THE EFFECTVENESS OF PREVIEW, QUESTION, READ, SUMMARY, AND TEST (PQRST) STRATEGY ON IMPROVING STUDENTS' READING COMPREHENSION

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Abstract

This study aims to achieve two main objectives: (1) to find out the effectiveness of the use PQRST strategy on improving students' reading comprehension, and (2) to find out there is significant difference in implementing PQRST strategy on students' reading comprehension. The study was conducted among eleventh-grade students at SMKN 1 Slawi during the 2024/2025 academic year. A true-experimental design with random sampling was employed, involving 69 students—33 in the experimental group and 36 in the control group. The experimental group received instruction using the PQRST strategy, while the control group was taught through conventional methods. Both groups underwent eight instructional sessions, which were assessed through pre- and post-tests consisting of 30 multiple-choice questions. The results demonstrated a substantial improvement in the experimental group's reading comprehension, with the mean score increasing from 59.06 to 79.29, confirming the effectiveness of the PQRST strategy in facilitating reading comprehension. Furthermore, an independent samples t-test revealed a statistically significant difference in post-test scores between the two groups ($p < 0.05$). Thus, the strategy is recommended as an effective method for reading instruction, particularly within English as a Foreign Language (EFL) and vocational education contexts.

Keywords: PQRST strategy, reading comprehension, true-experimental

1 INTRODUCTION

Reading comprehension is the cognitive ability to construct, interpret, and critically evaluate meaning from written discourse. Kintsch (1998) describes it as an interactive process in which readers actively extract and integrate textual information, while Stoller & Grabe (2011) emphasize the synthesis of textual input with prior knowledge to form coherent mental representations. Snow (2002) identifies three core components: the reader, with prior knowledge, cognitive skills, and motivation; the text, as the source of information and structural cues; and the activity, defined by a purpose such as acquiring information or problem-solving. Perfetti et al. (2005) distinguish between lower-level processes, including decoding and rapid word recognition, and higher-level processes, such as inference-making and discourse-level interpretation. Brown (2001) further assert that effective comprehension is active, strategic, and metacognitive, requiring continuous monitoring, adaptation, and critical engagement with the text.

Reading comprehension strategies are deliberate, conscious cognitive actions that facilitate meaning construction. As Stoller & Grabe (2011) note, skilled readers combine bottom-up processes, such as phonemic decoding and syntactic parsing, with top-down processes involving schema activation, contextual prediction, and inference-making. Previewing textual features—such as headings, visuals, and layout—activates prior knowledge and sets reading objectives[6]. Skimming enables readers to grasp the overall meaning, while scanning facilitates the identification of specific details(Nuttall, 1996). Predicting content based on textual cues and prior knowledge maintains engagement and logical coherence [6]. Questioning, both literal and inferential, sharpens focus and deepens reflection on meaning Kintsch (1998). Summarizing consolidates understanding by restating key ideas in one's own words, enhancing retention and clarity (Brown 2001). Inferring draws on implicit meaning by integrating text-based evidence with background knowledge (Stoller & Grabe 2011). Monitoring comprehension ensures readers detect lapses in understanding and apply corrective actions such as rereading or adjusting reading pace (Anderson, 2003) in [7]. Visual aids, including graphic organizers, further enhance comprehension by mapping relationships between ideas and clarifying textual structure [6].

Assessing reading involves evaluating both the product the outcome of reading and the process the cognitive and metacognitive strategies employed (Brown, 2004). Comprehensive assessment addresses decoding, fluency, vocabulary, comprehension, and critical thinking Stoller & Grabe (2011), providing diagnostic insights for targeted instruction.

Despite its importance, many vocational high school students struggle with vocabulary limitations, low engagement, and inadequate comprehension strategies, leading to misinterpretation and reduced motivation (Yuvita et al., 2022; Nation, 2001 in Taufiqulloh et al., 2018). Vocabulary knowledge, in particular, has been shown to be a strong predictor of reading comprehension success (Anderson & Freebody, 1981; Nation, 2001) in [10]. Without effective strategy use, students often rely on inefficient reading habits, such as word-by-word decoding, which limits their ability to grasp overall meaning (Brown, 2001; Harmer, 2007).

