

Research on Teaching Strategies for High School English Writing Instruction Assisted by Generative Artificial Intelligence

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Abstract

The rapid development of Generative Artificial Intelligence (GAI) technology has injected new momentum into the digital transformation of education, offering novel solutions to persistent challenges in high school English writing instruction, such as insufficient personalized feedback, limited resources, and low student interest. Grounded in the core competency objectives outlined in the National English Curriculum Standards for Senior High Schools, this study systematically explores practical strategies for GAI-assisted writing instruction. These strategies include: stimulating writing motivation through the creation of multimodal cross-cultural contexts; dynamically generating linguistic paradigms and structured scaffolds to enhance expressive accuracy; leveraging human-machine collaboration to deliver personalized, real-time feedback for optimizing the writing process; and utilizing intelligent collaborative platforms to deepen reflective thinking and critical reasoning skills. Practice demonstrates that GAI technology, through a synergistic model of "teacher-guided, student-centered, and technology-empowered" collaboration, significantly improves instructional precision and student engagement. While reducing teachers' mechanical workloads, it simultaneously strengthens the integrated development of language proficiency, thinking quality, and cultural awareness. However, teachers must remain vigilant about technological dependency and ethical risks, so as to further balance the relationship between technological empowerment and humanistic guidance, and to build a sustainable ecosystem for intelligent writing instruction.

Keywords

Generative Artificial Intelligence; High School English; Writing Instruction; Teaching Strategies; Core Competencies

1. Introduction

Against the backdrop of the rapid development of artificial intelligence technologies, Generative Artificial Intelligence (GAI), with its powerful natural language processing and content generation capabilities, has injected new momentum into

the digital transformation of education. China's national policies, such as the Action Plan for Educational Informatization 2.0 [1] and China's Education Modernization 2035 [2], explicitly call for "deepening the integration of information technology into education and teaching," requiring that technology serve the holistic development of students' core competencies. Nevertheless, high school English writing, as a central vehicle for cultivating language proficiency, thinking quality, and cultural awareness, still faces several challenges. First, the heavy burden of teacher grading leads to delayed feedback, undermining the timeliness of guidance [3]. Second, standardized instruction struggles to meet students' individual needs [4]. Third, students lack authentic contexts and in-depth feedback, resulting in weak writing motivation and insufficient training in higher-order thinking [5]. Under the traditional teaching model, the precision of writing guidance, the diversity of resources, and the effectiveness of evaluation are all limited; thus, technological empowerment is still needed to break through these predicaments.

The rise of generative artificial intelligence offers a new pathway to address the aforementioned challenges. Rooted in the Output Hypothesis, which posits that language learning requires cognitive restructuring through sustained feedback, and informed by Process Writing theory, which emphasizes the critical role of multiple revisions in developing expressive competence, GAI technology—through its capacities for generating personalized corpora, providing multidimensional evaluations, and simulating authentic communicative contexts—creates a dynamic "practice–feedback–refinement" environment for writing instruction. Accordingly, grounded in the practical needs of high school English teaching and oriented toward the cultivation of core competencies, this paper explores practical strategies for GAI-assisted writing instruction. The aim is to leverage AI to create authentic contexts for students, enhance the efficiency of writing instruction, alleviate teachers' workload, and unleash their creative potential in instructional design, thereby establishing a novel writing teaching model characterized by "teacher guidance, technology empowerment, and student agency."

2. Leveraging Generative Artificial Intelligence to Develop Diversified Writing Topics and Contexts and Stimulate Writing Motivation

With its powerful semantic understanding and multimodal content generation capabilities, Generative Artificial Intelligence offers a novel pathway to overcome the limitations of monotonous topics and deficient contexts in traditional writing instruction [6]. Guided by the core thematic units of the Foreign Language Teaching and Research Press (FLTRP) textbooks, teachers can design carefully crafted prompts to direct GAI to generate cross-cultural and interdisciplinary authentic corpora and virtual scenarios, thereby transforming abstract writing tasks into tangible expressive needs. For example, when teaching the unit "Philosophy and

Thinking," which requires students to explore the guiding significance of philosophical thought in daily life, students often fall into vague generalities due to the lack of concrete contexts in conventional instruction. In this case, teachers can employ GAI to generate script excerpts featuring a "transcendent dialogue between Zhuangzi and Plato," or to produce video scripts simulating debate scenes on "ethical dilemmas in artificial intelligence," thus rendering philosophical speculation as perceptible conflicts. By analyzing these dynamically generated multicultural materials, students are able not only to gain an in-depth understanding of the differences between "Taoist non-action" and "Western rationalism," but also to compose well-grounded argumentative essays based on specific cases derived from the virtual contexts. In this way, writing on philosophical topics is transformed into a thinking exercise that addresses real-world problems.

