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THE IMPLEMENTATION OF CRITICAL READING STRATEGIES ON EFL STUDENTS' READING COMPREHENSION IN THE TKA CONTEXT: EXAMINING GENDER AS A MODERATING VARIABLE

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Abstract: Reading comprehension remains a major challenge for Indonesian students in the Academic Ability Test (TKA). This study investigated the effect of critical reading strategies on twelfth-grade students' reading comprehension and examined gender as a moderating variable. Using a quasi-experimental design with 67 students, the experimental group received critical reading instruction while the control group received conventional instruction. The results revealed that the experimental group achieved higher mean post-test scores than the control group. However, the main effect of the teaching strategy was not statistically significant, $F(1, 63) = 1.718$, $p = .195$. Similarly, gender did not have a significant effect on reading comprehension, $F(1, 63) = 0.689$, $p = .409$, and no significant interaction effect between strategy and gender was found, $F(1, 63) = 2.367$, $p = .129$. Despite the lack of statistical significance, the findings indicate a positive tendency in favor of critical reading strategies. These results suggest that while critical reading strategies have the potential to enhance students' comprehension, their effectiveness may depend on longer and more intensive implementation. The study highlights the importance of strategy-based instruction in supporting higher-order reading skills in EFL contexts.
Keywords: C*ritical reading strategies, Reading comprehension, Tes Kemampuan Akademik (TKA), Gender differences, EFL instruction*

INTRODUCTION

Reading is increasingly conceptualized as a complex and multidimensional cognitive process involving the integration of linguistic knowledge, prior experience, and higher-order thinking skills (Duke & Cartwright, 2021). Reading comprehension also requires the coordination of cognitive and metacognitive processes to construct meaning effectively (Snow, 2002). In academic contexts, motivation and engagement further influence students' ability to comprehend texts critically (Soemer et al., 2023). In this sense, reading extends beyond literal understanding to include the ability to analyze arguments, evaluate evidence, and interpret implicit meanings.

Within large-scale assessment contexts, such as the Tes Kemampuan Akademik (TKA), students are required to demonstrate not only basic comprehension but also higher-order literacy skills. These include identifying main ideas, making inferences, evaluating claims, and interpreting the author's intent. However, recent international assessments continue to reveal persistent challenges in reading literacy. The Programme for International Student Assessment (PISA) 2022 reported that Indonesian students performed significantly below the OECD average, particularly in tasks requiring critical interpretation and evaluation of texts (OECD, 2023). This suggests a gap between current instructional practices and the cognitive demands of contemporary reading assessments.

One contributing factor to this gap is the continued reliance on traditional, teacher-centered approaches to reading instruction, which tend to emphasize surface-level comprehension rather than analytical engagement. In response to this issue, recent studies advocate the integration of

strategy-based instruction to improve students' comprehension processes (Peng et al., 2023). Explicit instruction and teacher support are also considered important in developing students' critical reading abilities (Rice et al., 2024). Among these approaches, critical reading strategies have gained increasing attention as an effective means of fostering deeper comprehension and critical literacy skills. Critical thinking instruction has increasingly become an important component of English language education in Indonesian classrooms (Fernandes et al., 2024).

Critical reading strategies involve structured cognitive and metacognitive practices that enable learners to actively engage with texts. These include previewing, annotating, questioning the author, evaluating evidence, recognizing bias, and drawing conclusions. Critical reading strategies help learners construct meaning actively while processing texts (Kintsch, 1998). Recent evidence also indicates that strategy-based comprehension instruction supports students in responding to complex reading tasks more effectively (Capin et al., 2024). Furthermore, critical reading is closely aligned with the competencies required in academic assessments, making it particularly relevant for contexts such as the TKA. Digital reading habits may additionally influence learners' comprehension processes and reading engagement (Altamura et al., 2025).

