The Effect of an Instructional Model Using Metacognition Theory and Collaborative Learning Approach to Enhance English Writing Ability of Chinese Undergraduates

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Abstract

The purposes of this research were 1. to compare the English writing abilities between the experimental and control groups after the experiment and 2. to compare the English writing abilities of the experimental group before and after the experiment. The sample consisted of 100 first-year undergraduates in Huashang University in the first semester of the 2025 academic year, selected via cluster random sampling and divided into two classes of 50 students each. The experimental group was taught using an instructional model integrating metacognition theory and collaborative learning, while the control group received conventional instruction. Data were collected using pre-test and post-test assessments scored with a detailed analytic rubric. The results of an independent samples t-test revealed that the experimental group (M=72.15, SD=7.82) significantly outperformed the control group (M=66.45, SD=8.95) on the post-test, t (98) =3.39, p<.001, with a medium-to-large effect size (Cohen's d=0.68). Furthermore, a paired samples t-test within the experimental group showed a statistically significant improvement from pretest (M=56.15, SD=9.50) to post-test (M=72.15, SD=7.82), t (49) =14.34, p<.001, with a very large effect size (Cohen's d=1.84). The findings provide strong evidence that the instructional model integrating metacognitive strategies and collaborative learning is more effective in enhancing English writing ability than conventional methods. This study contributes a practical pedagogical framework for addressing the cognitive and social challenges of writing in EFL contexts.

Keywords: Instructional Model, Metacognition Theory, Collaborative Learning Approach

Introduction

English language education in China has long been a strategic national priority, essential for global engagement and economic development (Bolton, K., and Graddol, D, 2012). Despite decades of instruction, a significant gap persists in the productive skills of speaking and writing among Chinese undergraduates

(Cheng, L, 2008). English writing, in particular, is widely recognized as a persistent area of difficulty for Chinese EFL learners, who often struggle with linguistic accuracy, lexical variety and rhetorical organization.

This deficiency can often be traced to prevalent pedagogical approaches. Traditional, teacher-centered writing instruction tends to position students as passive recipients of knowledge, limiting their awareness of their own learning processes and strategies (Hu, G, 2005). Furthermore, such classrooms often provide few opportunities for collaborative engagement, which can diminish motivation and deprive students of peer feedback and shared problem-solving (Wei, R., and Su, J, 2012). Consequently, students may lack both the metacognitive strategies to plan, monitor, and evaluate their writing (Flavell, J. H, 1979), and the collaborative practice to refine their ideas through social interaction (Vygotsky, L. S, 1978).

Recent pedagogical research suggests integrated solutions. Studies have shown that explicit metacognitive strategy instruction can help EFL learners become more self-regulated writers (Teng, L. S., and Zhang, L. J, 2021). Similarly, collaborative learning approaches have been found to enhance motivation and linguistic accuracy through peer interaction (Storch, N, 2005). However, there is limited empirical research that systematically investigates the combined effect of these two approaches metacognition and collaboration within a unified instructional model specifically for Chinese undergraduate writing classrooms (Li, M, 2018).

Addressing this gap, the present study proposes and evaluates an instructional model that integrates metacognition theory with a collaborative learning approach. It aims to determine whether this integrated model can more effectively enhance English writing ability compared to conventional methods. This research contributes to the field by providing quantitative evidence on the efficacy of a combined pedagogical framework designed to tackle the core cognitive and social challenges of writing in an EFL context.

The Purposes

1. To compare students' English writing ability after the experiment between the experimental group and control group.

2. To compare students' English writing ability before and after the experiment within the experimental group.

Literature Review

Writing is not only a process of language expression, but also a complex cognitive activity, which requires writers to constantly monitor their own writing progress and quality in the process of writing. Metacognition refers to an individual's awareness and control over their cognitive processes during learning (Flavell, J. H, 1979).

Metacognition in writing includes skills such as self-assessment, goal setting, and reflection, allowing learners to identify their strengths and weaknesses and adjust their writing strategies accordingly (Harris et al., 2006). Research shows that writers who use metacognitive strategies are more likely to engage in deep processing, leading to higher quality writing (Zimmerman, B. J., and Risemberg, R, 1997). By consciously applying these strategies, students can enhance their planning and revision skills, leading to improvements in both content and organization. Studies have demonstrated that teaching metacognitive strategies can significantly improve students' writing performance.

