

The Effect of Peer Review on the Writing Performance of non-English Majors

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Abstract: This study investigates the impact of peer review on writing performance among non-English major undergraduates in a Chinese university. An 8-week quasi-experiment was conducted with 75 freshmen, divided into an experimental group (EG, $n=30$) receiving peer review training and practice, and a control group (CG, $n=30$) relying solely on teacher's feedback. Quantitative data from pre-test and post-test scores showed that EG achieved higher improvements in overall writing performance ($p<.001$), particularly in content development ($p<.001$), logical organization ($p<.001$), and grammatical accuracy ($p<.01$). Qualitative data from semi-structured interviews indicated that peer review enhanced students' revision awareness and collaborative learning skills, though challenges like feedback inaccuracy were reported. The findings indicate that peer review, when properly implemented, improves non-English majors' writing competence by complementing traditional teacher-centered feedback.

Keywords: Peer review; non-English majors; writing performance.

1. Introduction

Writing is a critical skill for non-English major undergraduates, as it is integral to academic tasks such as report writing and thesis preparation. However, students often face unique challenges: limited exposure to English writing practice, insufficient feedback due to large class sizes, and weak metacognitive awareness of their own writing weaknesses. Traditional teacher feedback, while valuable, is frequently delayed and generic, failing to address individual needs.

Peer review, defined as the process of students evaluating peers' written work and providing constructive feedback, has been widely adopted in EFL contexts to address these limitations. It offers timely, interactive feedback and encourages active engagement with writing conventions (Storch, 2021)^[4]. Despite its popularity, research on peer review's effectiveness has primarily focused on English majors or postgraduates, leaving a gap in understanding its impact on non-English majors, whose writing goals and proficiency levels differ significantly.

This study aims to fill this gap by examining how peer review influences non-English majors' writing performance. Specifically, it addresses two research questions: (1) Does peer review lead to greater improvements in writing performance compared to traditional teacher's feedback? (2) What specific writing dimensions (content, organization, language) are most affected by peer review?

2. Literature Review

2.1. Theoretical Underpinnings

Peer review is grounded in sociocultural theory, which posits that learning occurs through social interaction and collaborative meaning-making (Vygotsky, 1978)^[6]. In this framework, peers act as "mediators" who scaffold each other's learning by providing feedback within the "zone of proximal development" (Lantolf & Poehner, 2018)^[3]. Additionally, it aligns with metacognitive theory, as evaluating others' work prompts students to reflect on their

own writing processes, enhancing self-regulation (Zimmerman & Risemberg, 2019)^[8].

2.2. Peer Review in EFL Writing for Non-English Majors

Non-English majors often regard writing as a tool for academic communication rather than literary expression, requiring proficiency in clear content, logical structure, and basic grammatical accuracy. Studies show that peer review can address these needs by encouraging students to focus on audience awareness—a skill critical for academic writing (Swain, 2020)^[5]. For example, Zhao (2012)^[7] found that non-English majors who engaged in peer review showed greater improvement in thesis clarity than those receiving only teacher feedback.

However, challenges exist. Non-English majors may lack confidence in their evaluative abilities due to limited linguistic competence, and cultural factors like reluctance to criticize peers can reduce feedback quality. Structured interventions, such as rubric-based training and teacher modeling, have been shown to mitigate these issues.

2.3. Research Gaps

Existing studies either focus on English majors or generalize "undergraduates" without distinguishing majors. This study contributes by targeting non-English majors, examining peer review's impact on dimensions most relevant to their academic needs (content, organization, grammar) rather than holistic scores.

3. Methods

3.1. Participants

Sixty non-English major sophomores (32 males, 28 females) from a comprehensive university in Zhejiang Province participated. All were enrolled in a mandatory "College English Writing" course, had studied English for 8–10 years, and scored within the B1-B2 range on the CEFR placement test. They were randomly assigned to EG ($n=30$) and CG ($n=30$), with no significant differences in pre-test

scores ($t=.32$, $p=.75$).

3.2. Instruments

1. Writing Tests: Pre-test and post-test assigned argumentative essays (e.g., “The Impact of Social Media on Interpersonal Relationships”) with a 300-word limit. Scores were based on a 50-point rubric: content (15), organization (15), grammar (10), vocabulary (10), rated by two experienced EFL instructors (inter-rater reliability $\alpha=.89$).

2. Semi-structured Interviews: Ten EG students were interviewed post-intervention to explore their perceptions of peer review.

3. Peer Review Rubric: Adapted from Jacobs et al. (1981)^[2], with simplified descriptors (e.g., “Organization: Each paragraph has a clear topic sentence”) to guide feedback.

3.3. Procedure

The study ran from March to May 2025:

1. Weeks 1–2: Pre-test administered. EG received 3 hours

of training: rubric explanation, analysis of sample feedback, and practice reviewing model essays.

