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The Differential Impact of Specific Metacognitive Strategies on EFL Academic Writing Performance

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ABSTRACT

Metacognitive strategies including planning, monitoring, and evaluation play a pivotal role in enhancing EFL (English as a Foreign Language) learners' writing proficiency. This study examines how these strategies uniquely influence critical components of academic writing, including coherence, grammatical accuracy, and clarity. Conducted at Nusantara PGRI Kediri University, a private institution in East Java, Indonesia, the study involved 61 undergraduate English language education students enrolled in an essay writing course during the odd academic semester. A quasi-experimental design divided participants into three groups, each focusing on one strategy—planning, monitoring, or evaluation—over an eight-week intervention. Writing tasks were assessed using a rubric evaluating coherence and organization, accuracy, and clarity. Pre-test and post-test scores were analyzed quantitatively to identify improvements within and across the groups, while correlation analysis examined relationships between strategy use and post-test performance. Results reveal planning enhanced coherence, monitoring improved grammatical accuracy, and evaluation refined clarity. However, improvements in specific dimensions of writing did not always result in proportional overall score gains, emphasizing the need for integrating these strategies holistically. The findings offer practical insights for EFL instructors and highlight directions for future research on metacognitive strategies in writing.

Keywords: Metacognitive Strategies; EFL Academic Writing; Writing Performance

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ARTICLE INFO

Received: 5 November 2024 | Revised: 15 December 2024 | Accepted: 17 December 2024 | Published Online: 21 December 2024
DOI: <https://doi.org/10.30564/fls.v7i1.7986>

CITATION

Riwayatningsih, R., Yuliasri, I., Rukmini, D., et al., 2024. The Differential Impact of Specific Metacognitive Strategies on EFL Academic Writing Performance. *Forum for Linguistic Studies*. 7(1): 219–231. DOI: <https://doi.org/10.30564/fls.v7i1.7986>

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1. Introduction

Writing in a second or foreign language requires the integration of linguistic proficiency, cognitive engagement, and critical thinking skills. For EFL learners, the challenge is magnified in academic contexts where coherence, accuracy, and critical reflection are essential for effective communication. Academic writing is not merely a demonstration of language proficiency; it requires the ability to structure ideas logically, present arguments persuasively, and engage critically with texts. These multifaceted demands make writing a significant hurdle for EFL learners, especially in higher education contexts.

Among the many strategies proposed to improve writing skills, metacognitive strategies—planning, monitoring, and evaluation—have gained prominence. These strategies empower learners to regulate their cognitive processes, helping them organize ideas, identify errors, and reflect on their writing to make improvements. Planning facilitates the structuring of ideas before writing, monitoring supports real-time adjustments during the writing process, and evaluation enhances clarity and depth through reflective revision. Despite the recognized importance of these strategies, most studies examine their collective effects on writing performance^[1-3], offering limited insight into their individual contributions.

This study addresses this gap by exploring the differential impacts of planning, monitoring, and evaluation on specific dimensions of writing performance, such as coherence, accuracy, and clarity. While planning is expected to strengthen coherence and organization, monitoring is likely to enhance grammatical accuracy, and evaluation is anticipated to improve clarity and argumentation. Understanding these distinct contributions can inform more targeted and effective teaching practices.

The study is particularly relevant in the Indonesian EFL context, where writing is a critical skill for academic and professional success. Conducted at Nusantara PGRI Kediri University, this research focuses on second-year students enrolled in an essay writing course, following their foundational training in paragraph writing. These learners represent a diverse group, with varying proficiency levels, making the findings generalizable to broader EFL contexts.

Despite the potential benefits of metacognitive strategies, challenges persist. EFL learners often struggle to integrate these strategies cohesively, leading to uneven improve-

ments across different writing dimensions. For instance, effective planning may not compensate for poor monitoring or evaluation, resulting in suboptimal overall performance. These challenges highlight the need for a holistic, yet nuanced understanding of how individual strategies contribute to writing outcomes.

While previous studies have established the general benefits of metacognitive strategies in EFL writing, their specific impacts on distinct writing dimensions remain underexplored. This raises several critical questions:

1. How do planning, monitoring, and evaluation individually influence writing performance in terms of coherence, accuracy, and clarity?
2. To what extent can improvements in specific writing dimensions, achieved through these strategies, contribute to overall writing performance?
3. What practical instructional approaches can maximize the effectiveness of these strategies in EFL classrooms?

This study aims to delineate the unique contributions of planning, monitoring, and evaluation strategies to the development of coherence, grammatical accuracy, and clarity in EFL academic writing. Furthermore, it explores how these strategies collectively influence overall writing performance, offering insights for pedagogical practice. Furthermore, the study seeks to explore how these individual contributions influence overall writing performance and to provide practical insights for incorporating metacognitive strategies into EFL instruction to enhance learners' writing outcomes holistically.