In addition to instructional strategies, individual learner characteristics such as gender, have also been identified as potential factors influencing reading achievement. Recent international data consistently indicate that female students tend to outperform male students in reading literacy; however, the extent to which instructional interventions interact with gender remains inconclusive (OECD, 2023; Morsy & Du, 2025). Some studies suggest that instructional support may reduce differences in reading achievement between male and female students (Morsy & Du, 2025). However, other studies report that gender does not significantly moderate reading comprehension outcomes when effective strategies are implemented (Soemer et al., 2023).

Despite the growing body of research on critical reading and reading comprehension, empirical studies examining the effectiveness of critical reading strategies in high-stakes assessment contexts remain limited, particularly in Indonesian EFL settings. Moreover, few studies have simultaneously investigated the role of gender as a moderating variable in such interventions. This gap highlights the need for context-specific research that integrates instructional strategies with learner variables.

This study contributes to the existing literature by integrating strategy-based instruction with gender analysis within a high-stakes assessment context, which remains underexplored in Indonesian EFL research.

Based on these gaps, this study aims to investigate the effect of critical reading strategies on students' reading comprehension and to examine whether gender moderates this effect.

The study is guided by the following research questions: (1) Is there a significant effect of critical reading strategies on students' reading comprehension? (2) Does gender moderate the effect of critical reading strategies on reading comprehension?

This study contributes to the literature by examining the effectiveness of critical reading strategies within a high-stakes assessment context while incorporating gender as a moderating variable.

To date, few studies have investigated critical reading strategies specifically in the context of Indonesia's newly implemented Tes Kemampuan Akademik (TKA), while simultaneously examining gender as a moderating variable.

Reading in a second language requires the integration of linguistic knowledge, strategic processing, and background knowledge to support comprehension development (Grabe, 2009). According to Kintsch (1998), comprehension involves the active construction of meaning through interaction between textual information and prior knowledge. Reading comprehension in second language contexts is influenced by multiple linguistic and cognitive variables, including vocabulary knowledge, grammatical competence, and decoding skills (Jeon & Yamashita, 2014). Reading comprehension is widely recognized as a dynamic and interactive process that involves the integration of multiple cognitive components, including decoding, linguistic knowledge, background knowledge, and metacognitive regulation. Word knowledge is considered a central component in reading comprehension processes (Perfetti & Stafura, 2014). Church (2023) emphasizes that neural and cognitive mechanisms play important roles in reading development and comprehension processing. Reading comprehension is viewed as an active process of meaning construction rather than the simple extraction of information from text (Snow, 2002). Higher-order cognitive skills

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are increasingly recognized as essential components of L2 reading comprehension (Vettori et al., 2024).

Readers are required to integrate background knowledge, vocabulary knowledge, and strategic processing to understand texts effectively (Oakhill et al., 2015). Vocabulary depth and working memory are also closely associated with successful reading comprehension performance (Artuso & Palladino, 2022). Adequate vocabulary knowledge remains essential for students to comprehend academic texts effectively (Biemiller, 2003). In addition to cognitive processing, linguistic competence also contributes substantially to comprehension development. Vocabulary and grammatical knowledge are important predictors of reading comprehension achievement (Hu et al., 2022). Spelling and vocabulary knowledge also contribute to students' reading performance and literacy development (Kim & Petscher, 2023). Lexical coverage and vocabulary threshold levels are important components in successful reading comprehension (Ludewig et al., 2023).

Recent developments in reading research have expanded traditional models by incorporating executive function, self-regulation, and motivation as essential components of skilled reading. Duke and Cartwright (2021) argue that reading comprehension is best understood as a coordinated system of processes that operate simultaneously, requiring readers to monitor their understanding and adjust strategies accordingly. This perspective is particularly relevant in academic contexts where students are expected to engage with complex texts critically. EFL university students frequently employ metacognitive strategies to support comprehension processes (Suharni et al., 2024).

In assessment contexts like the TKA, reading comprehension is operationalized through tasks that require students to locate information, integrate ideas, infer meanings, and judge the validity of claims. These demands align closely with higher-order thinking skills and underscore the need for instructional approaches that explicitly foster critical engagement with texts (Duke & Cartwright, 2021; Kim, 2024).