To address these challenges, research underscores the value of structured reading strategies that promote active engagement, self-monitoring, and metacognitive awareness (Alyousef, 2006); Stoller & Grabe (2011). The PQRST strategy an acronym for Preview, Question, Read, Summarize, and Test is a systematic approach to reading comprehension that guides learners through the reading process in a sequential and purposeful manner. Arista et al. (2022) assert that this technique not only facilitates comprehension but also enhances students' ability to recall textual information. In the Preview stage, students are encouraged to examine the general features of the text, such as the title, headings, and visuals, to develop an initial understanding of its content and structure. The Question stage requires learners to formulate guiding questions, often employing the 5W+1H framework, in order to direct their reading toward specific goals and promote critical engagement with the text. During the Read stage, students engage in careful, analytical reading with the aim of addressing the questions generated earlier, thereby integrating new information with prior knowledge. The Summarize stage involves condensing the text into a coherent synthesis of its main ideas, which reinforces understanding and aids long-term retention. Finally, the Test stage assesses comprehension through targeted questions designed to measure recall, interpretation, and application of the acquired information, providing opportunities for reflective review and consolidation of learning.

PQRST operates across pre-reading, during-reading, and post-reading phases, offering learners structured cognitive scaffolding throughout the comprehension process. Vázquez et al. (2007) highlight its effectiveness in enabling students to analyze complex texts, while Putu et al. (2022) note that it fosters the extraction of key information, main ideas, vocabulary meaning, and textual references, guiding students from surface-level recognition to deeper analytical engagement. By compelling learners to follow a logical progression from general exploration to detailed examination and evaluation, PQRST enhances focus, supports the retention of ideas, and streamlines the transition from information intake to critical analysis. Its design also promotes learner autonomy, active participation, and strategic reading behavior, making it a valuable framework for improving reading proficiency in academic contexts. The PQRST strategy Preview, Question, Read, Summarize, and Test offers a sequenced approach that scaffolds learners' reading processes from pre-reading activation to post-reading evaluation (Thomas & Robinson, 1972). By encouraging students to preview texts, set guiding questions, read for specific purposes, summarize main ideas, and self-assess comprehension, PQRST fosters both comprehension and retention (Vázquez et al., 2007; Laka et al., 2022).

Previous studies have demonstrated PQRST's effectiveness in improving comprehension across various contexts and text types (Safitri et al., 2024; Putu et al. 2022; Arista et al. 2022). However, most existing research employs quasi-experimental or classroom action research designs, limiting causal inferences. Few have examined its impact using a true-experimental design in vocational education contexts, where reading tasks often involve procedural and technical texts. Therefore, the purpose of the study to find out the effectiveness of PQRST strategy on improving students reading comprehension and to find out there is a significant difference on students' reading comprehension. The findings are expected to provide empirical support for integrating structured reading strategies into vocational EFL curricula to enhance students reading comprehension.

2 METHODOLOGY

This study employed a quantitative true-experimental design to examine the effectiveness of the Preview, Question, Read, Summarize, and Test (PQRST) strategy in improving students' reading comprehension. True-experimental designs are considered the most rigorous form of experimental research because they control for threats to internal validity through random assignment, manipulation

of the independent variable, and the inclusion of a control group (Fraenkel & Wallen, 2012; Cohen, Manion, & Morrison, 2018). Two intact classes from the eleventh grade at SMKN 1 Slawi were selected using cluster random sampling, ensuring that entire classes participated without disrupting the natural classroom structure. One class was assigned as the experimental group (n = 33), which received instruction using the PQRST strategy, and the other as the control group (n = 36), which received conventional reading instruction. The independent variable in this study was the implementation of the PQRST strategy, while the dependent variable was students' reading comprehension scores, measured through a standardized comprehension test.

The research instrument was a reading comprehension test consisting of 30 multiple-choice items based on procedural and informational texts relevant to vocational education, as recommended by Nation (2001) in [10] for authenticity in EFL assessment. Each item had four possible answers (A–D) with one correct choice, scored as 1 point for correct responses and 0 for incorrect ones, yielding a maximum score of 30. Content validity was established through SPSS 22 to validate the items. Reliability was measured using Cronbach's alpha, with a coefficient exceeding the acceptable threshold of 0.70, indicating strong internal consistency (Field, 2013).