This technology-empowered theme development model enhances the authenticity of writing tasks and students' intrinsic motivation to participate. Taking "Social Communication" as an example, the textbook requires students to master the conventions of writing letters of advice. Traditional instruction often resorts to formulaic exercises such as "writing study advice to a friend," whereas GAI can generate a project proposal framework for "designing water-saving solutions for water-deficient villages in China," or simulate a multicultural background information package for "delegate proposals at United Nations conferences." In immersive contexts, students analyze authentic needs and produce texts that genuinely express their own ideas; their linguistic output naturally incorporates cross-cultural communicative awareness and social responsibility, thereby fulfilling the objectives set forth in the National English Curriculum Standards for Senior High Schools (hereinafter referred to as the Curriculum Standards) of cultivating students' cross-cultural communication competence and cultural awareness [7].

More importantly, teachers can dynamically adjust the complexity of generated content according to students' proficiency levels: for weaker students, they can generate a structured outline for a "community waste-sorting initiative" scenario; for higher-achieving students, they can provide an open-ended case repository on "cultural conflict mediation in the context of globalization." This enables a personalized match between writing tasks and individual cognitive levels, allowing every student to gain expressive confidence within their Zone of Proximal Development. In such a classroom, when writing themes are closely connected to students' life experiences or current social issues, their creative motivation and intellectual vitality are fully unleashed. This GAI-based context creation is a vivid implementation of the Curriculum Standards' principle of "developing language application competence in authentic contexts" [7].

3. Leveraging Generative Artificial Intelligence to Provide Models and Scaffolds, and Enhance Linguistic Expression and Discourse Structure

Generative Artificial Intelligence offers an innovative pathway to overcome the limitations of scarce model texts and monotonous language input in traditional writing instruction [8]. In the high school English writing classroom, teachers can harness this technology to dynamically generate model texts that align with specific instructional objectives, thereby constructing a visualized frame of reference for students' linguistic expression and discourse structure. Taking the unit "The Violence of Nature" as an example, before guiding students to compose an argumentative essay on "measures to respond to natural disasters," teachers can design precise prompts—such as: "Please generate an argumentative essay at the high school English level on the topic 'How Should We Respond to Natural Disasters?', including an introduction, three arguments, examples, and a conclusion, using academic vocabulary and complex sentence structures"—and thereby obtain an AI-generated model text instantaneously. This model text not only presents the classical argumentative framework of "posing a problem – analyzing solutions – concluding with a call to action," but also demonstrates the authentic use of core unit terminology such as "establish early warning systems" and "enhance community resilience," thus transforming abstract structural theories and linguistic knowledge into tangible and perceptible practical samples.

On the basis of providing model texts, teachers should guide students to conduct critical textual analysis, thereby transforming the technology-generated texts into vehicles for thinking training [9]. Taking the aforementioned argumentative model essay as an example, teachers can organize students to engage in in-depth analysis of its writing methods: first, identifying how transitional sentences such as "Nevertheless, preventive measures remain the most cost-effective approach" achieve cohesive paragraph connections; second, examining the evidential reasoning underlying arguments like "implementing strict building codes" and "conducting regular disaster drills"; and finally, prompting students to discern potential cultural biases embedded in the AI-generated content—for instance, an overemphasis on technological solutions at the expense of humanistic considerations. This process not only deepens students' understanding of "discourse knowledge" as required by the Curriculum Standards, but also cultivates their critical thinking abilities.