The effectiveness of reading comprehension instruction is closely linked to the extent to which students are equipped with appropriate cognitive and metacognitive strategies. Strategy-based instruction has shown positive effects on reading comprehension among EFL college students (Nguyen & Nguyen, 2024). Strategy-based instruction focuses on explicitly teaching learners how to approach texts before, during, and after reading. Various internal and external factors influence students' use of reading strategies in EFL settings (Li et al., 2024). Skilled readers tend to employ deliberate and strategic thinking processes while interacting with texts (Pressley & Afflerbach, 1995). Strategy instruction also promotes learner autonomy and self-regulated reading behavior in language learning contexts (Oxford, 2017).

Recent meta-analytic evidence also confirms that strategy instruction contributes positively to reading comprehension development (Peng et al., 2023). Metacognitive reading strategies are widely acknowledged as important components of effective EFL reading instruction (Yulita & Napitupulu, 2023). Skilled readers actively employ strategies such as predicting, questioning, and monitoring comprehension while reading texts (Afflerbach et al., 2008). Adams et al. (2025) further emphasize that metacognitive questioning techniques help students monitor comprehension and strengthen text interpretation skills. In Indonesian EFL contexts, skimming and scanning strategies have also been shown to support students' reading comprehension performance (Agustin et al., 2023).

Recent studies emphasize that effective strategy instruction should involve modeling, guided practice, and gradual release of responsibility. Oxford (2017) highlights that when students are explicitly taught how to engage with texts strategically, they demonstrate improved comprehension and increased independence as readers. This aligns with broader student-centered learning approaches that prioritize active engagement and critical thinking (Yulita & Napitupulu, 2023). Teacher guidance also remains important in effective strategy instruction (Rice et al., 2024).

Critical reading represents a higher level of reading engagement that goes beyond basic comprehension to include analysis, evaluation, and interpretation. It involves questioning the author's assumptions, evaluating the credibility of information, and synthesizing ideas across texts. Kintsch (1998) suggests that critical reading strategies play a crucial role in enabling learners to process complex academic texts effectively. Critical literacy also involves the ability to evaluate meanings and perspectives presented within texts (Potter, 2023).

Empirical evidence supports the effectiveness of critical reading strategies in improving both

comprehension and critical thinking skills. Recent studies have shown that learners who receive explicit instruction in critical reading demonstrate better performance in tasks requiring inference, evaluation, and argument analysis (Su, 2024; Mekuria et al., 2024). These findings suggest that critical reading strategies are particularly relevant in contexts where students are expected to engage with higher-order cognitive demands. Awareness of metacognitive reading strategies is strongly associated with higher reading achievement among EFL learners (El Boukhrissi & Brigui, 2025). Both cognitive and metacognitive reading strategies contribute to students' comprehension performance (Moradi et al., 2023). Metacognitive awareness has also been found to correlate positively with reading achievement and strategic reading behavior among EFL learners (Alamer & Alsagoafi, 2023).

In this study, critical reading strategies are operationalized through five key practices: previewing, annotating, questioning, summarizing, and evaluating arguments. These strategies are grounded in contemporary cognitive theories of reading and are directly aligned with the competencies assessed in the TKA (Pahrizal et al., 2025; Su, 2024). Collaborative strategic reading activities contribute positively to students' comprehension development and classroom participation in EFL contexts (Aldossary, 2024; Herda et al., 2023). Such instructional approaches have also been associated with improved reading motivation, metacognitive awareness, and comprehension performance among EFL learners (Khonamri et al., 2023; Sarshogh et al., 2024).

Gender differences in reading achievement have been consistently reported in both national and international assessments. Female students generally demonstrate higher levels of reading comprehension, which has been attributed to differences in motivation, engagement, and strategy use (OECD, 2023). Reading motivation and self-regulated learning strategies are closely associated with comprehension achievement (Li & Gan, 2022). Bartlett and Camba (2023) reported that gender-related differences may influence students' academic learning performance and engagement. However, recent research suggests that these differences may not be inherent but influenced by instructional practices and learning environments.