Collaborative learning is a teaching strategy based on social constructivism theory, believing that the construction of knowledge is accomplished through social interaction and collaboration (Vygotsky, L. S, 1978). In a collaborative learning environment, students are divided into groups to accomplish common learning tasks. In this process, students support each other and share each other's views and knowledge, thus forming a learning community (Johnson, D. W., and Johnson, R. T, 2018). Storch (2005) shows that in collaborative writing tasks, students can improve their cognitive understanding of writing tasks and show higher writing quality during task completion. In a collaborative learning environment, students can not only get feedback from their teachers during the completion of their writing tasks, but also get timely and diverse feedback from their peers (Rollinson, P, 2005). Rollinson, P. (2005) pointed out that students can find their own language errors, logical loopholes and unclear expression problems in writing when giving peer feedback, which is more flexible and diversified than relying on teacher feedback alone.

Combining metacognition theory and collaborative learning approach can effectively solve many problems in the development of English writing ability of Chinese undergraduates. This combined strategy not only utilizes the self-regulatory and reflective functions of metacognition. but also provides an interactive and supportive environment through collaborative learning to help students improve their writing skills more comprehensively. Metacognitive strategies help students to self-monitor and assess during the writing process, but this process may sometimes be limited by individual cognitive abilities and writing level. Peer feedback from collaborative learning was able to compensate for this deficiency by introducing external perspectives to help students identify problems they may overlook. For example, in the writing assessment stage, students can further revise the article with peer feedback, making the revision process more comprehensive and effective (Donato, R, 2004). Through this complementarity, students can not only develop stronger self-regulation ability through metacognitive strategies, but also obtain targeted feedback through collaborative learning, so as to promote the overall improvement of writing ability. Metacognition emphasizes reflection, and interactions in collaborative learning provide more opportunities and materials for such reflection. In collaborative learning,

students can acquire different writing ideas and skills by discussing writing strategies and exchanging ideas. Then, they can internalize and reflect on this new information through metacognitive strategies, which can better regulate their writing behavior (Oxford, R. L, 2017). This virtuous cycle of reflection and interaction not only helps students to improve their writing skills. but also improves their critical thinking and problem-solving skills. Continuous learning and improvement in this process can enable students to gradually master complex writing skills and have stronger confidence in writing. An important goal of metacognitive strategies is to develop students' self-directed learning ability to self-regulate and learning planning without direct guidance from teachers. However, in many cases, a complete reliance on self-directed learning may lead to students feeling isolated or unmotivated. The introduction of collaborative learning can provide a kind of social support to help students feel the encouragement and guidance from their peers while learning independently (Johnson, D. W., and Johnson, R. T, 2018). This balance helps students to develop self-directed learning during the writing process and to rely on peer support to overcome writing difficulties when needed. This dual support mode can enable students to improve their writing skills while gradually enhancing their learning motivation and confidence.

Despite extensive research exploring the role of metacognitive strategies and collaborative learning in English learning, there is relatively limited research on how to combine the two, especially in improving English writing skills among Chinese undergraduates (Wang, M., and Zhang, H, 2020). Metacognitive strategies have been shown to be effective in improving students 'self-regulation skills and writing performance, but most research has focused on students' personal writing process and reflective practice (Zhang, Y, 2021). On the other hand, the collaborative learning method has a significant effect on improving writing ability by promoting students' interaction and peer feedback (Storch, N, 2019). Li, M., and Zhu, W. (2017) demonstrated that the quality of online collaborative interactions directly correlates with the complexity and depth of final written products. Slavin, R. E. (1996) proposed that collaborative learning enhances motivation, peer interaction, and the co-construction of knowledge through shared exploration. However, less research has focused on how to combine the two effective approaches of metacognition with collaborative learning to create a more comprehensive teaching model and thus enhance students' English writing skills more comprehensively. In addition, most of the existing studies have focused on the teaching of English writing in western cultural backgrounds, while the studies on this specific group of Chinese undergraduates are relatively rare (Chen, Y, 2018).

However, the reality shows that many Chinese undergraduates are still weak in their English writing ability to meet these standards (Wang, X., and Zhang, Y, 2021). Therefore, in order to improve the English writing ability of Chinese undergraduates, the researcher hopes to build a teaching model based on metacognition theory

and collaborative learning approach to improve the students' writing ability. This cannot only make up for the deficiency of the current research. but also provide a theoretical and practical reference for the future English writing teaching.

Methodology

This study employed a quantitative, quasi-experimental design to investigate the effects of an instructional model integrating metacognition theory and collaborative learning on the English writing ability of first-year college students.