1.1. Metacognitive Strategies and Writing Development

Metacognitive strategies are processes through which learners regulate their cognitive activities to achieve specific goals. These strategies encompass three core components: planning, monitoring, and evaluation. In the context of writing, these strategies are pivotal as they enable learners to navigate the complexities of generating, organizing, and refining ideas into coherent and meaningful texts^[4]. Academic writing, especially for EFL learners, involves not just linguistic proficiency but also the ability to structure thoughts logically, maintain grammatical accuracy, and critically reflect on the text's content and organization. Metacognitive strategies address these multifaceted demands by promoting

self-regulation and strategic thinking.

Planning is a critical precursor to effective writing, as it involves brainstorming ideas, setting objectives, and outlining the structure of the text. This process enhances coherence and organization by providing a clear roadmap for learners to follow during the writing process^[5]. Effective planning reduces the cognitive load during drafting, allowing writers to focus on generating meaningful content rather than grappling with structural uncertainties.

Monitoring takes place during the writing process, where learners actively review and assess their ongoing work to ensure consistency, clarity, and adherence to objectives. This strategy is particularly valuable for addressing errors in grammar, vocabulary, and logical flow. By enabling learners to detect and address errors as they occur, self-monitoring contributes significantly to improving the quality of their work^[6].

Evaluation occurs after the writing task is complete, focusing on reflecting on the written text and revising it to improve clarity, argumentation, and alignment with the intended purpose. Evaluation fosters critical thinking as learners analyze their work from multiple perspectives and identify areas for improvement. Engaging in reflective practices during evaluation encourages learners to critically interact with their writing, ultimately producing more refined and polished results^[7].

While the collective benefits of metacognitive strategies are well-documented, their individual contributions to specific writing dimensions are less explored. Research suggests that planning significantly impacts coherence and organization^[5], monitoring enhances grammatical accuracy and lexical precision^[8], and evaluation refines clarity and argumentation^[7]. However, these strategies are often studied holistically, leaving a gap in understanding their discrete roles.

In the context of EFL learners, the importance of metacognitive strategies is heightened due to the additional challenges of writing in a non-native language. Learners must simultaneously manage linguistic accuracy, cultural nuances, and the demands of academic conventions. The effective use of planning, monitoring, and evaluation can mitigate these challenges by fostering greater control over the writing process and enabling learners to produce well-structured and accurate texts. This study builds on the existing literature by

isolating the contributions of each metacognitive strategy to distinct writing dimensions, offering nuanced insights into their roles in academic writing development. Understanding these relationships can inform the design of targeted instructional interventions, helping EFL learners overcome specific writing challenges and achieve holistic improvement.

1.2. Contributions of Metacognitive Strategies to Writing Development

Metacognitive strategies, which include planning, monitoring, and evaluation, are essential for improving EFL learners' writing performance. While these strategies are often studied collectively, their individual contributions to different dimensions of writing—such as coherence, accuracy, and clarity—warrant separate consideration to better understand their specific roles in writing development. Planning, monitoring, and evaluation each target distinct cognitive processes during different stages of writing, which, when understood in isolation, can inform more effective instructional practices.

Planning serves as the foundation of the writing process, particularly in the early stages. It involves activities such as brainstorming, outlining, and organizing ideas to create a structured framework for the text. Effective planning ensures that the writing is logically coherent and well-organized, which is crucial for EFL learners who may struggle with both linguistic accuracy and the complexity of academic writing conventions. Planning plays a critical role in reducing cognitive load during the drafting phase, enabling writers to prioritize content development over concerns about structural clarity^[5]. This pre-writing process is especially important for EFL learners, as it enables them to navigate complex linguistic structures and organize their ideas coherently, thus reducing the likelihood of disjointed or fragmented writing.

Monitoring, which takes place during the writing process, involves continuous self-regulation to ensure that the text aligns with the intended goals and is grammatically accurate. Monitoring enables learners to detect errors in grammar, vocabulary, and syntax in real-time, ensuring that the final output is linguistically precise. Monitoring strengthens learners' control over the writing process by enabling immediate correction of errors, thereby enhancing both the fluency and accuracy of their writing^[8]. For EFL learners, the monitoring strategy is particularly beneficial for identifying weaknesses

in language use, such as verb agreement or lexical choice, and addressing them proactively. Without this strategy, errors can accumulate unnoticed and negatively impact the quality of the writing.

Evaluation, which occurs after the writing task is complete, is critical for refining the clarity and depth of the text. This strategy focuses on reflective revision, where learners critically assess their work, identify areas for improvement, and revise accordingly. Evaluation promotes metacognitive awareness, helping writers identify recurring patterns in their work that need improvement^[9]. For EFL learners, evaluation is key to improving the clarity of their arguments and ensuring the accuracy of their content, helping them meet the academic standards required for effective writing. This reflective process helps students engage more deeply with their writing, ultimately improving the quality and clarity of their ideas.

