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Teacher-AI Collaborative Feedback in Senior High School English Writing Teaching

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Abstract

The increasing application of artificial intelligence (AI) in English writing instruction has brought significant changes to the way writing feedback is delivered. While AI-powered writing tools can efficiently identify language errors and provide immediate revision suggestions, effective writing instruction still depends on teachers' professional guidance. Rather than replacing teachers, AI should be regarded as an instructional partner that supports the feedback process. From this perspective, teacher-AI collaborative feedback has become an important approach to improving writing teaching in senior high schools. Based on formative assessment theory and sociocultural theory, this paper discusses the necessity of teacher-AI collaboration in English writing instruction and proposes a collaborative feedback model that combines AI-generated language feedback with teachers' pedagogical guidance. It is argued that such collaboration not only improves the efficiency of writing feedback but also enables teachers to focus on students' higher-order writing development, including content organization, logical thinking, and communicative competence. The paper further discusses the pedagogical implications of integrating AI into classroom writing instruction and emphasizes that teachers remain central to the learning process in the age of artificial intelligence.

Keywords

Teacher-AI Collaboration; Writing Feedback; Senior High School English; Formative Assessment; English Writing Instruction

1. Introduction

1.1. AI Reshapes Writing Feedback in English Education

Recent advances in artificial intelligence have introduced new possibilities for English writing instruction. AI-powered writing tools can quickly analyze students' compositions, identify language errors, and provide immediate suggestions for revision. Compared with traditional teacher feedback, AI offers faster responses and allows students to revise their writing repeatedly within a short period of time. As a result, AI-assisted writing has become an increasingly important topic in English language education (Luckin et al., 2016).

The integration of AI into writing classrooms has changed not only the way feedback is delivered but also the role of teachers. In the past, teachers spent considerable time correcting grammar, vocabulary, and sentence structures. Today, many of these repetitive tasks can be completed efficiently by AI systems. This change enables teachers to devote more attention to supporting students' thinking, organization, and communication in writing. Therefore, the discussion of AI in writing instruction should move beyond technological functions and focus on how AI can be effectively integrated into classroom teaching.

1.2. The Need for Teacher-AI Collaboration

Although AI demonstrates considerable advantages in language analysis, writing instruction cannot rely entirely on technology. Writing is a complex learning activity that requires students to generate ideas, organize information, and communicate meaning for specific audiences. These processes involve critical thinking, creativity, and interaction, which are difficult for AI systems to evaluate comprehensively.

Teachers, on the other hand, understand students' learning characteristics, classroom objectives, and instructional contexts. They are able to provide personalized guidance, encourage reflection, and help students improve their writing beyond language accuracy. Therefore, instead of viewing AI as a replacement for teachers, it is more appropriate to regard AI as a teaching assistant that complements teachers' professional expertise. Holmes (2023) also emphasizes that generative AI should be used to support teaching and learning while maintaining teachers' central role in education.

Consequently, teacher-AI collaboration has become an important direction for English writing instruction. Through effective collaboration, AI can improve feedback efficiency, while teachers can provide deeper instructional support that promotes students' long-term writing development.

1.3. Purpose of the Paper

Against this background, this paper aims to explore how teachers and AI can work together to improve senior high school English writing instruction. Instead of discussing AI-assisted feedback as an independent technology, the paper focuses on the complementary roles of teachers and AI throughout the writing process. It first introduces the theoretical foundations of teacher-AI collaborative feedback and then proposes a collaborative feedback model for classroom practice. Finally, the paper discusses its pedagogical implications for future English writing teaching.

2. Theoretical Foundations of Teacher-AI Collaborative Feedback

2.1. Formative Assessment Theory

Teacher-AI collaborative feedback is closely related to the principles of formative assessment. Unlike summative assessment, which mainly measures students' final

learning outcomes, formative assessment emphasizes continuous feedback during the learning process. Its primary purpose is to help students recognize their strengths and weaknesses, make timely adjustments, and gradually improve their learning performance (Black & Wiliam, 1998).

