

AI-Empowered Business English Writing Instruction: A Pedagogical Inquiry

YUAN Fang

University of Shanghai for Science and Technology, Shanghai, China

Business English writing instruction faces persistent challenges in fostering audience awareness, critical thinking, and timely feedback. Generative artificial intelligence (AI) offers transformative potential. This pedagogical inquiry examines AI's multifaceted roles as diagnostic tool, simulated reader, and feedback provider. It argues that effective integration depends on a human-AI synergy model, where teachers evolve from content deliverers to learning designers, guiding students to develop strategic communication competence essential for the modern workplace.

Keywords: AI-Empowered instruction, Business English writing, human-AI synergy

Introduction

Business English writing instruction has long faced significant pedagogical challenges. Traditional models remain predominantly input-oriented, emphasizing grammar and templates while neglecting the cultivation of critical thinking, audience awareness, and strategic communication skills (Cheng, 2023). Feedback mechanisms are often delayed and linguistically focused, offering little guidance on higher-order concerns like logic and rhetorical effectiveness (Xu, 2026). Consequently, students often produce linguistically correct but communicatively ineffective texts.

The emergence of generative artificial intelligence (AI) presents promising solutions, yet current research remains fragmented. Questions persist regarding how to integrate AI beyond surface-level correction to develop higher-order thinking and how to maintain writerly agency amid automation (Cao, 2026; Cheng, 2026).

To address these gaps, this pedagogical inquiry synthesizes recent empirical findings and theoretical developments in AI-mediated language education. It examines the pedagogical conditions under which human-AI collaboration proves most effective and outlines a principled framework for integrating AI as cognitive partners in Business English writing courses, specifying the respective responsibilities of teachers, learners, and technological tools within a structured instructional workflow.

Literature Review

The integration of AI into language education has gained considerable momentum since the emergence of generative models. Early research primarily focused on AI's capacity for surface-level error correction, with studies confirming the efficacy of AI-powered tools in grammar checking, vocabulary enhancement, and writing efficiency improvement. More recently, scholars have explored AI's pedagogical applications in English for

YUAN Fang, M.A., instructor, Department of Foreign Languages, University of Shanghai for Science and Technology, Shanghai, China.

Specific Purposes (ESP) contexts. Cao (2026) applies the Production-Oriented Approach in Business English writing courses, confirming its effectiveness in enhancing technical writing quality. Xu (2026) demonstrates AI's capacity to provide instant feedback and generate authentic writing materials, thereby improving writing efficiency and language accuracy. Cheng (2026) further advances this inquiry by proposing an AI-empowered reader-centered assessment framework, integrating critical thinking evaluation with business communication principles.

Despite these advances, significant limitations have been documented. A metadiscourse investigation revealed that AI-powered tools display particular weakness in evaluating digression, transitional coherence, and tonal appropriateness. This finding underscores AI's limitations in assessing higher-order thinking skills and pragmatic reasoning essential to professional business communication.

Moreover, investigations into student perceptions reveal a dual effect: AI tools can effectively alleviate writing anxiety and provide immediate language support, yet excessive dependence may undermine the development of foundational writing competence. Research on AI-based writing self-efficacy indicates that learners' confidence in using AI tools mediates the relationship between metacognitive strategies and writing anxiety, suggesting that pedagogical interventions should target both AI literacy and self-regulated learning.

Taken together, prior research has validated AI's potential in Business English writing instruction yet reveals a fragmented picture lacking a coherent pedagogical framework that systematically addresses both the affordances and constraints of human-AI collaboration. Critical concerns regarding learner agency, the appropriate balance between automation and human instruction, and strategies for developing higher-order writing competence persist. In view of this, this study aims to propose a human-AI synergy model that integrates AI tools as cognitive partners while preserving teacher-led scaffolding and learner agency.

Theoretical Basis

This research is grounded in the theoretical frameworks of Human-Computer Interaction and Sociocultural Theory, with particular reference to the concept of "synergy" in collaborative learning environments and Vygotsky's (1978) notion of the Zone of Proximal Development (ZPD).