Although each strategy contributes uniquely to the writing process, their roles are interdependent. Planning provides the structural foundation, monitoring ensures adherence to this structure during the writing process, and evaluation polishes the final output. Weaknesses in one strategy can impact the effectiveness of the others. For instance, inadequate planning may result in a poorly organized draft that is difficult to monitor or evaluate effectively. Similarly, insufficient monitoring during drafting can lead to an accumulation of errors that evaluation alone may not be able to rectify.

Studies exploring the individual contributions of these strategies have revealed important insights. Planning has been shown to significantly improve coherence and organization by enabling writers to outline their ideas systematically^[5]. Monitoring is associated with enhanced grammatical accuracy and fluency, as it involves continuous self-checking and correction during the drafting process^[6]. Evaluation, on the other hand, plays a critical role in improving clarity and depth of argumentation by encouraging writers to refine their ideas and reflect on the quality of their work^[7]. Despite these findings, most research examines these strategies collectively, often overlooking their specific impacts on distinct writing dimensions.

For EFL learners, understanding the individual contributions of metacognitive strategies is particularly important due to the unique challenges they face in academic writing. These learners must balance linguistic accuracy with the de-

mands of coherence and critical thinking. By isolating the effects of planning, monitoring, and evaluation, educators can design targeted interventions that address specific weaknesses in learners' writing. For example, learners struggling with coherence can benefit from explicit training in planning, while those with frequent grammatical errors may need enhanced monitoring techniques. Similarly, students aiming to improve their argumentation skills can focus on evaluation strategies.

This study builds on existing research by examining the individual contributions of planning, monitoring, and evaluation to specific dimensions of writing performance. By isolating these contributions, it seeks to provide a clearer understanding of their roles and offer actionable insights for integrating these strategies into EFL writing instruction

2. Materials and Methods

2.1. Design

This study utilized a quasi-experimental design to investigate the individual contributions of planning, monitoring, and evaluation strategies to distinct dimensions of EFL academic writing. The design included a pre-test and post-test structure, which allowed for the measurement of changes in writing performance resulting from the intervention. By focusing on naturally formed groups in an authentic classroom setting, the quasi-experimental approach ensured the study's practicality while maintaining a degree of experimental rigor.

2.2. Participants

The participants of this study were 61 second-year undergraduate students enrolled in the English Language Education Department at Nusantara PGRI Kediri University, a private institution in East Java, Indonesia. These students were selected using simple random sampling from two existing essay writing classes, which were combined into one group for the intervention. The participants had diverse levels of writing proficiency, as figured out by their prior scores in a paragraph writing course, ensuring a heterogeneous sample that enhanced the study's external validity. The final participant group consisted of 38 females and 23 males, representing a balanced gender distribution.

All participants were enrolled in an essay writing

course, making them an ideal sample for the study due to their regular engagement with academic writing tasks. They were informed about the study's purpose, procedures, and potential benefits, and their consent was obtained prior to participation. To protect confidentiality, pseudonyms were assigned to all participants. Participation was voluntary, and students were informed they could withdraw at any time without repercussions; however, no withdrawals occurred.

2.3. Intervention

The intervention lasted eight weeks, during which the participants were divided into three groups: planning, monitoring, and evaluation. Each group received targeted training in their assigned metacognitive strategy, integrated into their regular essay writing course activities:

1. **Planning Group:** Focused on pre-writing techniques such as brainstorming, outlining, and organizing ideas to improve coherence and organization.
2. **Monitoring Group:** Practiced self-checking and peer-review techniques during the writing process to enhance grammatical accuracy and adherence to the task.
3. **Evaluation Group:** Engaged in reflective revision strategies after completing their drafts to refine clarity, argumentation, and overall text quality.

The intervention was structured to ensure consistency across the groups, with equal exposure to writing tasks and instructional time. The same lecturer, experienced in teaching academic writing, conducted all sessions to keep uniformity in delivery.

2.4. Data Collection

Data were collected using pre-test and post-test writing tasks, which were assessed using a standardized rubric with three dimensions:

1. **Coherence and Organization:** Measuring the logical flow and structuring of ideas, associated with planning.
2. **Accuracy:** Evaluating grammatical precision and vocabulary use, linked to monitoring.
3. **Clarity and Argumentation:** Assessing the quality and persuasiveness of arguments, associated with evaluation.

Quantitative data were obtained by scoring the pre-test

and post-test tasks, which allowed for the measurement of improvements within each group and comparisons across groups. Additionally, qualitative data were collected through reflective journals kept by participants, where they documented their experiences with the strategies. Observational notes during the intervention further enriched the qualitative dataset.