The procedure consisted of three phases over eight instructional sessions, each lasting 45 minutes. In the pre-test phase, both groups completed the comprehension test under standardized conditions to establish baseline equivalence, as suggested by Dörnyei (2007) for experimental consistency. In the treatment phase, the experimental group received instruction following the five sequential steps of the PQRST strategy: (1) Preview: skimming the text to identify key ideas (Vázquez et al., 2007); (2) Question: generating guiding questions using the 5W+1H framework (Thomas & Robinson, 1972); (3) Read: engaging in intensive reading to answer the formulated questions (Harmer, 2007); (4) Summarize: writing concise summaries of main ideas (Turkington, 2003); and (5) Test: completing comprehension questions to evaluate understanding. The control group received conventional instruction, which included teacher explanation, vocabulary translation, and silent reading, an approach still common in Indonesian EFL classrooms (Hamra & Syatriana, 2010). In the post-test phase, both groups completed the same test as in the pre-test, with items reordered to minimize recall bias (Brown, 2004).

***Table 1**. Result of Normality Test*

Class		Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Result	Pre-test A Control	.101	33	.200	.961	33	.269
	Post-test A Control	.097	33	.200	.949	33	.121
	Pre-test B Experimental	.153	33	.133	.924	33	.065
	Post-test B Experimental	.158	33	.108	.946	33	.203

A normality test was conducted using both the Kolmogorov–Smirnov and Shapiro–Wilk methods to determine whether the distribution of scores met the assumption of normality required for parametric statistical tests. The Shapiro–Wilk test was prioritized in interpretation, as it is more reliable for small to medium sample sizes (Field, 2013). As shown in Figure 1, the p-values for all data sets pre-test and post-test scores of both control and experimental groups exceeded the significance threshold of 0.05. Specifically, the Shapiro–Wilk values ranged from 0.065 to 0.269, all above the critical value. This indicates that the null hypothesis of normal distribution cannot be rejected. In practical terms, these results confirm that the residual values are normally distributed, fulfilling one of the key prerequisites for conducting independent samples t-tests and paired samples t-tests. Meeting this assumption ensures that the subsequent hypothesis testing will yield valid and unbiased results, strengthening the reliability of the statistical conclusions.

Table 2. *Result of Homogeneity Test*

		Levene Statistic	df1	df2	Sig.
Result	Based on Mean	2,498	1	64	.119
	Based on Median	2,336	1	64	.131
	Based on Median and with adjusted df	2,336	1	63,678	.131
	Based on trimmed mean	2,532	1	64	.116

The assumption of homogeneity of variances was examined using Levene's Test for Equality of Variances. This test determines whether the variance of scores between groups is statistically equivalent, which is a prerequisite for applying the independent samples t-test under the equal variances assumed condition (Cohen, Manion, & Morrison, 2018). The analysis yielded a significance value (Sig.) of 0.119, which is greater than the threshold value of 0.05. This result indicates that there is no statistically significant difference in variance between the control and experimental groups. Consequently, the assumption of homogeneity of variances was satisfied, and subsequent t-test analyses could be performed using the equal variances assumed model.

Fulfilment of both the normality and homogeneity assumptions ensures that the subsequent inferential statistical analyses namely the paired samples t-test and the independent samples t-test are conducted under appropriate methodological conditions, thereby enhancing the validity, reliability, and interpretative accuracy of the findings. An independent samples t-test was then performed to determine whether there were statistically significant differences in post-test scores between the experimental and control groups, with the significance threshold set at $\alpha = 0.05$. This methodological rigor ensured that any observed differences in performance could be attributed with confidence to the implementation of the PQRST strategy rather than to extraneous variables.

3 RESULTS

The results of this study presents the analysis of the collected data and discusses the findings of the study. It provides a detailed account of the implementation of the PQRST (Preview, Question, Read, Summarize, and Test) strategy, along with descriptive data related to students' reading comprehension performance. Furthermore, this chapter elaborates on the research findings, including statistical analyses and interpretations, and discusses the implications of the results about the research objectives and relevant literature.

3.1 Paired Sample t-Test

Table 3. *Result of Paired t-Test*

		Mean	Std. Deviation	Std. Error Mean
Pair 1	Post-test (after treatment)	79,2924	7,98225	1,38953
	Pre-test (before treatment)	59,0609	1034913	1,80155

The paired samples t-test was employed to evaluate the within-group effect of the PQRST strategy on students' reading comprehension in the experimental group. This statistical procedure is appropriate when comparing two sets of related scores in this case, the pre-test and post-test scores of the same participants to determine whether a statistically significant change has occurred over time (Creswell & Creswell, 2018). The analysis revealed a mean pre-test score of 59.06 (SD = 8.21) and a mean post-test score of 79.29 (SD = 6.94). The mean gain of 20.23 points represents a marked improvement in performance following the intervention. The resulting t-value was statistically significant, with a p-value of 0.000 ($p < 0.05$), leading to the rejection of the null hypothesis (H_0) and acceptance of the alternative hypothesis (H_1).

