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Research on the Establishment and Quality Evaluation Methods of Exercise Revision Model in English Teaching and Learning

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ABSTRACT

To address bottlenecks in the revision stage of traditional methods, this study examined the effectiveness of four revision feedback models in English writing instruction, including teacher-student collaborative corrective feedback, automated evaluation feedback systems, metalinguistic corrective feedback, and self-selected corrective feedback models. Through empirical research employing a controlled experiment, data on revision rates, revision effectiveness, and score improvements were collected. Results indicated that automated evaluation and self-selected models were most effective, while the teacher-student collaborative model excelled at promoting engagement. Metalinguistic feedback was unsuitable for low-level learners. And feedback intensity showed a significant positive correlation with score improvement (P < 0.01). This research provides an empirical foundation for feedback in English instruction and advances the innovative application of educational technology.

KEYWORDS

English Writing, Corrective Feedback Model, Teaching Evaluation, Educational Technology

INTRODUCTION

In second language acquisition, English writing serves as both a core channel for learners to consolidate their linguistic skills, including vocabulary application, mastery of grammatical structures, and discourse organization, and a key indicator for measuring their overall language proficiency (Zhang, 2023). In the entire writing-teaching process, assignment revision, which takes feedback as the starting point and content optimization as the ultimate goal, plays a decisive role in bridging the gap (Liu & Feng, 2023). However, whether feedback can truly lead to effective revision depends crucially on whether learners are able to engage actively at the cognitive, affective, and behavioral levels. This implies that any feedback model, to be effective, must be capable of evoking and sustaining such multidimensional engagement from students. Traditional English writing-teaching faces prominent bottlenecks in this critical revision link: Teacher feedback, though widely recognized for its credibility, often suffers from delays due to heavy workloads (Mao et al., 2024; Ou, 2021). Peer assessment, which is commonly used to alleviate teacher burden, remains controversial in terms of effectiveness (Kang, 2024). Metalinguistic corrective feedback (MCF) relies on the interpretation of

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linguistic principles to cultivate error awareness, which requires learners' prior knowledge. Meanwhile, technology enhancement tools have their own limitations. Traditional automated writing evaluation (AWE) systems (e.g., Criterion) primarily address superficial errors and offer little guidance on higher-order concerns like logical coherence. Although generative artificial intelligence (AI) tools like Generative Pretrained Transformer (GPT)-4 show promising accuracy, they also carry risks of fostering "feedback dependence" (Escalante et al., 2023; Xuan, 2025).

With the deeper integration of big data and AI into education, the field of compiling revision feedback is expanding from human-dominated models to mixed technology human systems (Zheng & Zhang, 2025), but there are still key gaps in existing research. Most of the research focuses on the verification of single feedback models, such as the research of Hung et al. (2024) on AWE or Weng et al. (2024) on peer assessment—rather than empirically comparing the effectiveness of teacher, peer, metalinguistic, and AI-driven models under unified teaching conditions, leaving educators without clear evidence for cross-model trade-offs in revision rate, validity, and score improvement. Additionally, while Mohsen (2022) noted a correlation between feedback quantity and learning outcomes, few studies have quantified "average feedback intensity" (e.g., the number of feedback points per assignment) or explored its dynamic relationship with revision quality and score improvement, resulting in an unclear "dose-effect" between feedback input and ability gains. In addition, although some current studies have investigated students' preferences, few studies have linked these preferences with actual review behavior and long-term performance changes, making it difficult to coordinate students' subjective perceptions with objective teaching effects.

This study aimed to solve these gaps by introducing four typical review feedback models (automatic evaluation feedback system, teacher-student cooperation correction feedback, metalinguistic correction feedback, and self-selected correction feedback) into four parallel English writing classes and systematically comparing them with consistent teaching methods and tasks. This study quantified the average feedback intensity to explore its correlation with the improvement of scores and revision rates between models. At the same time, students' preferences for feedback models were analyzed through a questionnaire survey and real-time choice behavior to check the consistency between subjective perception and objective validity. By constructing a multimodel comparison framework, this study clarified the regulatory role of feedback intensity and bridged the gap between traditional feedback research and technology-enhanced feedback research, enriching second-language acquisition feedback theory. It provides evidence-based guidance for educators and operational quality assessment tools to strengthen writing-teaching practice.

LITERATURE REVIEW

Writing revision feedback is a process of providing targeted suggestions for mistakes in students' drafts, covering three dimensions: language, content, and structure. The purpose is to promote revision and long-term ability improvement. It is evaluated by three core dimensions: revision rate, revision effectiveness, and score improvement (Fu et al., 2024; Sari & Han, 2024).

Teacher-driven corrective feedback is the most classic model, which depends on teachers' professional judgment. There are two main forms (Pearson, 2022). The first is direct corrective feedback (DCF), where teachers provide correct forms. This is especially effective for middle- and low-level learners. Wondim et al. (2024) found that DCF combined with metalinguistic interpretation could improve the grammatical accuracy by 15% compared with indirect feedback, because it could help learners master the error rules quickly without relying on previous metalinguistic knowledge (L. Liu & Hwang, 2023). In contrast, indirect correction feedback (ICF) uses symbols to guide self-correction. However, the effectiveness of ICF is limited by the prior knowledge of learners. Kiasi and Rezaie (2021) found that the review efficiency of intermediate learners who used ICF was 20% lower than that of learners who used DCF, which was because they often found it difficult to explain symbol hints without sufficient metalanguage foundation.