Writing development requires repeated practice and continuous revision. Therefore, effective feedback should not only identify problems but also guide students in improving their future writing. Hattie and Timperley (2007) argue that effective feedback should answer three key questions: Where am I going? How am I going? What should I do next? These questions highlight that feedback is a process of supporting learning rather than simply judging performance.

In a teacher-AI collaborative model, AI provides immediate language-level feedback, while teachers help students interpret feedback, reflect on their writing, and develop appropriate revision strategies. Such collaboration makes formative assessment more practical because students receive timely support from AI and meaningful instructional guidance from teachers throughout the writing process.

2.2. Sociocultural Theory

Sociocultural theory provides another important perspective for understanding teacher-AI collaborative feedback. According to Vygotsky (1978), learning is a socially mediated process in which learners develop knowledge through interaction with more capable others. Teachers play a crucial role in providing appropriate scaffolding that helps students accomplish tasks beyond their current ability.

Although AI can provide useful writing suggestions, it cannot fully replace teachers' instructional support. Students often need help understanding why a revision is necessary, deciding whether AI suggestions are appropriate, and applying feedback to future writing tasks. These learning activities require communication, explanation, and reflection, all of which depend on teachers' professional guidance.

From the perspective of sociocultural theory, AI can be regarded as a learning tool that supports students' writing, whereas teachers remain the key mediators who facilitate learning through classroom interaction. Therefore, effective writing instruction should integrate technological assistance with human guidance rather than relying on either one alone.

2.3. Human-AI Collaboration in Education

The growing use of artificial intelligence has gradually shifted educational research from discussing whether AI should be used to exploring how humans and AI can work together effectively. Recent studies suggest that AI is most valuable when it complements teachers' expertise instead of replacing it (Luckin et al., 2016; Holmes et al., 2019).

In writing instruction, AI and teachers demonstrate different strengths. AI performs well in identifying objective language problems and generating immediate feedback,

while teachers are more capable of evaluating idea development, discourse organization, and communicative effectiveness. More importantly, teachers can provide emotional support, encourage critical thinking, and adjust instruction according to students' individual learning needs.

Therefore, teacher-AI collaboration should be viewed as a complementary partnership. AI improves the efficiency of routine feedback, allowing teachers to spend more time guiding higher-order writing skills. Such collaboration not only enhances the quality of writing instruction but also helps teachers make better use of educational technology in classroom practice.

3. Teachers' Changing Roles in AI-Supported Writing Instruction

3.1. From Language Corrector to Learning Facilitator

Traditionally, English teachers have devoted a large proportion of their time to correcting students' grammatical errors, inappropriate word choices, and sentence structures. Although such corrections are necessary, they often leave teachers with limited time to address students' broader writing needs. As AI-assisted writing tools become increasingly capable of identifying language errors, teachers are gradually being freed from repetitive correction tasks.

This shift allows teachers to assume a new role as learning facilitators. Instead of focusing primarily on error correction, teachers can guide students to analyze writing tasks, clarify writing purposes, and develop effective revision strategies. During classroom discussions, teachers can encourage students to explain their writing choices, compare different revisions, and reflect on how language serves communication. In this way, feedback becomes a process of learning rather than simply correcting mistakes.

3.2. From Feedback Provider to Feedback Interpreter

Although AI can generate detailed feedback within a short time, students may not always understand how to use these suggestions effectively. Some learners tend to accept every AI recommendation without careful consideration, while others may ignore useful feedback because they are uncertain about its meaning. Therefore, providing feedback is no longer the only responsibility of teachers. Equally important is helping students interpret and evaluate AI-generated feedback.

Teachers can explain why certain suggestions are appropriate, discuss situations in which AI feedback may not be suitable, and encourage students to make informed revision decisions. Through teacher guidance, students gradually develop the ability to judge the quality of feedback instead of relying on AI uncritically. Such guidance also promotes students' critical thinking and digital literacy, both of which are increasingly important in AI-supported learning environments.