Soemer et al. (2023) argue that when students are provided with effective reading strategies and supportive learning conditions, gender differences in reading performance tend to diminish. Similarly, Morsy and Du (2025) found that factors such as reading habits and motivation play a more significant role than gender itself in determining reading outcomes.

Despite these findings, the role of gender as a moderating variable in instructional interventions remains underexplored. Some studies report differential effects of strategy instruction across genders, while others find no significant interaction effects. This inconsistency underscores the need for further investigation, particularly in EFL contexts where cultural and educational factors may influence learning outcomes (OECD, 2023; Stranovská & Szabó, 2024). Metacognitive awareness has been identified as an important predictor of reading achievement among EFL learners (Alamer & Alsagoafi, 2023).

METHOD

This study employed a quasi-experimental pre-test–post-test factorial design. The independent variable was the teaching strategy (critical reading strategies vs. conventional teaching), and gender served as a moderator variable (male vs. female). The dependent variable was students' reading comprehension for the TKA.

The participants were 67 twelfth-grade students of SMA IBS Raudhatul Jannah Payakumbuh in the 2025–2026 academic year. Using cluster sampling with intact classes, as random assignment of individual students was not feasible; 32 students from class XII F1 were assigned to the experimental group, and 35 students from class XII F2 were assigned to the control group. Because intact classes were used without random assignment, potential pre-existing differences between groups may have affected the internal validity of the study.

The experimental group comprised 17 females and 15 males, while the control group consisted of 15 females and 21 males.

Reading comprehension was measured using a standardized reading test developed in alignment with TKA indicators. The test comprised 25 multiple-choice items, each scored 1 point for a correct answer and 0 for an incorrect response (maximum score = 25). Items were mapped to TKA cognitive indicators: locating explicit information (C3), making inferences (C4), and evaluating arguments/author intent (C5). Content validity was confirmed by two English education specialists which Aiken's V ranged from .85 to .95, and internal consistency yielded $\alpha = .82$. Reliability was estimated using Cronbach's alpha

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based on pilot data from students with characteristics similar to the target population.

The study was conducted over six instructional sessions, each lasting 90 minutes.

In the experimental group, students were taught using critical reading strategies. The instruction included activities such as identifying arguments, analyzing text structure, evaluating evidence, recognizing bias, and drawing conclusions. Students engaged in guided discussions and collaborative tasks to apply these strategies.

In contrast, the control group received conventional reading instruction, which consisted of reading texts, answering comprehension questions, and discussing vocabulary. The instructional approach focused primarily on surface-level understanding rather than critical analysis.

To ensure consistency, lesson plans were prepared and followed throughout the intervention. The implementation of the instructional procedures was monitored to maintain fidelity. The relatively short duration of the intervention may have limited students' opportunities to internalize and consistently apply critical reading strategies.

Data were analyzed using two-way ANCOVA to examine the main effects of teaching strategy and gender, as well as their interaction effect. Prior to conducting the analysis, assumptions of normality and homogeneity of variance were tested using the Shapiro-Wilk test and Levene's Test, respectively. The results indicated that the data met the assumptions required for ANCOVA ($p > .05$).

RESULTS AND DISCUSSION

Descriptive statistics

The descriptive analysis was conducted to obtain an overview of students' reading comprehension performance before and after the instructional intervention. Prior to treatment, the pre-test results indicated that the experimental and control groups had relatively comparable levels of reading comprehension. The experimental group obtained a mean pre-test score of 42.38, while the control group achieved a mean score of 48.34, showing a difference of 5.86 points. This suggests that both groups started from a similar baseline and that any differences found in the post-test could reasonably be attributed to the instructional strategies implemented.

