refined their ideas, which simultaneously strengthened their critical thinking skills. Finally, in the share phase, pairs presented their collaboratively constructed ideas to the whole class through Padlet, providing visible evidence of students' comprehension and analytical thinking on a shared digital platform (Muslimah et al., 2020).

The findings of this study are consistent with those of Muslimah et al. (2020), who reported that students taught through Padlet-assisted Think-Pair-Share demonstrated better learning outcomes than those taught using the conventional Think-Pair-Share strategy. Similarly, Rathakrishnan and Ahmad (2018) found that Padlet effectively promotes higher-order thinking skills by encouraging students to question, reason, and connect ideas. Furthermore, Reyes and Alvarado (2024) highlighted that integrating digital platforms into collaborative learning strategies contributes positively to students' reading comprehension and critical thinking development.

The effect size analysis further supports these findings. The obtained Cohen's *d* value of 0.60 indicates a medium effect size, suggesting that the integration of Padlet into the Think-Pair-Share strategy produced a meaningful educational impact on students' reading comprehension and critical thinking skills. However, the medium effect size also indicates that the observed

improvement may have been influenced by factors beyond the instructional intervention.

Nevertheless, several limitations of this study should be acknowledged. First, the use of a one-group pretest-posttest design without a control group limits the ability to attribute the observed improvement solely to the treatment. Second, the study involved only one intact class consisting of 36 students from a single senior high school, which may limit the generalizability of the findings to other educational contexts. Third, the treatment was conducted over only four instructional sessions, which may not have been sufficient to capture the long-term effects of integrating Padlet into the Think-Pair-Share strategy. Therefore, future studies are encouraged to employ more rigorous experimental designs with control groups, larger and more diverse samples, and longer intervention periods to provide stronger evidence regarding the effectiveness of this instructional approach.

Overall, the findings suggest that integrating Padlet into the Think-Pair-Share strategy has the potential to improve EFL students' reading comprehension and critical thinking skills, although the results should be interpreted in light of the study's methodological limitations.

Conclusion

Based on the data analysis presented in the results and discussions, students' reading comprehension and critical thinking significantly improved after being taught using Padlet integrated into the Think-Pair-Share strategy. It was evident that there was a significant difference between the mean of the pretest score and the posttest score before and after the treatment was applied. Furthermore, the standard deviation of the pretest score was higher than the standard deviation of the posttest score, indicating that the posttest results were considerably better than the pretest results.

Moreover, the results of the paired-samples test indicated that the null hypothesis was rejected, as there was a significant difference between the mean pretest and posttest scores in students' reading comprehension and critical thinking before and after being taught using Padlet integrated into the Think-Pair-Share strategy. This demonstrates a positive and significant effect of Padlet use within the Think-Pair-Share strategy on EFL senior high school students' reading comprehension and critical thinking. Therefore, it could be concluded that the integration of Padlet into the Think-Pair-Share strategy is effective for enhancing Indonesian EFL senior high school students' reading comprehension and critical thinking.

In light of the research results, it is recommended that further studies be conducted on the use of Padlet integrated into the Think-Pair-Share strategy in different

contexts, skills, or educational levels with varying purposes, which would provide a broader contribution to the field of English language teaching.

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