3.3. From Evaluator to Writing Coach

The application of AI also encourages teachers to move beyond the traditional role of evaluator. Instead of focusing mainly on assigning scores, teachers can act as writing coaches who support students throughout the writing process. They help students generate ideas, organize paragraphs, strengthen logical connections, and express their thoughts more effectively. In addition, teachers can provide encouragement, answer students' questions, and create opportunities for peer discussion and collaborative learning.

As writing develops through continuous practice and revision, students need not only accurate feedback but also motivation and confidence. Teachers are therefore responsible for building a supportive learning environment in which students actively participate in revising and improving their writing. By combining AI-generated language feedback with teachers' professional guidance, writing instruction can become more learner-centered and more effective in promoting students' long-term writing development.

4. A Teacher-AI Collaborative Feedback Model for Senior High School English Writing

To make teacher-AI collaboration more practical, this paper proposes a collaborative feedback model for senior high school English writing instruction. The model emphasizes the complementary roles of AI, teachers, and students throughout the writing process. Instead of replacing teachers, AI serves as an instructional assistant, while teachers provide pedagogical guidance and students actively participate in revision.

4.1. AI-Supported Initial Feedback

The collaborative process begins after students complete the first draft of their writing. AI tools provide immediate feedback on language use, including grammar, vocabulary, spelling, and sentence structure. This initial diagnosis helps students quickly identify obvious language problems and revise their drafts independently.

At this stage, students are encouraged to review AI suggestions critically rather than accepting every recommendation automatically. The purpose of AI feedback is to support self-revision and prepare students for further learning, rather than to produce a perfect final draft.

4.2. Teacher-Guided Deep Revision

After students complete the first round of revision, teachers provide feedback on aspects that require human judgment. Instead of focusing on language errors that have already been addressed, teachers concentrate on idea development, text organization, coherence, and communicative effectiveness. They also encourage students to explain their writing choices and consider whether their writing meets the intended purpose and audience.

By shifting attention from language correction to higher-order writing skills, teachers help students improve the overall quality of their compositions. This stage highlights the irreplaceable role of teachers in developing students' critical thinking and writing competence.

4.3. Reflection and Continuous Improvement

The final stage emphasizes reflection and continuous learning. After receiving both AI and teacher feedback, students revise their writing again and compare different versions of their compositions. Through this process, they gradually recognize their common writing problems and develop more effective revision strategies.

Teachers can also encourage students to summarize what they have learned from each writing task and apply these experiences to future writing activities. In this way, feedback becomes an ongoing learning process rather than the end of assessment. The collaboration among AI, teachers, and students therefore supports not only better writing performance but also the development of learner autonomy and reflective learning.

5. Pedagogical Implications

5.1. Empowering Teachers Through AI Integration

The integration of AI into writing instruction does not reduce the importance of teachers; instead, it reshapes their professional responsibilities. As AI becomes increasingly capable of providing immediate language feedback, teachers are able to devote more time to designing meaningful learning activities and supporting students' higher-order thinking. Rather than correcting every grammatical mistake, teachers can guide students to develop ideas, improve discourse organization, and communicate more effectively. This shift enables teachers to move from repetitive language correction to instructional facilitation.

To achieve this goal, teachers should continuously improve their AI literacy. Besides understanding the functions and limitations of AI tools, they need to evaluate AI-generated feedback critically and determine how it can best support different teaching objectives. Effective teacher training should therefore include not only technical skills but also pedagogical strategies for integrating AI into classroom instruction. Only when teachers are able to use AI appropriately can technology truly contribute to improving writing instruction.

5.2. Cultivating Students' Critical AI Literacy

The widespread use of AI has changed students' learning habits, making it increasingly important to develop their critical AI literacy. Although AI provides convenient writing support, students should not rely on it to complete writing tasks independently. Instead, they need to learn how to evaluate AI-generated suggestions, distinguish useful feedback from inappropriate recommendations, and make

informed revision decisions based on their own understanding.

Teachers should encourage students to regard AI as a learning partner rather than a shortcut to completing assignments. Classroom activities such as peer discussion, reflective journals, and revision reports can help students explain why they accept or reject certain AI suggestions. Through these activities, students gradually develop independent thinking, problem-solving abilities, and responsible attitudes toward AI-supported learning. Such competencies are essential for lifelong learning in the digital age.