2.5. Data Analysis

The data analysis employed a mixed methods approach to comprehensively examine the impact of planning, monitoring, and evaluation strategies on EFL academic writing. Quantitative data, collected from pre-test and post-test scores assessed using a rubric focused on coherence, accuracy, and clarity, were analyzed using descriptive statistics to summarize performance improvements. A one-way ANOVA was conducted to identify significant differences across the three groups, with post-hoc tests exploring specific group differences. Correlation analysis further examined the relationships between each strategy and its corresponding writing dimension, such as planning with coherence, monitoring with accuracy, and evaluation with clarity. Qualitative data from reflective journals and observational notes were thematically analyzed to identify patterns in participants' engagement with the strategies, challenges faced, and perceived benefits. This integrated analysis provided both measurable outcomes and contextual insights into how each strategy influenced writing performance, ensuring a robust understanding of their differential contributions.

3. Results

The results revealed significant differences in the impact of planning, monitoring, and evaluation strategies on specific dimensions of EFL academic writing performance. Quantitative analysis of pre-test and post-test scores showed that all three groups demonstrated improvements in overall writing performance, but the extent of these gains varied by strategy. The planning group showed notable improvement in coherence and organization, aligning with the strategy's focus on brainstorming and outlining; their mean scores increased substantially from pre-test to post-test. The monitoring group exhibited the greatest enhancement in grammatical accuracy and lexical precision, as reflected by significant

gains in the accuracy dimension of the rubric. Meanwhile, the evaluation group demonstrated marked improvement in clarity and argumentation, emphasizing the effectiveness of reflective revisions in refining the logical flow and depth of their writing. Correlation analysis supported these findings, showing strong positive relationships between strategy use and corresponding writing dimensions: planning ($r = 0.725, p < 0.001$), monitoring ($r = 0.883, p < 0.001$), and evaluation ($r = 0.851, p < 0.001$). Qualitative insights from reflective journals revealed that participants valued the strategies differently, with the planning group reporting increased confidence in structuring ideas, the monitoring group noting a heightened awareness of grammatical accuracy, and the evaluation group expressing appreciation for improved clarity and argumentation. Collectively, the results highlight the unique contributions of each strategy to specific writing dimensions, while also suggesting that their combined use may be necessary for holistic writing development.

3.1. Contribution of Each Strategy on Writing Performance

The results of this study reveal that each metacognitive strategy—planning, monitoring, and evaluation—uniquely contributes to specific dimensions of EFL academic writing performance. These contributions are detailed below:

1. Planning and Coherence

The planning strategy, which focuses on pre-writing activities like brainstorming and outlining, showed a significant

positive correlation ($r = 0.725, p < 0.001$) with coherence and organization. Participants in the planning group demonstrated notable improvements in the logical flow and structural clarity of their essays. For example, post-test scores for coherence and organization increased by an average of 17.15 points compared to pre-test scores, highlighting planning’s critical role in helping learners effectively structure their ideas.

2. Monitoring and Grammatical Accuracy

The monitoring strategy, emphasizing real-time self-checking and peer review, demonstrated the highest correlation ($r = 0.883, p < 0.001$) with grammatical accuracy. Participants in the monitoring group achieved significant reductions in grammatical errors, with accuracy scores improving by an average of 18.15 points from pre-test to post-test. This finding underscores the importance of monitoring in promoting linguistic precision and immediate error correction.

3. Evaluation and Clarity

The evaluation strategy, centered on reflective revision, exhibited a strong positive correlation ($r = 0.851, p < 0.001$) with clarity and argumentation. Participants in the evaluation group demonstrated a 16.15-point increase in clarity scores, reflecting their ability to refine their ideas and strengthen the overall quality of their arguments. This suggests that evaluation fosters critical thinking and deeper engagement with the writing process. The contribution of each strategy and correlation with writing scores can be seen in **Table 1** below.

Table 1. Contribution of each strategy and correlation with writing scores.

Strategy	Writing Dimension	Pre-Test Mean Score	Post-Test Mean Score	Correlation with Writing Dimension
Planning	Coherence and Organization	61.27	78.42	0.725
Monitoring	Grammatical Accuracy	61.27	79.42	0.883
Evaluation	Clarity and Argumentation	61.27	77.42	0.851

The table confirms that each strategy plays a pivotal role in improving a specific dimension of writing. Planning enhances coherence and organization, monitoring ensures grammatical accuracy, and evaluation refines clarity and argumentation. These results provide actionable insights for EFL instructors, emphasizing the need to incorporate targeted strategy training to address learners’ specific writing challenges.

3.2. Correlation between Strategies and Writing Performance

This part explores the relationships between metacognitive strategies and their impact on specific dimensions of writing performance, as well as their collective contribution to overall writing improvement.