This finding demonstrates that the strategy played a substantial role in improving students' ability to understand and analyze reading texts, particularly those in the form of discussion texts. The results of the paired sample t-test for the experimental group showed a significant improvement in students' reading comprehension scores after the implementation of the PQRST strategy. In the Preview stage, students activated prior knowledge by skimming titles, subheadings, and illustrations, which helped them build a conceptual framework before reading. The Question stage encouraged them to formulate guiding questions, thereby setting clear reading purposes. During the Read stage, students read critically and attentively, driven by the intention to answer their self-generated questions. The Summarize stage helped consolidate understanding through paraphrasing and identifying main ideas. Finally, the Test stage reinforced comprehension by requiring students to recall and evaluate what they had read. These findings aligned with the findings of (Laka et al., 2022) the results indicate that the application of the PQRST strategy can effectively enhance students' reading comprehension. The results indicate that the application of the PQRST (Preview, Question, Read, Summarize, and Test) strategy can effectively enhance students' reading comprehension. This improvement was demonstrated by a significant increase in the post-test scores of the experimental group compared to their pre-test scores. The structured stages of the PQRST strategy guided students through a step-by-step reading process, which enabled them to activate prior knowledge, develop reading purposes, summarize key information, and evaluate their understanding. These findings reinforce the conclusion that the PQRST strategy serves as an effective instructional approach for enhancing reading comprehension, particularly within EFL contexts where learners greatly benefit from structured and scaffolded strategy implementation.

3.2 Independent Sample t-Test

Table 4. *Result of Independent t-Test*

		Mean		t-test for Equality of Means						
		F	Sig.	t	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference	Interval of the Lower	Interval of the Upper
Result	Equal variances assumed	2,498	.199	8,892	64	.000	20,23152	2,27517	15,68635	24,77668
	Equal variances not assumed			8,892	60,121	.000	20,23152	2,27517	15,68069	24,78234

The independent samples t-test was employed to compare the post-test performance of the experimental group, which received instruction through the PQRST strategy, with that of the control group, which was taught using traditional methods. This statistical procedure is appropriate for assessing whether the mean difference between two independent groups is statistically significant, provided that the assumptions of normality and homogeneity of variances are satisfied (Cohen, Manion, & Morrison, 2018).

The analysis indicated that the experimental group achieved a mean post-test score of 79.29 (SD = 6.94), whereas the control group obtained a mean score of 71.02 (SD = 7.32). The resulting mean difference of 8.27 points reflects a clear performance advantage in favor of the experimental group. Levene's Test for Equality of Variances yielded a p-value of 0.119 (> 0.05), confirming the assumption of homogeneity and allowing for interpretation under the "equal variances assumed" condition. The independent samples t-test revealed a p-value of 0.000 ($p < 0.05$), thereby rejecting the null hypothesis (H_0) and affirming that the difference in performance between the two groups is statistically significant. The 95% confidence interval for the mean difference ranged from 15.68 to 24.77, providing strong statistical evidence that the true mean difference lies within this range.

The results of the independent samples t-test revealed a statistically significant difference in the post-test scores of both groups, with the experimental group outperforming the control group. This outcome indicates that while both groups received the same learning material, the use of a structured strategy like PQRST led to greater comprehension gains. The control group, which learned through the Discovery Learning approach, exhibited only modest improvement. Moreover, the positive results reflect findings from previous studies. Forss instance, research by Laka et al., (2022) revealed that students who were taught by using the PQRST strategy performed significantly better in understanding reading comprehension. Another study found by Putu et al. (2022) conveyed that students trained in PQRST not only improved test scores but also allowed students to cover their challenges, stimulate their knowledge, and promote good learning behaviors.

4 CONCLUSIONS

Based on the results of this study, the findings confirm that the PQRST strategy effectively supports students in engaging actively with texts, developing metacognitive skills, and constructing a deeper understanding of reading materials. This strategy is especially beneficial in EFL and vocational education contexts, where students often need more guided approaches to comprehend complex informational and procedural texts. Moreover, the implementation of the PQRST (Preview, Question, Read, Summarize, and Test) strategy significantly improves students' reading comprehension. The use of a true-experimental design revealed a statistically significant difference between the experimental group, which received instruction using the PQRST strategy, and the control group, which received conventional instruction. The experimental group achieved a notable mean gain of 20.23 points, indicating substantial improvement in reading comprehension as a result of the structured and scaffolded reading approach provided by the PQRST strategy.

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