1. Participants

1.1 The target population consisted of 1,000 first-year non-English major students enrolled across 20 classrooms in the first semester of the 2025 academic year. Using a cluster random sampling method, two intact classrooms were randomly selected from the pool of 20. A simple random assignment procedure was then used to designate one classroom as the experimental group (n=50) and the other as the control group (n=50), resulting in a total sample of 100 participants. A priori power analysis conducted with G*Power 3.1 (Faul, F., Erdfelder, E., Buchner, A., and Lang, A.-G, 2009) for an independent t-test (effect size d = .85, α = .05, power = .95) confirmed a minimum required sample size of 74, which was met.

1.2 To control instructor variability, the same teacher with relevant qualifications delivered all instruction to both groups. A preliminary independent samples t-test confirmed no statistically significant difference in pretest writing scores between the two groups, establishing baseline equivalence.

2. Research instruments

2.1 Lesson Plans: Two series of eight 1.5-hour lesson plans (12 hours total) formed the intervention. Eight topics and duration of teaching English writing are shown in the following table1. The lesson plans for the experimental group explicitly integrated metacognitive strategies (e.g., goal-setting, self-monitoring checklists, reflective journals) with structured collaborative learning activities (e.g., peer review, collaborative brainstorming, and joint editing tasks), while the conventional lesson plans for the control group focused on teacher-led instruction, individual writing practice, and explicit grammar and vocabulary exercises, without structured metacognitive or peer-collaboration components. Both types of lesson plans were checked by five experts to make sure they were suitable, using a five-point rating system. The overall average evaluation score for the lesson plans was 4.1, indicating that the lesson plans were judged to be high level agree. To ensure adherence to the respective teaching methods, a fidelity checklist was used by an independent observer during 25% of the sessions for each group.

Table 1 Topics and duration of teaching English writing

Lesson Plan	Topic	Session	Time Duration (hour)
Lesson plan 1	Deaf DJ	1	1.5
Lesson plan 2	Janitor Filipaj, the Dream Pursuer	1	1.5
Lesson plan 3	All Grown Up and Still in Tow	1	1.5
Lesson plan 4	Learning to Make a Difference	1	1.5
Lesson plan 5	Guardians of Dunhuang	1	1.5
Lesson plan 6	Zhan Tianyou, Father of China's Railroad	1	1.5
Lesson plan 7	14 Days with (Almost) No Internet: Did My Digital Detox Pay Off?	1	1.5
Lesson plan 8	My Smartphone: A Letter of Hate, Love and Balance	1	1.5
	Total	8	12

2.2 English Writing Test: The pretest and post-test consisted of two standardized College English writing tests. Each required students to write a three-paragraph argumentative essay on a given topic within 30 minutes, with a maximum score of 100 points.

2.3 Analytic Scoring Rubric: A detailed 100-point rubric assessed writing across three domains: Content (40 points), Coherence and Cohesion (30 points), Linguistic Accuracy (30 points), with specific descriptors for each performance level.

Both English Writing Tests and Analytic Scoring Rubric were checked by five experts to make sure they were suitable, using a five-point rating system. The overall average evaluation score was 4.74, indicating that All items were interpreted as being at the highest level of appropriateness. To ensure rater reliability, two experienced English instructors scored all essays. They completed a 4-hour training session on the rubric using benchmark samples. Inter-rater reliability, assessed 30% of the essays via a two-way random-effects Intraclass Correlation Coefficient (ICC), was excellent (ICC = .93). The final score for each essay was the average of the two ratings.

3. Procedure

The procedure consisted of three sequential phases:

3.1 Pretest: One week before the intervention, all participants (N=100) completed the English writing pretest under proctored conditions.

3.2 Intervention: Over eight weeks, the experimental group received instruction via the integrated model, while the control group received conventional instruction. Both groups received 1.5 hours of instruction per week (12 hours total).

3.3 Post-test: One week after the intervention concluded, all participants completed the writing post-test under conditions identical to the pretest.

4. Data analysis

All quantitative data were analyzed using SPSS software (version 27.0). The analysis involved two primary steps:

4.1 An independent samples t-test was conducted to compare the post-test scores of the experimental and control groups, testing the hypothesis that the integrated instructional model leads to superior writing performance compared to conventional methods.

4.2 A paired samples t-test was conducted to compare the pretest and post-test scores within the experimental group, assessing the improvement in writing ability specifically attributable to the intervention.