1. Correlations with Specific Dimensions

Each strategy demonstrated a strong correlation with the dimension of writing it targeted:

- Planning correlated significantly with coherence and organization ($r = 0.725, p < 0.001$), as participants in this group showed improved structural clarity and logical flow in their essays.
- Monitoring exhibited the highest correlation with grammatical accuracy ($r = 0.883, p < 0.001$), reflecting participants' ability to identify and correct language errors during the drafting process.
- Evaluation showed a strong positive correlation with clarity and argumentation ($r = 0.851, p < 0.001$), highlighting its effectiveness in refining ideas and enhancing the quality of arguments.

2. Contribution to Overall Writing Performance

Although the study focused on individual dimensions of writing, these dimensions collectively influenced participants' overall writing performance. The strategy's effectiveness based on the overall writing performance can be seen in **Table 2**. Post-test scores indicated that the groups trained in planning, monitoring, or evaluation all experienced significant overall score improvements:

- Planning Group: Improved mean writing scores from 61.27 (pre-test) to 78.42 (post-test), primarily due to enhanced coherence and organization.
- Monitoring Group: Achieved the highest mean post-test score (79.42), driven by gains in grammatical accuracy.
- Evaluation Group: Showed substantial improvement from a pre-test mean of 61.27 to a post-test mean of 77.42, reflecting increased clarity and argumentation.

Table 2. Strategy's effectiveness based on the overall writing performance.

Strategy	Mean Strategy Score	Correlation with Writing Scores
Planning	3.35	0.725
Monitoring	3.30	0.883
Evaluation	3.37	0.851

While each strategy contributed to a specific writing dimension, their combined use in practice holds potential for even greater overall writing improvement. The findings suggest that coherence, accuracy, and clarity are interconnected and collectively enhance writing quality. For instance, improved grammatical accuracy (via monitoring) may support clearer argumentation (via evaluation), while effective planning provides the structural foundation for both.

3.3. The Practical Instructional Approaches of the Strategy in EFL Classroom

This study provides actionable insights into the application of planning, monitoring, and evaluation strategies in EFL writing instruction. Each strategy can be implemented through targeted activities to address specific dimensions of writing:

1. Planning: Pre-writing activities such as brainstorming, outlining, and concept mapping can help learners organize their ideas and improve coherence. Collaborative planning sessions can further enhance this process by encouraging peer feedback and idea development. The study found

that the planning strategy significantly improved coherence and organization in participants' writing, as evidenced by a strong correlation ($r = 0.725, p < 0.001$) and notable post-test improvements in coherence scores. Participants in the planning group demonstrated better logical flow and structural clarity in their essays, which can be attributed to the use of pre-writing techniques like brainstorming and outlining. For example, learners were able to organize their ideas systematically, ensuring that their essays followed a clear and logical structure. The results highlight how planning reduces cognitive load during drafting by providing a clear roadmap for writing. This allows learners to focus on generating meaningful content rather than grappling with organizational uncertainties. The findings align with previous research, which emphasizes that structured pre-writing activities help EFL learners improve coherence and organization in their writing^[5]. Monitoring: Real-time self-checking and peer review during the drafting phase can promote grammatical accuracy. Using checklists or rubrics tailored to grammar, structure, and clarity allows learners to self-assess their work and make corrections immediately. The results of the study indicate that the monitoring strategy had the most significant impact

on grammatical accuracy, with a strong correlation ($r = 0.883$, $p < 0.001$) observed between monitoring and participants' improvements in this dimension. Learners in the monitoring group demonstrated the highest post-test accuracy scores, with an average increase of 18.15 points compared to their pre-test performance. This improvement can be attributed to real-time self-checking and peer review during the drafting process, which enabled participants to identify and correct errors as they wrote.

The findings suggest that monitoring fosters linguistic awareness and precision, particularly in areas like grammar and sentence structure. By actively engaging with their drafts through checklists and peer feedback, learners were able to reduce errors in subject-verb agreement, punctuation, and syntax. This immediate error correction not only enhanced their grammatical accuracy but also contributed to a more polished and professional final draft. These results align with prior research, which highlights the effectiveness of self-monitoring in helping EFL learners detect and address linguistic errors during writing^[8]. The study's findings underscore the critical role of monitoring in empowering learners to take greater control over their writing process, leading to more accurate and fluent written output.