According to Vygotsky (1978), the ZPD refers to "the distance between what learners can accomplish independently and what they can achieve with guidance from more capable peers or tools." This concept has been extended in technology-mediated learning contexts, where AI tools function as cognitive partners that scaffold learners' performance within their ZPD, enabling them to accomplish tasks beyond their unassisted capabilities. The notion of human-AI synergy in educational settings draws upon this foundational premise, positing that the collaborative interaction between human cognitive processes and AI systems can produce outcomes superior to either agent working independently (Cheng, 2026).

The concept of "synergy" in this study is further informed by Salomon, Perkins, and Globerson's (1991) framework of "effects with technology" and "effects of technology." The former refers to "the enhanced performance achieved when learners work in partnership with intelligent tools, while the latter concerns the durable cognitive gains that result from such collaborations. In the context of business English writing instruction, AI tools are conceptualized not as replacements for teacher guidance or learner effort, but as mediating artifacts that augment students' writing capabilities through immediate feedback, audience simulation, and genre scaffolding" (Cheng, 2026; Xu, 2026).

Complementing these perspectives is the “reader awareness” construct, which emphasizes the writer’s capacity to anticipate and address the needs, expectations, and decision-making processes of target readers in professional communication contexts (Cheng, 2026). The integration of AI as a reader simulator enables learners to externalize and operationalize this otherwise abstract cognitive skill, facilitating the development of audience-oriented writing strategies through iterative human-AI interaction.

In sum, the theoretical basis of this study integrates sociocultural perspectives on mediated learning with human-computer interaction frameworks to conceptualize human-AI synergy in business English writing pedagogy. This integration provides a coherent lens for examining how AI tools function as cognitive partners, supporting learners’ genre knowledge development, audience awareness cultivation, and self-regulated writing competence within structured pedagogical contexts.

Research Design

Subjects of Study

As the author teaches sophomore English majors the course of Business English writing in a Chinese university, the 50 students of the author’s two classes are taken as subjects for this study.

Method

Pre-class translation comparison and collaborative evaluation. The pedagogical implementation of AI tools follows a structured workflow, with the preliminary phase conducted prior to classroom meetings. During pre-class preparation, the instructor identifies key terminologies and representative sentences from the assigned textbook chapter. Students are directed to select any AI platform of their personal preference and generate translations of the designated items.

This open-choice approach serves two purposes. First, it familiarizes students with diverse AI tools. Second, it capitalizes on the phenomenon that different AI platforms produce varying outputs for identical input, ranging from professional renderings to suboptimal versions (Cheng, 2026). Students upload their translations to the discussion forum of the university’s online learning system prior to class and all of them are required to review peers’ submissions.

In classroom sessions, the instructor facilitates collaborative evaluation through whole-class discussion. Students present and compare diverse translation versions retrieved from various AI platforms. Through guided questioning, the instructor encourages critical examination of each rendition against established business communication criteria, including terminological precision, contextual suitability, and professional conventions. The collective deliberation culminates in consensus-based identification of the most accurate and contextually appropriate translation. The instructor then systematically unpacks underlying rationales, explicating linguistic, stylistic, or pragmatic factors that render certain versions superior. This meta-cognitive debriefing reinforces conceptual understanding and consolidates learning through principled reasoning rather than rote memorization.

Post-class writing practice: Collaborative AI-mediated text review and revision. The post-class writing practice phase extends classroom learning into collaborative peer-review activities facilitated by AI tools. Following the completion of in-class writing tasks, students are organized into groups of four to engage in a structured text evaluation and revision exercise. Each group is instructed to input designated prompts into an AI software to generate a sample business English document that deliberately exhibits various forms of substandard

writing. These deficiencies may encompass inappropriate lexical choices, informal or colloquial registers, inconsistent terminological usage, structural disorganization, or deviations from established business writing conventions. The intentionally flawed output serves as the pedagogical anchor for subsequent collaborative analysis.

Upon obtaining the AI-generated text, groups undertake a systematic review process guided by two primary reference resources: the sample documents provided in the course textbook and the writing principles explicitly taught during classroom sessions. These principles typically address fundamental aspects of professional business communication, including appropriate tone and formality, audience awareness, logical coherence, terminological accuracy, conciseness, and adherence to genre-specific conventions. Students are expected to apply these criteria as analytical lenses when examining the AI-generated document.

