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Is AI working wonders in EFL Writing in China- A review study of AI-aided EFL writing practice in China

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Abstract: The past 15 years saw rapid application of AI technology in teaching and learning in EFL writing in China's English education. This study attempts to look into what and how AI is assisting English Writing education from the perspective of high-quality essays (CSSCI and CCJC journals). The paper finds that AI enables the teachers and learners with a higher efficacy in writing guidance, error corrections, assessments, but also it boosts the psychological and cognitive aspects of the learners. Despite its advancements in EFL writing, the role of human instructors are still irreplaceable and the future calls for a much deeper collaborations between teachers and AI technology.

Keywords: Generative AI, EFL Writing, Feedback, Process Writing, Cognitive Load

1. Introduction

The ever-upgrading AI technology and its impact can be widely felt in almost every industry and no exception to EFL education. Over the past 15 years or so, from the traditional AI to the latest GAI, this technology has revolutionized the way how a foreign language is learned and taught. To gain an insight into how AI is integrated into the EFL writing practice in China, where the AI application is so robust and the Englisher learners so numerous, the efficient approach is, perhaps, to have an overview of the research papers of this topic. Thus, this study selects 28 high-quality essays from either CSSCI or CCIC journals to find out the latest and relatively authoritative voice and trajectories in this field. All the essays are written in Chinese from CNKI.net, one of the largest and most comprehensive sources of academic writings. To make the selection more inclusive. the author applied "AI" or "chatgpt" or "Rengongzhineng (AI in Chinese)" alternatively with "English Writing" in the theme search and obtained around 100 articles, but narrowed down to 28 after limiting the journal source to CSSCI or CCIC, aiming to derive relatively authoritative voice. The following five aspects are the major findings:

2. AI-assisted pedagogy is widely adopted across a range of educational context, from primary, secondary to post secondary classrooms

In primary education, Yang Huali et al. (2020) discovered that tools combining human and computer input are great at picking up on young writers' challenges with step-by-step evaluations. For teachers, this means they can build focused plans to really help students strengthen their basic writing[1]. Studies in middle schools show that GAI feedback helps students improve basic writing skills like grammar and word choice, though it has less effect on more advanced skills

such as developing themes[2]. In universities, platforms like SWORD have been shown to work well for peer review, helping students write more and improve the quality of their writing based on results from studies around the world[3]. In addition, Course-specific adaptations, such as the "General Academic English Writing" curriculum reforms, demonstrate comprehensive AI integration across eight pedagogical dimensions—from syllabus design to evaluation methods—still maintaining emphasis on human oversight for critical thinking development[4].

3. The involvement of GAI largely facilitate the traditional teacher's feedback instructions and a combined model greatly benefit both the instructors and the learners

The traditional feedback given by instructors plays an important role in the EFL writing pedagogy. With the intervention of GAI, many studies compare these two modes and put forward some new models of teaching, focusing on the integration of GAI with traditional feedback instructions. Some indicate that AI tools like ChatGPT can isntantly give personalized corrections, especially for simple language mistakes. However, human feedback is still better at understanding context and capturing cultural nuances[5]. Sun Peijian et al. (2025) found that combining GAI feedback with teacher feedback resulted in long-term benefits for university students' writing quality, though the AI's impact became more pronounced only after multiple iterations of feedback cycles[6]. Mu Huifeng and Tang Yanfang (2025) found that AI is good at giving lots of instant suggestions and helping students learn at their own pace, while peer feedback works better for activities that need shared background knowledge and teamwork[5]. Together, these findings suggest that the best way to teach writing is to combine AI's speed and accuracy in fixing basic mistakes with the human ability to guide deeper thinking and cultural understanding in writing.

4. Generative AI has changed how writing materials are created, making it easy to combine text, images, and sound, and helping teachers adapt writing lessons for different cultures

Xu and Lu (2024) demonstrate how AI-generated multimodal prompts can stimulate students' creative expression through interactive combinations of images, videos, and culturally contextualized texts, particularly benefiting learners in resource-constrained environments[7]. Wang Haixiao (2025) found that the teachers can instruct the generative AI to produce culturally adapted writing samples and comparative rhetoric analyses that bridge Western and Eastern discourse conventions [8]. Study further shows how knowledge-enhanced LLMs generate discipline-specific writing materials that maintain technical accuracy while accommodating learners' cultural backgrounds[4]. These studies show that generative AI can powerfully enhance writing by creating richer and more culturally responsive learning environments. At the same time, they remind us that teachers still play a key role in helping students handle cultural nuances that AI alone can't fully grasp.