Furthermore, to facilitate students' transition from model comprehension to independent creation, Generative Artificial Intelligence can dynamically generate personalized writing scaffolds. When students are composing expository essays on the theme of language evolution, teachers can invoke AI tools to produce customized auxiliary resources: for students weak in textual structure, a mind-map scaffold following the pattern "phenomenon description → historical tracing → social impact → future trends" can be provided; for those deficient in vocabulary, lists of expressions such as "linguistic evolution" and "cultural assimilation" can be generated; and differentiated sentence-transformation exercises can even be

designed for learners at varying proficiency levels. These individualized scaffolds effectively reduce students' cognitive load in writing, enabling them to focus on idea expression and logical construction. Ultimately, in their film review writing for the unit "The Magic of Film," students are able to skillfully employ professional expressions acquired from the scaffolds—such as "close-up shot signifies..." and "parallel editing creates suspense"—thus achieving a qualitative leap from linguistic imitation to creative application.

Through the three-stage progression of "scaffold presentation → critical analysis → scaffold empowerment," Generative Artificial Intelligence translates its technological advantages into instructional productivity. It not only compensates for the lag in model texts and the insufficiency of individualized guidance in traditional teaching, but also strengthens students' metacognitive abilities through a human-machine collaborative model, and can improve their self-monitoring capacity during the writing process—which is precisely a key indicator of writing competence development under technology empowerment.

4. Leveraging Generative Artificial Intelligence to Deliver Personalized Feedback and Optimize the Writing Process

In English writing instruction, providing timely evaluation of student work is an effective means of enhancing their writing competence [10]. However, under the traditional model, teachers are often required to expend considerable time on basic corrections for dozens of student essays, making it difficult to offer in-depth content guidance and individualized improvement suggestions for each piece of writing [11]. The introduction of Generative Artificial Intelligence (GAI) technology offers a novel solution to the problem of delayed feedback in high school English writing instruction. Leveraging its natural language processing capabilities, GAI can perform real-time multidimensional analysis of student compositions—from lexical collocation accuracy and syntactic complexity to logical coherence of paragraph transitions and sufficiency of argumentation—and generate personalized diagnostic reports accordingly [4]. Teachers can thus be liberated from mechanical labor and focus their efforts on designing differentiated instructional strategies: reinforcing foundational training for linguistically weaker students, while guiding more capable learners toward deeper reflection and cultural expression. This truly realizes a precision-oriented educational model characterized by "data-driven instruction and feedback-fueled growth."

Taking the argumentative writing task for the unit "Learning from History" as an example, students are required to express their views on "whether destroyed historical sites should be rebuilt." The GAI-assisted feedback process adopted in this study spans three stages: pre-class, in-class, and post-class, as detailed below.

Pre-class stage: The teacher publishes the writing task on the smart platform, setting parameters such as a word count of 180–220 and the requirement to include

historical examples as evidence. After students submit their first drafts online, the GAI system completes basic grammar, spelling, and punctuation corrections within 60 seconds, automatically generates an error-type heatmap, identifies weak argumentation paragraphs, and pushes relevant model examples. Based on this, the teacher obtains a distribution of frequent errors and a list of individual problems, enabling precise diagnosis of students' learning conditions.

In-class stage: The teacher, guided by the system-generated class distribution map of weak argumentation points, conducts data-driven precision instruction. Taking a student's essay as an example, the teacher displays the system-optimized comparison: the original sentence "Rebuilding is important." is revised to "Rebuilding the war now was listed as UNESCO heritage in 1980, proves restoration can revive cultural identity," prompting students to engage in group discussion on sentence improvement strategies. Meanwhile, the smart platform projects anonymized samples on screen, retrieves matching examples from the textbook database, and instantly generates group exercise questions: the grammar group completes fill-in-the-blank exercises on tense and voice with "The temple (destroy) during the war now (serve) as a peace museum," while the critical thinking group imitates the textbook sentence pattern "Not only does restoration preserve..., but it also teaches..." to achieve tiered in-time practice.

Post-class stage: The system pushes tiered consolidation tasks: the basic level comprises automatically generated passive voice practice, while the advanced level requires students to supplement causal chains of historical events. After students complete the customized exercises and submit their final drafts integrating historical evidence and cultural reflection, the system generates an intensive error-correction package and a multidimensional scoring chart for the final draft (covering dimensions of grammar, logic, and cultural awareness). The teacher reviews the revised drafts and annotates the depth of cultural expression, focusing their core efforts on guiding higher-order thinking and cultural literacy.