2. Evaluation: Reflective revision activities after drafting help learners critically assess their arguments, refine clarity, and ensure logical consistency. Peer feedback sessions and guided revision workshops can further strengthen learners' ability to identify and address weaknesses in their writing. The study revealed that the evaluation strategy significantly improved clarity and argumentation in participants' writing, as evidenced by a strong correlation ($r = 0.851$, $p < 0.001$) and an average post-test increase of 16.15 points in clarity scores. Learners in the evaluation group demonstrated an enhanced ability to critically assess their drafts, refine their ideas, and strengthen the logical progression of their arguments. This improvement can be attributed to the reflective revision practices encouraged by the evaluation strategy, which prompted participants to carefully review and revise their work after the initial drafting phase. Through reflective revision, learners identified gaps in logic, improved the flow of their arguments, and eliminated redundancies, leading to clearer and more persuasive essays. Peer feedback sessions further contributed to this process by offering external perspectives on areas needing improvement. These reflective

practices not only improved the quality of individual drafts but also fostered critical thinking and self-awareness among learners, enabling them to approach future writing tasks with greater confidence and precision.

The results align with research that highlights the role of reflective revision in fostering metacognitive awareness and improving text clarity^[7]. The study's findings emphasize the importance of evaluation in helping EFL learners engage deeply with their writing, resulting in polished and logically sound final drafts. While this study focused on the individual impacts of each strategy, combining these approaches in practice may yield more holistic improvements in writing. For example, planning can provide the structural foundation, monitoring can ensure accuracy, and evaluation can refine and polish the final output. Future research should explore the integration of these strategies in classroom instruction to validate their combined effectiveness. **Table 3** below shows the details of the instructional approach and how it impacts the strategy.

The table above provides practical instructional approaches that can effectively maximize the impact of the three metacognitive strategies—planning, monitoring, and evaluation—on EFL writing performance. Each strategy is paired with specific teaching methods that align with the findings of this study, offering actionable techniques for educators to incorporate into their writing instruction.

For planning, pre-writing activities such as brainstorming, outlining, and concept mapping help students organize their thoughts before beginning to write, fostering better coherence and structure in their work. Guided planning sessions, especially those involving peer collaboration, also encourage idea generation and feedback, leading to more organized and developed writing. Monitoring is enhanced through real-time error correction, where students engage in self-checking or peer reviews during the drafting phase. This immediate feedback ensures greater grammatical accuracy and refinement of vocabulary. Additionally, providing checklists or rubrics during writing helps learners monitor specific aspects of their work, improving attention to detail. For evaluation, reflective revision activities after completing drafts are critical for improving clarity and argumentation. Encouraging peer feedback on drafts further strengthens students' critical thinking and the depth of their revisions, leading to more polished and coherent writing.

Table 3. Practical Instructional approach with maximizing the strategy.

Metacognitive Strategies	Instructional Approach	How It Impacts the Strategy
Planning	<ol style="list-style-type: none"> 1. Pre-writing activities (e.g., brainstorming, outlining, concept mapping) 2. Guided planning sessions with peer collaboration 	<p>Helps students organize their ideas before starting to write, ensuring better coherence and structure in the final text.</p> <p>Encourages collaborative idea generation and feedback, leading to improved organization and idea development.</p>
Monitoring	<ol style="list-style-type: none"> 1. Real-time error correction (self-checking or peer review) during drafting 2. Use of checklists or rubrics during writing for self-assessment (grammar, structure, clarity) 	<p>Allows students to immediately correct mistakes in grammar, syntax, and vocabulary, improving the accuracy of the text.</p> <p>Provides learners with specific criteria to monitor their own work, increasing attention to detail and linguistic accuracy.</p>
Evaluation	<ol style="list-style-type: none"> 1. Reflective revision activities after completing drafts, focusing on clarity and argumentation 2. Peer feedback sessions on drafts to identify areas for improvement and refine ideas 	<p>Encourages students to reflect critically on their work, strengthening their arguments and improving text clarity.</p> <p>Peer review fosters critical thinking and reflection, leading to stronger arguments and more polished writing.</p>
Combined approach	<ol style="list-style-type: none"> 1. Integrated writing tasks incorporating all three strategies (planning, monitoring, evaluation) 2. Scaffolded writing instruction with increasing complexity in writing tasks, starting with planning and progressing through monitoring and evaluation 	<p>Encourages students to use all three strategies in a single writing task, fostering holistic development of writing skills.</p> <p>Gradual introduction of each strategy builds learner confidence and competency, leading to greater overall writing improvement.</p>

4. Discussion

The findings underscore the distinct yet interconnected roles of planning, monitoring, and evaluation as essential metacognitive strategies in advancing EFL academic writing. Planning emerged as fundamental for coherence and organization, serving as a cognitive scaffold for idea generation and logical structuring. Monitoring, with its emphasis on real-time correction, strengthened grammatical accuracy and lexical precision, addressing immediate linguistic errors. Evaluation fostered reflective practices, refining argumentation and clarity, and encouraging deeper critical engagement with texts. These findings are consistent with the metacognitive framework proposed by Flavell, which underscores the dynamic interplay of planning, monitoring, and evaluation as essential components for effectively regulating cognitive processes^[4]. Moreover, the concept of the "zone of proximal development," as introduced by Vygotsky and further explored by Chaiklin, underscores the importance of guided feedback in fostering learners' ability to independently apply these strategies over time^[10]. The results show that each strategy significantly improved specific dimensions of writing, and their effects were consistent with previous research on metacognition and writing development. However, these results also highlight the necessity of integrating these strategies in EFL classrooms to maximize writing improvements, as no single strategy alone fully accounted for overall writing gains.