5. The nature of AI's iterative feedback capacities can greatly enhance the efficacy of the process writing approaches

Process writing approaches have been significantly enhanced by AI's capacity to provide iterative, real-time feedback throughout the writing cycle, transforming traditional linear composition models into dynamic, recursive learning experiences. Wei and Li (2023) demonstrate how ChatGPT's multi-layered feedback—spanning grammatical correction, lexical refinement, and structural coherence—thus enables writers to progressively refine their work through successive iterations[6]. The iterative nature of AI feedback is further validated by Sun Jianbei et al. (2025), whose longitudinal study reveals cumulative improvements in writing quality when students engage with multiple cycles of AI-generated suggestions, particularly in wording accuracy and organizational clarity[9]. In another study, Zhang and Liu's (2025) find that AI-supported iterative writing enhances learners' flow experiences and self-efficacy by providing immediate performance feedback during composition, fostering a growth mindset toward writing improvement[10]. Liu et al. (2025) provide empirical evidence that intermediate writers particularly benefit from this GAI approach, showing significant gains in content relevance and grammatical accuracy through repeated AI-assisted revisions[11]. However, Mu

and Tang (2025) caution that over-reliance on AI's iterative feedback may inadvertently disrupt deeper cognitive engagement with writing as a meaning-making process, advocating for balanced integration with peer and teacher interactions[5]. Admittedly, These studies stress that AI is changing how students learn to write, but they also remind us that human teachers are still essential for helping students think critically and develop a strong sense of style and purpose in their writing.

6. AI's language processing support reduces the cognitive load, thus facilitates the writing process and boost the self-efficacy of the learners

Researchers have recently focused on how AI helps reduce the mental effort involved in writing. Studies show that AI tools ease the strain on working memory by handling basic language tasks—like fixing grammar, suggesting words, and improving sentence structure—so writers can focus more on ideas and overall organization. In other words, AI lightens the load of juggling both language accuracy and content creation at the same time. Xu et al. (2024) identify such utility as a key factor in learners' positive perceptions of AI writing assistants, particularly for non-native writers who traditionally struggle with divided attention between idea formulation and language production[12]. Li and Chen's (2025) developmental analysis of AI writing systems, which highlights progressive improvements in cognitive offloading capacities—from basic error detection in early systems to contemporary tools' comprehensive language generation and refinement[13]. Chu Jinjin (2025) further validates these findings through large-scale attitude surveys, revealing that 72% of students report decreased writing anxiety when using AI tools, attributing this primarily to reduced cognitive strain during drafting phases[14]. The cognitive benefits extend beyond basic writing tasks—Wang and Wei (2025) demonstrate how AI's language processing support enables learners to focus on cultural appropriateness and rhetorical strategies in international communication contexts, areas that traditionally suffer when cognitive resources are overwhelmed by linguistic demands[15]. Xu and Wang (2025) document similar advantages in ESP writing, where domain-specific terminology suggestions and genre-appropriate phrasing recommendations reduce the cognitive load associated with mastering specialized discourse conventions[4]. Overall, these findings suggest that while AI can greatly improve writing fluency and quality by taking over some of the mental workload, the best learning results come when teachers balance automation with chances for students to practice language consciously and reflect on their own thinking.

Conclusion

Although AI tools for English writing have come a long way, they still struggle to truly understand context and culture—two factors that limit their effectiveness in the classroom. Research shows that while AI excels at catching grammar errors and improving sentence structure, it often fails to grasp the subtleties of culturally specific expressions, disciplinary language, or context-sensitive rhetorical choices. Many studies point out that AI-generated suggestions, though grammatically correct, can sound awkward or even inappropriate in cross-cultural situations, where effective communication depends on social and cultural awareness rather than just linguistic accuracy.

These emerging research gaps also include the absence of cross-cultural validations for collaborative model effectiveness, particularly in non-Western educational contexts where writing pedagogies may emphasize different competency dimensions. Additionally, the field lacks robust longitudinal studies tracking whether current human-AI writing partnerships actually accelerate the development of higher-order composition skills compared to traditional methods, rather than simply improving immediate task performance. These limitations show that future AI tools need to do more than just assist with writing — they should be designed to explain their feedback clearly, adapt to different cultural contexts, and actively help users develop their own thinking and writing skills. Only then can AI move from being a helpful add-on to becoming a true partner in the writing process.

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Conflicts of interest:

The author declares no conflicts of interest regarding the publication of this paper.