This closed-loop process of "intelligent pre-class diagnosis – precise in-class intervention – tiered post-class consolidation" compresses the feedback cycle from "days" to "minutes," and its personalized content delivery achieves precision tutoring "tailored to each individual student" [5]. Studies have also indicated that GAI enhances students' writing confidence and perseverance in problem-solving through iterative cycles of "writing–feedback–revision" [12]. More importantly, teachers are able to channel their core efforts into creative inspiration, thereby truly implementing the human-machine collaborative model where "machines handle standardized tasks and teachers focus on creative inspiration," and effectively fostering the cultivation of critical thinking and cultural literacy.

5. Leveraging Generative Artificial Intelligence to Facilitate Collaborative Learning and Reflection, and Cultivate Higher-Order Thinking

The application of Generative Artificial Intelligence also opens up new pathways for collaborative learning in high school English instruction. By simulating diverse perspectives in authentic language environments, it guides students to engage in in-depth dialogue and collective creation, transforming the writing process from individual output into socialized cognitive practice [13]. For instance, in the unit *Scientists Who Changed the World*, teachers can design a writing task centered on a "debate on technological ethics": first, students are guided in groups to input debate topics (e.g., "Should AI replace human doctors?") into GAI tools to obtain databases of pros and cons. Students then collaboratively screen effective information, identify data biases (such as cases of humanistic care in medicine that AI may overlook), and integrate the spirit of scientists from the textbook (e.g., Marie Curie's dedication) to reorganize their arguments. In this process, technology serves as a "thinking catalyst," driving students to clarify logical loopholes through group debates, and ultimately producing a well-grounded argumentative essay outline. This collaborative inquiry, supported by intelligent technology, enhances students' abilities in information evaluation, evidence integration, and logical reasoning, while also strengthening their teamwork skills.

This technology also provides structured scaffolds for writing reflection. After completing their first drafts, students may input their compositions into GAI platforms to obtain preliminary language optimization suggestions (such as vocabulary upgrading and conjunctive replacement). However, teachers should guide students to engage in critical reflection—analyzing the rationality of the revision suggestions and discerning whether the AI-generated viewpoints contain ethical biases [14]. For example, in the narrative writing task for *Developing Ideas in Unit 2 of the FLTRP Selective Compulsory Course 1*, when students describe their experiences at a campus cultural festival, the GAI might suggest adding embellished sentences such as "the air crackled with excitement." Teachers should prompt students to consider: Does this expression align with the authentic scenes of Chinese campuses? Is it overly Westernized? Students are then guided to creatively rewrite the text based on their own local cultural experiences. Through this human-AI dialogic reflection, students progressively develop sensitivity to linguistic and cultural differences, achieving a cognitive leap from "mechanical acceptance" to "deliberate judgment" with technological assistance, so that GAI better serves both teachers and students as a powerful assistant in teaching and learning [15].

Furthermore, GAI-empowered instruction helps break the spatial and temporal constraints of student collaboration, enabling seamless integration of in-class and out-of-class group discussions. For instance, students can annotate peers' compositions in real time through shared cloud-based documents, with GAI generating instant revision suggestions for group deliberation. Meanwhile, human-AI interaction can give rise to new models of reflection, as students deepen their metacognitive abilities in the process of evaluating technological feedback,

learning to question and innovate. This writing instruction model, which integrates technology, collaboration, and reflection, ultimately aligns with the goals set forth in the Curriculum Standards—cultivating students' critical thinking, creativity, and cultural character—and lays a foundation for developing internationally competent talents who meet the demands of the new era [7].

6. Conclusion

In summary, the practical exploration of Generative Artificial Intelligence-assisted high school English writing instruction demonstrates that creating multimodal thematic contexts, providing precise linguistic scaffolds, and implementing human-machine collaborative feedback can effectively enhance the precision of writing instruction and student engagement. These strategies facilitate the transformation of the writing process from one-way knowledge transmission to the cultivation of competence and affect, embodying an organic integration of technology empowerment and humanistic guidance.