2. Weeks 3–9: Both groups completed 5 writing tasks. EG: Drafts were exchanged in pairs; reviewers provided written feedback using the rubric, followed by 10-minute discussions. Revisions were submitted to the teacher. CG: Drafts submitted to the teacher for written feedback, then revised.

3. Week 10: Post-test administered; interviews conducted.

3.4. Data Analysis

Quantitative data: Paired-samples t-tests compared within-group pre-test/post-test scores; independent-samples t-tests analyzed between-group differences. Qualitative data: Interview transcripts were coded thematically (Braun & Clarke, 2022)^[1] to identify key themes.

4. Results

4.1. Quantitative Outcomes

Table 1. Pre-test and Post-test Scores (Mean $\pm$ SD)

Group	Test	Total Score	Content	Organization	Grammar	Vocabulary
EG	Pre-test	28.6 $\pm$ 4.2	8.1 $\pm$ 1.5	7.5 $\pm$ 1.4	5.9 $\pm$ 1.1	7.1 $\pm$ 1.2
	Post-test	39.2 $\pm$ 3.8	12.3 $\pm$ 1.2	11.8 $\pm$ 1.1	8.2 $\pm$ 0.9	6.9 $\pm$ 1.0
CG	Pre-test	27.9 $\pm$ 4.5	7.9 $\pm$ 1.6	7.3 $\pm$ 1.5	5.7 $\pm$ 1.2	7.0 $\pm$ 1.3
	Post-test	33.5 $\pm$ 4.1	9.5 $\pm$ 1.4	8.9 $\pm$ 1.3	6.8 $\pm$ 1.0	8.3 $\pm$ 1.1

4. Within-group comparisons: EG showed improvements in total score ($t=11.36$, $p<.001$) and all dimensions (content: $t=10.25$, $p<.001$; organization: $t=12.08$, $p<.001$; grammar: $t=8.73$, $p<.001$). Vocabulary scores remained stable ($t=-.76$, $p=.45$). CG improved in total score ($t=5.82$, $p<.001$) but with smaller gains, especially in organization ($t=4.17$, $p<.001$).

5. Between-group comparisons: EG’s post-test total score was higher than CG’s ($t=5.47$, $p<.001$). EG outperformed CG in content ($t=6.32$, $p<.001$), organization ($t=8.05$, $p<.001$), and grammar ($t=4.91$, $p<.001$), but CG scored higher in vocabulary ($t=4.68$, $p<.001$).

4.2. Qualitative Findings

Three themes emerged from interviews:

1. Enhanced Revision Focus: All interviewees noted that peer review heightened their attention to structural issues. One student stated, “When I told Zhang her essay lacked transitions, I realized I often skip them too. Now I check for that first.”

2. Increased Engagement: 80% reported greater motivation: “Discussing my ideas with Li made me realize my examples were weak. I found better ones for revision.”

3. Challenges in Language Feedback: 70% admitted difficulty evaluating vocabulary: “I know a word is wrong but can’t suggest a better one. We need more vocabulary training.”

5. Discussion

5.1. Peer Review and Writing Performance

The findings confirm that peer review significantly improves non-English majors’ writing performance, supporting previous research. EG’s greater gains in content and organization align with sociocultural theory: peer interaction prompted students to clarify ideas and restructure arguments to meet audience expectations (Swain, 2020)^[5].

Improvements in grammar may stem from metacognitive reflection: identifying peers’ errors heightened students’ awareness of their own mistakes (Zimmerman & Risemberg, 2019)^[8]. This is particularly valuable for non-English majors, who often neglect grammatical accuracy amid focusing on content.

CG’s higher vocabulary scores suggest teacher feedback is more effective for lexical development, as instructors can provide precise word choices—an area where peers lack expertise. This highlights the need to combine peer review with teacher guidance on vocabulary.

5.2. Student Perceptions

The qualitative data reveal peer review fosters collaborative learning and revision awareness, consistent with Storch (2021)^[4]. However, challenges in language feedback reflect non-English majors’ limited lexical resources, indicating the need for targeted training in vocabulary evaluation.

5.3. Pedagogical Implications

For non-English majors: (1) Integrate structured peer review with clear rubrics focusing on content and organization. (2) Supplement with teacher-led vocabulary workshops. (3) Train students in feedback skills, including constructive criticism, to address cultural reluctance.

6. Conclusion

This study demonstrates that structured peer review effectively enhances non-English major undergraduates’ writing performance, particularly in content, organization, and grammar. While peer feedback complements teacher input, it is less effective for vocabulary, requiring targeted instructor support. Limitations include a small sample size

and focus on argumentative writing; future research could explore peer review in other genres (e.g., reports) and across different proficiency levels.

References

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