The group work proceeds through distinct collaborative phases. First, members jointly identify and annotate specific textual features that deviate from professional standards, discussing the nature and severity of each deficiency. Second, through collective deliberation, they propose and negotiate alternative formulations that better conform to textbook models and writing principles. Third, the group collaboratively redrafts the original text into a revised version that demonstrates improved lexical precision, appropriate formal register, consistent and accurate use of professional terminology, and overall stylistic conformity to business writing expectations.

This process of critical evaluation and revision embodies principles of collaborative learning and peer scaffolding, as students collectively construct deeper understanding through dialogue and negotiation. Importantly, the identification of deficiencies within the AI-generated sample serves a dual purpose. The primary benefit lies not merely in producing a corrected document, but rather in the meta-cognitive development that occurs through the discovery process itself. As students actively locate and analyze writing problems, they internalize awareness of common pitfalls and develop self-editing strategies applicable to their own independent writing. This experiential learning cycle—encountering flawed models, diagnosing problems through application of learned criteria, and implementing targeted revisions—cultivates students' ability to recognize and avoid similar errors in future writing tasks.

Survey Results and Discussion

A post-intervention questionnaire was administered to 50 participating students to gauge perceptions of the AI-integrated pedagogical approach. The survey employed a five-point Likert scale (1 = “Strongly Disagree,” 5 = “Strongly Agree”) across three dimensions: perceived usefulness, engagement, and skill development.

Results indicated generally positive perceptions. For perceived usefulness, the mean score was 4.12 ($SD = 0.78$), with 82% of students agreeing that AI-assisted translation comparison enhanced their terminological accuracy. Regarding engagement, the mean was 3.98 ($SD = 0.85$), suggesting that peer discussion of AI outputs stimulated active participation. Notably, the collaborative review and revision activity received the highest rating ($M = 4.21$, $SD = 0.72$), with students appreciating the opportunity to identify and correct deficiencies in AI-generated texts. Regarding skill development, 76% believed the review process improved their ability to self-edit and avoid common writing errors.

The findings offer several implications for course design and pedagogical implementation. First, the high usefulness ratings confirm that AI tools effectively scaffold learning when integrated with structured peer collaboration. Second, the elevated engagement scores support the pedagogical value of comparative translation

analysis and collaborative text revision. Finally, the positive skill development outcomes indicate that experiential learning through error identification promotes durable writing competence.

Conclusion

This pedagogical inquiry examined AI integration in Business English writing instruction through a structured teaching experiment. Findings indicate that the AI-assisted approach, encompassing pre-class translation comparison, collaborative text review, and group-based revision activities, effectively enhanced students' terminological accuracy, audience awareness, and self-editing competence. Survey results revealed positive perceptions of usefulness and engagement, with students particularly valuing the collaborative review process. However, limitations including short research duration and small sample size restrict generalizability. Future research should extend intervention periods and incorporate qualitative methods, such as interviews to triangulate findings. Further investigation may also explore diverse approaches to utilizing AI tools in classroom settings, such as real-time writing assistance, interactive scenario simulation, and dynamic feedback generation.

References

- Cao, H. (2026). Research on the application of "output-oriented approach" in the teaching of Business English writing course. *China Multimedia and Network Teaching Journal*, 10(1), 26-28.
- Cheng, M. L. (2023). A diagnostic analysis of Business English writing based on critical thinking quality assessment criteria. *Journal of Hubei University of Economics (Humanities and Social Sciences)*, 20(7), 141-143.
- Cheng, M. L. (2026). Constructing a reader-centered assessment standard for Business English writing and its pedagogical practice empowered by AIGC. *Journal of Hubei University of Economics (Humanities and Social Sciences)*, 23(4).
- Salomon, G., Perkins, D. N., & Globerson, T. (1991). Partners in cognition: Extending human intelligence with intelligent technologies. *Educational Researcher*, 20(3), 2-9.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Xu, Y. Y. (2026). Research on the application of AI technology in college Business English writing instruction. *English Square*, 13(9), 67-70.