However, in the process of advancing the deep integration of Generative Artificial Intelligence into English writing instruction, teachers must maintain a clear awareness of its limitations. First, excessive reliance on technology may weaken students' creative development. Second, the ethical framework for technology application has not yet been fully established. Finally, GAI still has inherent limitations in context creation and depth of feedback. This implies that teachers must fully leverage their creative thinking, in-depth understanding of students' individual differences, and observational abilities to effectively integrate AI's data analysis advantages, thereby providing more constructive personalized feedback and practice design. Only in this way can a new ecosystem of English writing instruction—characterized by "teacher guidance, student agency, and AI empowerment"—be established, allowing Generative Artificial Intelligence to truly serve as an innovative engine for high school writing instruction that nurtures students' patriotic sentiments and global perspectives.

References

- [1] Ministry of Education. Notice of the Ministry of Education on Issuing the "Educational Informatization 2.0 Action Plan" [EB/OL]. (2018-04-13) [2025-06-17]. http://www.moe.gov.cn/srcsite/A16/s3342/201804/t20180425_334188.html.
- [2] The Central Committee of the Communist Party of China and the State Council. China's Education Modernization 2035 [EB/OL]. (2019-02-23) [2025-06-17]. http://www.gov.cn/zhengce/2019-02/23/content_5367987.htm.
- [3] Liu, M., Zou, W., Zong, M., et al. How Generative Artificial Intelligence Empowers Teaching: An Empirical Study on Middle School Students' English Writing Teaching [J]. *China Educational Technology*, 2025, (06): 70-79.
- [4] Xu, X., & Lu, Y. A Practical Exploration of Generative Artificial Intelligence Assisting Junior High School English Writing Teaching [J]. *English Teaching and Research in Primary and Secondary Schools*, 2024, (04): 49-53.

- [5] Xiang, R., & Li, D. Practical Exploration of Promoting High-Quality English Teaching in High Schools with Artificial Intelligence [J]. *Journal of the Chinese Society of Education*, 2024, (S1): 170-173.
- [6] Tajik, A. Exploring the role of AI-driven dynamic writing platforms in improving EFL learners' writing skills and fostering their motivation [J]. 2025.
- [7] Ministry of Education of the People's Republic of China. English Curriculum Standards for Senior High Schools (2017 Edition, Revised in 2020) [S]. Beijing: People's Education Press, 2020.
- [8] Fu, Y., Li, M., & Wang, H. The Internal Mechanism and Practical Path of Generative Artificial Intelligence Empowering High School Chemistry Teaching [J]. *Teaching and Administration*, 2025, (13): 47-51.
- [9] Baidoo-Anu, D., & Ansah, L. O. Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning [J]. *Journal of AI*, 2023, 7(1): 52-62.
- [10] Liu, J., & Wang, G. A Study on the Impact of Formative Assessment on Student Academic Achievement: A Meta-Analysis Based on 63 Empirical Studies [J]. *China Examinations*, 2024, (1): 72-82.
- [11] Yang, Z. Research on Effective Guidance Strategies for English Essays of Weak High School Students [J]. *Education Science Forum*, 2016, (4): 62-65.
- [12] Li, Y., Liu, S., Li, X., et al. Can Human-Machine Collaborative Writing Evaluation Promote Writing Teaching? Evidence from an Extended Course in School Z [J]. *Modern Distance Education Research*, 2022, 34(01): 63-74.
- [13] Yi, K., & Han, X. From Blended Teaching to Human-AI Collaborative Teaching: A New Teaching Form under the Transformation of Generative Artificial Intelligence Technology [J]. *Distance Education in China*, 2025, 45(04): 85-98.
- [14] Yu, S., & Wang, Q. Analysis of the Collaborative Path Development of "AI+Teachers" [J]. *Research on Audio-Visual Education*, 2019, 40(04): 14-22+29.
- [15] Zhou, Q., & Wen, X. The Practical Form of "AI+Teacher" Collaborative Teaching in the Intelligent Era [J]. *Journal of Distance Education*, 2020, 38(02): 37-45.