5.3. Promoting Sustainable Teacher-AI Collaboration

The long-term value of AI in English writing teaching lies in building a sustainable collaborative relationship between teachers and technology. AI is particularly effective in providing timely language support and learning data, whereas teachers remain responsible for designing instruction, motivating students, and evaluating higher-order writing skills. These complementary strengths make teacher-AI collaboration more effective than relying solely on either human feedback or automated feedback.

Schools should therefore establish supportive learning environments that encourage the appropriate use of AI in writing instruction. This includes providing teachers with professional development opportunities, selecting reliable AI platforms, and developing clear guidelines for responsible AI use. Through continuous collaboration among teachers, students, and AI, writing instruction can become more efficient, personalized, and learner-centered. Such collaboration also reflects the future direction of English language education in the context of educational digitalization.

6. Conclusion

Artificial intelligence has transformed the way writing feedback is provided in senior high school English classrooms. Rather than replacing teachers, AI creates opportunities for teachers to redesign writing instruction and provide more meaningful learning support. This paper has examined teacher-AI collaborative feedback from theoretical and pedagogical perspectives and proposed a collaborative feedback model for senior high school English writing teaching.

The proposed model highlights the complementary strengths of AI and teachers throughout the writing process. AI provides immediate feedback on language use and supports students' self-revision, while teachers guide students in developing ideas, improving discourse organization, and strengthening communicative competence. Through continuous interaction among AI, teachers, and students, writing feedback becomes a dynamic learning process instead of a one-time evaluation.

Despite its potential, teacher-AI collaborative feedback should be implemented with

careful pedagogical planning. Teachers remain the key decision-makers in classroom instruction, and AI should always function as a supportive instructional tool rather than an independent evaluator. Future research may further investigate the effectiveness of different collaborative feedback models in diverse educational contexts and explore how emerging generative AI technologies can better support English writing instruction.

References

[1] Bitchener J, Ferris D R. Written corrective feedback in second language acquisition and writing[M]. Routledge, 2012.

[2] Black P, Wiliam D. Assessment and classroom learning[J]. Assessment in Education: principles, policy & practice, 1998, 5(1): 7-74.

[3] Ferris D. Treatment of error in second language student writing[M]. University of Michigan Press, 2011.

[4] Hattie J, Timperley H. The power of feedback[J]. Review of educational research, 2007, 77(1): 81-112.

[5] Holmes W, Bialik M, Fadel C. Artificial intelligence in education promises and implications for teaching and learning[M]. Center for Curriculum Redesign, 2019.

[6] Feedback in second language writing: Contexts and issues[M]. Cambridge university press, 2019.

[7] Kasneci E, Seßler K, Küchemann S, et al. ChatGPT for good? On opportunities and challenges of large language models for education[J]. Learning and individual differences, 2023, 103: 102274.

[8] Luckin R, Holmes W. Intelligence unleashed: An argument for AI in education[J]. 2016.

[9] Ministry of Education of the People's Republic of China. General Senior High School English Curriculum Standards (2017 Edition, 2025 Revision). Beijing: People's Education Press, 2025.

[10] Holmes W, Miao F. Guidance for generative AI in education and research[M]. Holmes Publishing, 2023.

[11] VanLehn K. The relative effectiveness of human tutoring, intelligent tutoring systems, and other tutoring systems[J]. Educational psychologist, 2011, 46(4): 197-221.

[12] Vygotsky L S. Mind in society: The development of higher psychological processes[J]. 1978.

[13] Zhang Z V, Hyland K. Fostering student engagement with feedback: An integrated approach[J]. Assessing Writing, 2022, 51: 100586.

[14] Zawacki-Richter O, Marín V I, Bond M, et al. Systematic review of research on artificial intelligence applications in higher education–where are the educators?[J]. International journal of educational technology in higher education, 2019, 16(1): 39.

[15] Shute V J. Focus on formative feedback[J]. Review of educational research, 2008, 78(1): 153-189.