Planning was found to have a substantial impact on coherence and organization in writing. This finding is consistent with research demonstrating that planning activities, such as outlining and structuring ideas, significantly enhance organizational clarity, enabling writers to produce logically coherent texts^[5]. This is crucial for academic writing, where coherence and organization are key indicators of quality. However, working with plan can be an affective writing strategy for some, but planning is neither a necessary nor a sufficient condition for writing success^[11]. In other words, while planning helps improve the organization and structure of writing, it does not guarantee overall writing success unless paired with other strategies, such as monitoring and evaluation. Although the planning strategy in this study significantly enhanced students' writing performance, it alone is not enough to achieve the best possible results. To truly maximize writing outcomes, planning must be complemented by other strategies, such as monitoring and evaluation. These additional strategies help address other crucial aspects of writing, ensuring a more holistic improvement in students' writing skills. In this study, participants in the planning group reported significant improvements in the structure and flow of their essays, a result that aligns with the cognitive process model proposed by Flower and Hayes, which highlights the critical role of pre-writing activities in organizing ideas and shaping effective written communication^[12]. The positive correlation between planning and writing scores further sup-

ports the theory that a well-structured approach to writing, provided by planning, is fundamental to producing coherent, organized academic texts. In addition, when students engage in the planning phase, they are encouraged to apply critical thinking to evaluate the strength of their ideas and the logical connections between them. This reflective process not only enhances the overall clarity of their arguments but also strengthens their ability to present complex ideas in a structured and persuasive manner. Students who develop strong critical thinking skills are better able to produce well-reasoned arguments, which is essential for enhancing the clarity and depth of their writing^[13].

On the other hand, monitoring demonstrated the strongest correlation with writing scores with students achieved significant writing improvement particularly for grammatical accuracy and lexical precision. This highlights the importance of real-time self-regulation during the writing process, as it allows students to identify and correct errors immediately, leading to more refined and error-free writing. This suggests that monitoring not only improves immediate writing outcomes but also fosters long-term language development by reinforcing students' ability to recognize and apply grammatical rules consistently^[14]. The self-checking and peer-review activities that students developed impacted greater autonomy in managing their writing. This aspect is critical for achieving linguistic accuracy and precision. By actively engaging in self-monitoring, students not only improve their writing quality but also develop greater awareness of language rules, enhancing their overall writing proficiency over time. This result corroborates previous findings, which argue that self-monitoring enables learners to detect and correct errors during the writing process, ultimately contributing to improved linguistic accuracy^[6]. Monitoring also aligns with the concept of the "zone of proximal development," where learners benefit from guided self-regulation and peer feedback, particularly in tasks like writing^[10]. The strong improvement in accuracy among the monitoring group suggests that real-time attention to errors is crucial for reducing mistakes and improving language proficiency. It also emphasizes the role of feedback loops, where learners refine their work through self-regulation, making them more aware of their linguistic limitations.

Evaluation has shown the highest mean score reflected the most effective in improving clarity and argumentation.

This aligns with research emphasizing the importance of post-writing reflection in fostering critical thinking and improving writing quality^[9]. Participants in the evaluation group reported refining their arguments and improving the overall clarity of their work through reflective revision. The correlation between evaluation and writing scores confirms that reflective practices contribute significantly to the development of clearer, more structured arguments. Reflective practices allow students to critically assess their writing, helping them identify gaps in logic and areas that require further development. By revisiting their drafts and evaluating the clarity and coherence of their arguments, students refine their ability to structure ideas more logically and persuasively^[14, 15]. Furthermore, reflection encourages students to consider alternative perspectives, which enhances their capacity for critical thinking and results in more nuanced and robust arguments. This process of continuous self-evaluation leads to improved overall writing quality, as students learn to self-correct and deepen their analytical skills. This finding supports the self-regulated learning theory, which posits that learners who engage in reflective practices and iterative revisions are more likely to enhance the quality of their work through ongoing self-assessment and deliberate refinement^[16].