After the treatment, the post-test results revealed a noticeable improvement in the experimental group that received instruction through critical reading strategies. The mean post-test score of the experimental group increased to 51.22, representing a gain of 8.84 points from the pre-test. In comparison, the control group achieved a mean post-test score of 41.83, with a decline of 6.51 points. While the experimental group showed improvement, the control group experienced a decline in scores.

When examined by gender, female students generally obtained higher mean scores than male students in both groups. However, the main effect of gender was also not statistically significant. This suggests that gender alone did not significantly influence students' reading comprehension outcomes, despite observable differences in mean scores.

Inferential statistics

Table 1. *Inferential statistics*

Source	df	F	Sig	η^2p
Strategy	1	1.718	.195	.03
Gender	1	0.689	.409	.01
Interaction	1	2.367	.129	.04
Error	63			

Note: η^2p = partial eta squared.

Results of two-way ANCOVA on reading comprehension scores

To examine the effects of teaching strategy and gender on students' reading comprehension, a two-way Analysis of Variance (ANCOVA) was employed. The analysis focused on three main effects: (1) the effect of teaching strategy, (2) the effect of gender, and (3) the interaction effect between teaching strategy and gender.

The two-way ANCOVA indicated no statistically significant main effect of teaching strategy, $F(1, 63) = 1.72$, $p = .195$, $\eta^2p = .03$. Similarly, gender did not significantly predict reading comprehension, $F(1, 63) = 0.69$, $p = .409$, $\eta^2p = .01$. The interaction between strategy and gender was also non-significant, $F(1, 63) = 2.37$, $p = .129$, $\eta^2p = .04$.

Note on η^2p calculation: $\eta^2p = F / (F + df_error)$

Strategy : $1.718 / (1.718 + 63) = .027 \rightarrow .03$

Gender : $0.689 / (0.689 + 63) = .011 \rightarrow .01$

Interaction: $2.367 / (2.367 + 63) = .036 \rightarrow .04$

Although students taught using critical reading strategies obtained higher mean post-test scores than those taught using conventional methods, the difference did not reach the 0.05 significance level. This finding indicates that critical reading strategies demonstrated a positive tendency to improve students' reading comprehension, but the effect was not strong enough to be considered statistically significant within the scope of the study. Although statistically non-significant, the strategy effect produced a small effect size (η^2p=.03), suggesting limited practical impact.

Regarding gender, the analysis indicated that female students achieved higher mean scores than male students. However, the main effect of gender was not statistically significant, $F(1, 63) = 0.689$, $p = 0.409$. This suggests that gender alone did not significantly influence students' reading comprehension outcomes, despite observable differences in mean scores.

Most importantly, the interaction effect between teaching strategy and gender was also not statistically significant, $F(1, 63) = 2.367$, $p = 0.129$.

This result indicates that the effectiveness of critical reading strategies did not depend on students' gender. In other words, critical reading instruction benefited both male and female students in a relatively similar manner.

This study aimed to examine the effect of critical reading strategies on students' reading comprehension in the context of the Tes Kemampuan Akademik (TKA) and to investigate whether gender moderated this effect. The findings provide several important insights into strategy-based instruction in EFL contexts.

Although the effect did not reach statistical significance (p = .195), the experimental group's mean gain of 8.84 points contrasts sharply with the control group's decline of 6.51 points, yielding a 15.35-point post-test differential. In high-stakes testing contexts like the TKA, where cut-off scores often separate university admission tiers, such a magnitude may indicate a potentially meaningful educational trend that warrants further investigation for instructional design (Capin et al., 2024).

First, although the statistical analysis indicated that the effect of critical reading strategies was not significant, the descriptive results revealed a positive trend in favor of the experimental group. Students who were exposed to structured critical reading practices, such as previewing, annotating, questioning, summarizing, and evaluating arguments, demonstrated higher mean scores compared to those who received conventional instruction. This finding aligns with previous research showing that strategy-based instruction improves students' engagement with texts and comprehension performance (Capin et al., 2024). Teacher guidance and explicit instructional support also contribute to more effective comprehension instruction (Rice et al., 2024). Self-efficacy and intrinsic motivation may also influence students' willingness to apply metacognitive strategies during reading tasks (Zhao et al., 2025). This finding is consistent with previous studies showing that explicit strategy instruction can improve students' reading performance when sufficient practice opportunities are provided (Mekuria et al., 2024; Habók et al., 2024).