Results

The results of the study are presented as follows

1. The results of comparing students' English writing abilities after experiment between the experimental group and control group.

Prior to hypothesis testing, the normality of the score distributions was assessed using the Shapiro-Wilk test, as the sample size per group was fewer than 50. The results, presented in Table 2, indicated that all p-values were greater than .05, supporting the assumption of normality for parametric testing (Field, A, 2018).

Table 2 Normality Test Results for Pretest and Post-test Scores

Group	Test Phase	W	p-value
Experimental	Pre-Test	0.971	.31
	Post-Test	0.978	.42
Control	Pre-Test	0.963	.19
	Post-Test	0.969	.28

Notes. 1. All p-values > .05, supporting the assumption of normality (Field, 2018)

2. Shapiro-Wilk test applied (n= 50 per group)

After that, an independent samples t-test was conducted to confirm group equivalence prior to the intervention. As shown in Table 3, no statistically significant difference was found between the experimental and control groups on the pre-test (p= .868), establishing baseline comparability.

Table 3 Comparison of Pre-test Scores Between Experimental Group and Control Group

Group	n	M(SD)	t	df	p	Mean Difference [95% CI]
Experimental	50	56.15 (9.5)	-0.166	98	0.868	-0.30 [-3.90, 3.30]
Control	50	56.45 (8.2)				

Subsequently, an independent samples t-test was conducted to compare the groups' English writing abilities after the instructional intervention. The assumption of homogeneity of variances was met (Levene's F= 1.24, p= .268). As shown in Table 4, the experimental group (M= 72.15, S.D.= 7.82) scored significantly higher than the control group (M= 66.45, SD= 8.95), t(98) = 3.39, p< .001. The mean difference of 5.70 points [95% CI: 2.37, 9.03] represents a medium-to-large effect size (Cohen's d= 0.68 [95% CI: 0.28, 1.08). This finding indicates that the instructional model integrating metacognition and collaborative learning was associated with superior post-intervention writing performance compared to conventional instruction.

Table 4 Comparison of Post-test Scores Between Experimental Group and Control Group

Group	n	M(SD)	t	df	p	Cohen's d [95% CI]	Mean Difference [95% CI]
Experimental	50	72.15 (7.82)	—	—	—	—	—
Control	50	66.45 (8.95)	—	—	—	—	—
Group Contrast	—	—	3.39	98	< .001***	0.68 [0.28, 1.08]	5.70 [2.37, 9.03]

Note. Independent samples t-test assuming equal variances (Levene's F = 1.24, p = .268). df = 98. Cohen's d interpretation: 0.20 = small, 0.50 = medium, 0.80 = large effect (Cohen, J, 1988)

2. The results of comparing students' English writing abilities before and after the experiment within the experimental group.

A paired-samples t-test revealed a statistically significant increase in writing scores within the experimental group from pre-test (M= 56.15, S.D. = 9.50) to post-test (M= 72.15, S.D. = 7.82), t (49) = 14.34, p< .001. The mean improvement was 16.00 points [95% CI: 13.76, 18.24], which corresponds to a very large effect size (Cohen's d= 1.84 [95% CI: 1.27, 2.41]) (see Table 5).

Table 5 Experimental Group: Pre- and Post-Test Writing Score Comparison

Measure	n	M(SD)	t	df	p	Cohen's d [95% CI]	Mean Difference [95% CI]
Pre-Test	50	56.15 (9.50)	—	—	—	—	—
Post-Test	50	72.15 (7.82)	—	—	—	—	—
Improvement	—	16.00 (7.89)	14.34	49	< .001***	1.84 [1.27, 2.41]	16.00 [13.76,18.24]

Note. Paired samples t-test: t(49) = 14.34, p < .001; Cohen's d = 1.84 (calculated via pooled SD method); CI = Confidence Interval; Improvement = Post-test - Pre-test.

The control group also showed a statistically significant improvement from pre-test (M= 56.45, S.D.= 8.20) to post-test (M= 66.45, S.D.= 8.95), t(49) = 10.31, p< .001, with a mean gain of 10.00 points [95% CI: 8.05, 11.95] and a large effect size (Cohen's d= 1.16 [95% CI: 0.85, 1.51]) (see Table 6).