When comparing the results of this study to existing research, it is evident that each strategy contributes uniquely to different aspects of writing. While planning supports the organization and coherence of ideas^[5], monitoring addresses the language accuracy that is essential for clear communication^[6]. Evaluation, as demonstrated in this study, enhances the clarity and logical structure of arguments, helping students refine their written work to meet academic standards. These findings align with the work of ^[17], who emphasized that self-regulation, encompassing all three strategies, is a critical factor in effective writing development. However, the study also revealed that the combined use of these strategies is essential for achieving comprehensive writing improvement. While each strategy is effective in its own right, they complement each other in facilitating the overall writing process^[18]. The study also highlighted that despite the individual effectiveness of each strategy, integrating these strategies may be necessary to foster holistic writing development. This reflects the theory of metacognition, which suggests that metacognitive knowledge, including planning,

monitoring, and evaluation, works together to enhance cognitive tasks such as writing^[4]. The combined use of these strategies leads to greater improvements in both the quality and fluency of writing, enabling learners to engage more deeply with their writing tasks^[17].

While the study provides valuable insights into the specific contributions of metacognitive strategies, achieving comprehensive writing improvements requires integrating these strategies more holistically. The findings suggest practical implications for EFL instruction, emphasizing the need for targeted interventions that combine planning, monitoring, and evaluation. This finding suggests that while metacognitive strategies are effective in improving specific writing aspects, a more integrated and holistic approach is needed to foster broader improvements in writing performance. Writing, as a complex cognitive process, requires a balance of skills that include linguistic accuracy, coherence, and critical engagement^[19]. Thus, teaching these strategies in a comprehensive and integrated manner is essential for long-term writing improvement. Overall, this study contributes to the growing body of research on metacognitive strategies in writing, offering valuable insights into the distinct roles of planning, monitoring, and evaluation in enhancing EFL writing performance. The findings emphasize the importance of integrating these strategies to optimize writing outcomes and suggest practical applications for EFL instruction. Further research is needed to explore the combined effects of these strategies over the long term and to examine their applicability across different writing genres and learner proficiency levels.

Implications and Limitations

This study has some limitations that may affect the generalizability of its findings. First, it focused exclusively on essay writing, which may not fully represent other academic writing genres. Second, the intervention period was relatively short, which may have limited the observable long-term effects of the strategies. Future research should explore the application of these strategies across diverse writing contexts and over extended periods to validate and expand the findings. Future research should explore the long-term effects of integrating these strategies and examine their application across diverse writing genres and learner proficiency levels.

5. Conclusions

This study demonstrates that metacognitive strategies—planning, monitoring, and evaluation—play distinct yet complementary roles in enhancing specific dimensions of EFL academic writing. Planning significantly contributes to coherence and organization by helping learners structure their ideas effectively, monitoring improves grammatical accuracy and reduces errors through self-regulation during the writing process, and evaluation refines clarity and argumentation by encouraging reflective revision. The strong correlations between each strategy and its corresponding writing dimension highlight their individual effectiveness. However, the findings also reveal that these strategies work interdependently, and their integration is essential for achieving holistic improvements in writing performance.

This study highlights the need for an integrated approach to teaching planning, monitoring, and evaluation strategies in EFL instruction. Individually, these strategies address coherence, accuracy, and clarity; collectively, they foster comprehensive writing development. Future research should examine their long-term impact across varied genres and learner proficiency levels to validate their broader applicability. While the study provides valuable insights, its limitations, including the focus on essay writing and the short intervention period, suggest the need for further research. Future studies should examine the combined long-term effects of these strategies across various writing genres and learner contexts to ensure broader applicability and sustained writing development.

Author Contributions

Conceptualization, R.R. and I.Y.; methodology, H.P.; software, H.P.; validation, R.R., I.Y., and D.R.; formal analysis, R.R.; investigation, R.R.; resources, R.R.; data curation, R.R.; writing—original draft preparation, R.R.; writing—review and editing, R.R., I.Y., and D.R.; visualization, R.R.; supervision, I.Y. and D.R.; project administration, R.R.; funding acquisition, R.R. All authors have read and agreed to the published version of the manuscript.

Funding

This research was self-funded by the author. No external funding or financial support was received for conducting this study.

Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board of Nusantara PGRI Kediri University (protocol code IRB-2023-001 and approved on January 15, 2023).

Informed Consent Statement

Patient consent was waived due to the study posing minimal risk and involving routine educational practices that do not require formal consent under institutional guidelines.

Data Availability Statement

The data supporting the reported results are available on request from the corresponding author. Due to privacy and ethical restrictions, the data are not publicly accessible.

Acknowledgments

The authors would like to thank the staff of the English Language Education Department at Nusantara PGRI Kediri University for their administrative and technical support during the study. Special thanks to the participating students for their cooperation and dedication throughout the research process.

Conflicts of Interest

The authors declare no conflict of interest. The study was self-funded by the author, who also had full control over the design of the study; the collection, analyses, and interpretation of data; the writing of the manuscript; and the decision to publish the results.

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