From a cognitive perspective, critical reading strategies facilitate active meaning construction by encouraging learners to monitor their understanding and evaluate textual information. Both cognitive and metacognitive reading strategies contribute to students' comprehension performance (Moradi et al., 2023). According to Naumann et al. (2025), goal-directed reading processes enable learners to allocate attention more effectively and engage in higher-order thinking. Similarly, Loyens et al. (2023) emphasize that metacognitive regulation plays a crucial role in comprehension development, particularly when learners are required to interpret complex texts. Metacognitive instruction can significantly increase students' awareness and use of reading strategies (Khurram, 2023). Metacognitive reading strategy instruction may also improve students' attitudes toward reading activities (Noipa & Phusawisot, 2025). Students in EFL contexts often experience difficulties in drawing conclusions and making predictions while reading texts (Hidayah et al., 2026).

However, the absence of statistical significance suggests that the implementation of critical reading strategies in this study may not have been sufficiently intensive to produce measurable effects. Previous studies indicate that the effectiveness of strategy instruction depends on duration, explicit modeling, and sustained practice (Ueno et al., 2025). Sustained guided practice is particularly important in helping students internalize reading strategies independently (Peng et al., 2023). The relatively short intervention period in this study may have limited students' ability to internalize and apply the strategies independently. Eye-tracking research has further demonstrated the relationship

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between reading behaviors and comprehension outcomes (Mézière et al., 2023). Tywoniw (2023) highlights the interaction between language proficiency and reading behavior in second-language comprehension processes. Students' self-efficacy may further influence the effectiveness of metacognitive strategy use during reading activities (Muche et al., 2024).

Second, the results indicated that female students obtained higher mean scores than male students; however, the difference was not statistically significant. While this finding partially reflects global trends reported in international assessments, it also suggests that gender differences in reading achievement may be less pronounced when students are exposed to structured instructional support. Stranovská and Szabó (2024) argue that engagement and motivation play a more significant role than gender in determining reading outcomes, particularly in classroom settings where instructional practices are controlled. Reading engagement also plays a substantial role in supporting students' comprehension development (McGeown & Smith, 2023).

Third, the interaction effect between teaching strategy and gender was not statistically significant, indicating that gender did not moderate the effectiveness of critical reading strategies. This finding suggests that strategy-based instruction can be applied equitably across male and female students. It supports the argument that well-designed instructional approaches have the potential to reduce performance gaps by providing all learners with access to effective cognitive tools (Kim, 2024).

The findings of this study contribute to the growing body of literature emphasizing the importance of strategic and metacognitive approaches to reading instruction. Although the results did not show a statistically significant effect, the observed positive trend highlights the potential of critical reading strategies to support students' comprehension, particularly in high-stakes assessment contexts such as the TKA. Technology-supported literacy instruction has also demonstrated positive effects on students' reading development (Dahl-Leonard et al., 2024). Reading comprehension in second language contexts is influenced by multiple linguistic and cognitive variables, including vocabulary knowledge, grammatical competence, and decoding skills (Jeon & Yamashita, 2014). Students' navigation strategies during digital reading activities may affect their comprehension performance (Salmerón et al., 2025). McCarthy and Yan (2023) emphasize the importance of constructive reading processes in digital learning environments. Different patterns of digital reading behavior may lead to varying comprehension outcomes among students (Shimizu et al., 2024).

Overall, the results suggest that critical reading strategies are pedagogically valuable but require longer implementation and more intensive instructional support to produce statistically significant improvements in reading comprehension.