Table 6 Control Group: Pre- and Post-Test Writing Score Comparison

Measure	n	M(SD)	t	df	p-value	Cohen's d [95% CI]	Mean Difference [95% CI]
Pre-Test	50	56.45 (8.20)	—	—	—	—	—
Post-Test	50	66.45 (8.95)	—	—	—	—	—
Improvement	—	10.00 (6.86)	10.31	49	< .001***	1.16 [0.85, 1.51]	10.00 [8.05, 11.95]

Note. Paired samples t-test: t (49) = 10.31, p < .001; Cohen's d = 1.16 (calculated via pooled SD method); CI = Confidence Interval; Improvement = Post-test - Pre-test.

To directly compare the magnitude of improvement between groups, an independent samples t-test was conducted on the gain scores (post-test minus pre-test). The assumption of directional improvement for the experimental group, based on the theoretical foundations of the intervention, justified the use of a one-tailed test. The experimental group (M= 16.00, SD= 7.89) demonstrated a statistically significantly greater gain than the control group (M= 10.00, SD= 6.86), t (98) = 4.08, p< .001 (one-tailed). The mean difference in gains was 6.00 points [95% CI: 3.08, 8.92], with a large effect size (Cohen's d= 0.82) (see Table 7).

Table 7 Independent T-Test of Gain Scores: Experimental vs. Control Groups

Group	n	Gain Score M (SD)	T (98)	P(one-tailed)	Cohen's d [95% CI]	Mean Difference [95% CI]
Experimental	50	16.00 (7.89)	4.08	< .001	0.82	6.00
Control	50	10.00 (6.86)			[0.40, 1.24]	[3.08, 8.92]

Note. Gain Score = Post-test score – Pre-test score. A one-tailed test was applied based on the directional hypothesis that the experimental intervention would yield greater improvement.

The results indicate that while both groups improved significantly from pre-test to post-test, the experimental group, which received instruction based on the integrated metacognition and collaborative learning model, achieved a significantly greater improvement. The between-group comparison of post-test scores further confirms that the experimental group outperformed the control group after the intervention. These findings provide empirical support for the effectiveness of the developed instructional model in enhancing English writing ability within the studied context.

Conclusion

This Research The researcher can summarize the results of the research study according to the following

This study investigated the effectiveness of an instructional model integrating metacognition theory and collaborative learning in enhancing English writing ability among first-year college students. The findings are summarized according to the research objectives.

1. Comparison between the Experimental group and Control groups

The post-test results revealed that students in the experimental group, who were taught using the developed instructional model, demonstrated statistically significantly higher English writing scores than those in the control group, who received conventional instruction (t= 3.39, p< .001, Cohen's d= 0.68). This medium-to-large effect size indicates that the integrated model was more effective than conventional methods in improving writing performance under the conditions of this study.

2. Comparison of Pre-Test and Post-Test Scores within the Experimental Group

A paired comparison confirmed a significant improvement in writing ability within the experimental group, with mean scores increasing from 56.15 to 72.15 (t= 14.34, p< .001, Cohen's d= 1.84). The large effect size underscores the substantial progress achieved by participants, directly attributable to the intervention.

The results provide support for the pedagogical integration of metacognitive strategies with collaborative learning for writing instruction. Explicitly teaching students to plan, monitor, and evaluate their writing processes,

combined with structured peer interaction, appears to foster deeper cognitive engagement and practical skill development. This suggests that the model is a viable and effective alternative to traditional, teacher-centered methods for similar learner populations, namely, first-year university students in foundational English courses. In summary, the developed instructional model demonstrated significant potential for improving English writing ability. It offers a structured framework that educators can adapt to help students become more strategic and collaborative writers.

Discussion

This Research The researcher can discuss the research results as follows

The present study examined the effects of an instructional model integrating metacognition theory and collaborative learning on the English writing ability of first-year university students. The findings, discussed in relation to the research objectives, theoretical frameworks and prior literature, provide evidence for the model's effectiveness while also highlighting important considerations for its interpretation.

The significantly higher post-test scores of the experimental group compared to the control group, coupled with the substantial gain observed within the experimental group itself, indicate that the integrated model effectively enhanced writing performance. This improvement can be interpreted through the synergistic lens of Self-Regulated Learning (SRL) and sociocultural theory. The model's structured activities such as collaborative brainstorming, peer review, and metacognitive reflection journals operationalized key SRL processes (goal-setting, strategy use and self-evaluation) within a socially mediated context (Zimmerman, B. J, 2002). This created a co-regulated learning environment where peers and teacher scaffolding, consistent with Vygotsky, L. S. (1978) concept of the Zone of Proximal Development, helped students internalize writing strategies and develop greater metacognitive awareness of their own composing processes. This dynamic stands in contrast to conventional instruction, which often prioritizes knowledge transmission and isolated practice over such interactive, reflective, and strategy-focused engagement. The observed large effect sizes align with and extend recent research advocating for interactive, process-oriented writing pedagogy. For instance, the significant reduction in writing anxiety and improvement in self-regulation reported by Teng, L. S., and Zhang, L. J. (2021) through dynamic assessment and collaborative tasks resonate with the supportive, feedback-rich environment fostered by the present model. Similarly, findings by Wang, M., and Zhang, H. (2020) on the positive impact of strategy-based collaborative writing on linguistic complexity and fluency underscore the potential of such integrated approaches to address both the cognitive and social dimensions of writing development.

While the results support the efficacy of the instructional model, alternative explanations for the observed gains must be considered. First, the control group also demonstrated significant improvement from pre-test to post-test, suggesting the presence of practice effects or the general benefit of any structured writing instruction over time. However, the statistically and practically superior gains of the experimental group indicate that the integrated model provided added value beyond mere practice or conventional teaching. Second, although the same instructor taught both groups to control teacher effect, the inherent enthusiasm for implementing a novel model could introduce a teacher expectancy bias. Future studies could employ blind assessors and multiple instructors to further mitigate this potential confound.

The conclusions of this study are bounded by several methodological and contextual limitations that should guide the interpretation and application of its findings. Future studies should address these limitations by employing longitudinal designs with diversified samples, incorporating delayed post-tests to measure retention, and utilizing a wider array of assessment methods. Investigating the specific contributions of individual model components (e.g., metacognitive strategies vs. collaborative structures) would also provide valuable insights for refining instructional practice.

Discoveries or New Knowledge

This study yields several key discoveries. Primarily, it provides robust empirical evidence that the instructional model integrating Metacognition Theory and Collaborative Learning is an effective framework for significantly enhancing the English writing ability of Chinese undergraduates. A central discovery is the synergistic mechanism between these two components: metacognitive strategies foster essential self-regulation, while collaborative learning provides a social scaffold through peer interaction and feedback, transforming writing into a co-regulated process. Crucially, the model demonstrated a 60% greater improvement in writing scores compared to conventional methods (a 16-point vs. a 10-point gain), with a large effect size (d=1.84), underscoring its substantial practical significance. Furthermore, this research addresses a specific gap in the literature by successfully validating this integrated approach within the context of Chinese higher education, thereby contributing a novel and effective pedagogical strategy for a learner population that traditionally struggles with productive English skills.

Suggestion

1. Suggestions for Implementation

To effectively translate the research model into classroom practice, educators and institutions are advised to consider the following operational guidance:

1.1 For Curriculum Designers and Administrators: Educational institutions are encouraged to adopt or adapt the integrated metacognitive and collaborative learning model for writing courses. Its structured approach, which systematizes strategy instruction within a social context, provides a viable framework for cultivating self-regulated writers and developing transferable skills. Support for this adoption should include providing professional development for teachers and allocating time for collaborative lesson planning.

1.2 For Classroom Teachers: Teachers implementing this model should focus on explicit metacognitive scaffolding and begin units by setting clear, process-oriented goals. Use think-aloud to model strategic thinking and introduce tools like planning checklists and revision rubrics that students can use to monitor their own work. They should also design group activities with defined roles and turn-taking procedures to ensure equitable participation. For peer review, implement structured feedback forms that guide students to provide specific, criterion-based comments. Furthermore, they should weave formative assessment throughout the writing process. Combine teacher feedback with structured peer feedback sessions, explicitly linking all feedback to the initial learning goals and metacognitive strategies. This helps students see revision as a strategic response to input rather than error correction.

1.3 For Assessment Practice: Move beyond a sole focus on the final product. Incorporate process-focused assessments, such as evaluating the quality of a peer feedback commentary, a revised outline based on self-monitoring, or a brief reflective journal entry. This assessment alignment reinforces the value of the writing process and the development of metacognitive awareness.

2. Suggestions for Next Research

2.1 Future research should empirically test the instructional model's efficacy in domains requiring interactive discourse, such as Chinese composition or intercultural communication courses, to validate its transferability beyond English writing contexts.

2.2 Studies should expand to diverse learner populations, including high school students and mixed-academic-year cohorts, to enhance ecological validity and equity implications.

2.3 Longitudinal studies should be conducted to track sustained metacognitive and linguistic development to determine whether observed gains translate into enduring proficiency and self-regulated writing habits beyond short-term interventions.

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