The six-session intervention (9 hours total) likely provided insufficient time for students to internalize and independently apply critical reading strategies. Meta-analytic evidence suggests that meaningful strategy transfer typically requires 10–15 hours of scaffolded practice distributed over 6–8 weeks, with explicit modeling and gradual release of responsibility (Ueno et al., 2025; Peng et al., 2023). The condensed dosage in this study may explain the attenuated statistical effect despite positive directional trends.

Several methodological factors may explain the non-significant findings observed in this study. First, the relatively small sample size reduced the statistical power to detect modest treatment effects. Second, the six-session intervention may not have been sufficient for students to fully develop and transfer critical reading strategies to independent reading tasks. Third, the use of intact classes without random assignment may have introduced pre-existing group differences despite comparable baseline performance. These limitations should be considered when interpreting the findings and designing future research.

CONCLUSION

This study investigated the effect of critical reading strategies on twelfth-grade students' reading comprehension in preparation for the Tes Kemampuan Akademik (TKA), with gender examined as a moderating variable. The findings indicate that, although students exposed to critical reading strategies demonstrated higher mean scores than those receiving conventional instruction, the effect was not statistically significant.

Furthermore, gender did not have a significant effect on reading comprehension outcomes, nor did it moderate the relationship between instructional strategy and achievement. These findings suggest that critical reading strategies can

be implemented effectively in mixed-gender classrooms without disadvantaging any group of learners.

Despite the lack of statistical significance, the positive trend observed in the experimental group highlights the potential of critical reading strategies to enhance students' engagement with texts and support higher-order comprehension processes. The results underscore the importance of sustained and intensive strategy instruction in order to achieve measurable learning outcomes.

Future research should implement critical reading instruction across a minimum of 10–12 weekly sessions, incorporate fidelity checks through lesson video coding or observer rubrics, and employ a priori power analysis (e.g., G*Power) targeting $N \geq 120$ to detect small-to-moderate effects ($d = 0.40$, $\alpha = .05$, power = .80). Mixed-methods designs combining think-aloud protocols, strategy use journals, and pre/post-test measures would further clarify how and when students deploy critical reading strategies during TKA-style tasks.

The findings of this study offer several important implications for English language teaching, particularly at the senior high school level.

First, English teachers may consider integrating critical reading strategies into regular reading instruction, such implementation should be supported by sufficient duration and guided practice. Rather than focusing solely on vocabulary explanation and comprehension questions, teachers should explicitly model and guide students in previewing texts, annotating ideas, questioning assumptions, summarizing information, and evaluating arguments. Such practices can foster deeper comprehension and critical thinking skills required in high-stakes assessments like the TKA.

Second, teachers should adopt a strategy-based and student-centered approach to reading instruction. Providing opportunities for guided practice, collaborative discussion, and reflective activities can help students internalize critical reading strategies and apply them independently. This approach aligns with current curriculum demands that emphasize higher-order thinking skills and learner autonomy.

Third, given that critical reading strategies were found to be effective for both male and female students, teachers can confidently implement these strategies without concern for gender bias. Strategy instruction can serve as an equitable pedagogical tool that supports all learners, regardless of gender differences in motivation or reading habits.

At the institutional level, schools are encouraged to support professional development programs that focus on critical reading and critical literacy instruction. Training workshops and collaborative teacher learning communities can help educators design reading lessons that align with national assessment standards and promote higher-order thinking.

From a policy perspective, the findings support the integration of critical reading competencies into curriculum guidelines and assessment frameworks. Aligning classroom instruction with the analytical and evaluative demands of the TKA can contribute to improved student outcomes and help address broader concerns regarding reading literacy achievement in Indonesia.

Future studies are recommended to explore the long-term effects of critical reading instruction across different grade levels and text genres. Researchers may also examine additional moderating variables, such as reading motivation, proficiency level, or socio-cultural background, to gain a more comprehensive understanding of how critical reading strategies function in diverse EFL contexts. Employing mixed-methods designs could further enrich the findings by capturing students' perceptions and strategic behaviors during reading.

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