

Integrating Generative Artificial Intelligence into College English Teaching : An Action Research from a Core Competency Perspective

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Abstract: The rapid development of generative artificial intelligence (GenAI) has created new possibilities for innovation in higher education. This study explores the integration of GenAI into College English teaching from a core competency perspective through an action research approach. The study was conducted in a compulsory College English course for first-year non-English majors at a private university in China. During one semester, Doubao AI was incorporated into classroom activities, including language practice, writing revision, Chinese cultural communication, and learning reflection. Data were collected through classroom observations, student reflections, semi-structured interviews, and teacher reflective journals. The findings indicate that GenAI can support students' language ability, cultural awareness, critical thinking, and autonomous learning when combined with effective pedagogical design. The study emphasizes that the value of GenAI lies not in replacing teachers but in enhancing interaction, reflection, and personalized learning in College English classrooms.

Keywords: Generative Artificial Intelligence; College English Teaching; Core Competencies; Action Research; AI Literacy; Intercultural Communication

1. Introduction

The rapid advancement of generative artificial intelligence (GenAI) has introduced new possibilities for innovation in higher education. Unlike previous educational technologies that mainly provided digital resources or automated feedback, GenAI-based tools are capable of generating texts, responding interactively to learners' questions, and providing individualized language support. These characteristics have attracted increasing attention in language

education, where learning depends heavily on interaction, practice, and continuous feedback.

In College English education, GenAI offers potential support for addressing several challenges in traditional classroom practice. University English classrooms often include students with different educational backgrounds, learning experiences, and levels of language proficiency. Some students actively participate in English communication, while others experience difficulties with vocabulary, writing organization, and oral expression. Such differences are particularly noticeable in private universities, where student populations are often characterized by diverse academic foundations and learning needs.

GenAI provides one possible direction for addressing this issue. Through AI-assisted interaction, students can obtain language suggestions, explore expressions, and revise their work beyond limited classroom time. However, the educational value of GenAI should not be understood simply through its technological capabilities. AI-generated responses may contain inaccurate information, inappropriate expressions, or incomplete cultural interpretations. Without sufficient guidance, students may become passive users who depend on AI-generated answers rather than active learners who engage in meaningful thinking.

The concept of core competencies provides a valuable perspective for examining this issue. Contemporary College English education has gradually moved beyond the traditional emphasis on language knowledge and examination performance. Instead, it increasingly focuses on students' ability to communicate effectively, understand cultural meanings, think critically, and continue learning independently.

From this perspective, GenAI can be viewed as a learning mediator rather than merely a technological tool. For example, AI-supported

writing activities may encourage students to reflect on language use, while AI-assisted cultural tasks may help students develop the ability to introduce Chinese culture in English. When combined with teacher guidance, GenAI may create opportunities for students to develop multiple dimensions of competence.

This study focuses on a College English course for first-year non-English majors at a private university in China. Through one semester of classroom implementation, Doubao AI was integrated into language learning activities, cultural communication tasks, and learning reflection practices. The purpose of the study is to explore how GenAI can support students' core competency development in an authentic classroom environment.

2. Literature Review

2.1 Generative Artificial Intelligence in Language Education

The application of artificial intelligence in language education has developed over several decades, from computer-assisted language learning systems to intelligent tutoring platforms. Earlier forms of educational technology mainly provided learners with digital resources, automated exercises, and limited feedback. The emergence of generative artificial intelligence represents a new stage of technological development because it enables dynamic interaction, content generation, and personalized responses.

Recent studies have highlighted the potential of GenAI in foreign language education. AI-based tools can support various aspects of language learning, including writing assistance, vocabulary development, conversational practice, and feedback provision. For university students who have limited opportunities to use English outside the classroom, AI-supported interaction may provide additional spaces for language practice and experimentation.

However, technological capability alone does not guarantee meaningful learning. Unlike traditional learning resources, AI-generated content requires users to evaluate its accuracy, appropriateness, and relevance. In language education, fluent AI-generated expressions may appear convincing but may not always represent accurate or contextually appropriate communication. Therefore, students need to develop critical awareness when interacting with

AI tools.

Previous research has also emphasized the importance of teacher mediation in AI-supported learning environments. Teachers play a key role in designing learning tasks, guiding students' interaction with AI, and helping learners develop responsible technology use habits. Therefore, the educational value of GenAI depends largely on how it is integrated into pedagogical practices.

2.2 Core Competencies in College English Education

The concept of core competencies has reshaped contemporary approaches to English education. Instead of focusing only on linguistic knowledge and examination performance, competency-oriented education emphasizes students' overall development, including communication ability, cultural understanding, critical thinking, and lifelong learning capacity.

In the context of College English education in China, students are expected not only to acquire English language skills but also to develop the ability to use English in meaningful social and cultural contexts.

This study adopts four dimensions of core competencies as the analytical framework:

Language Ability

Language ability refers to students' capacity to understand and use English appropriately in different situations. AI-supported writing revision, vocabulary exploration, and language practice may provide additional opportunities for students to develop language awareness.

Cultural Awareness

Cultural awareness emphasizes students' understanding of cultural differences and their ability to communicate cultural meanings effectively. For Chinese university students, learning English also involves developing the ability to introduce Chinese culture to international audiences.

Thinking Quality

Thinking quality refers to students' ability to analyze information, evaluate different perspectives, and make independent judgments. In the context of GenAI, this competency becomes particularly important because students need to assess AI-generated information critically.

Learning Ability

Learning ability concerns students' capacity for autonomous learning, reflection, and self-regulation. When appropriately guided, AI

may provide opportunities for students to explore learning resources and develop more independent learning strategies.

Through this framework, the present study examines GenAI not simply as a teaching tool but as a resource that may support students' comprehensive development.

2.3 GenAI, Cultural Communication, and College English Learning

An important feature of this study is the integration of Chinese cultural content into AI-supported English learning.

Traditional College English teaching has often emphasized students' understanding of English-speaking cultures. However, intercultural communication requires a two-way process. University students need not only to understand other cultures but also to express their own cultural experiences effectively in English.

Chinese cultural topics provide meaningful contexts for English learning because they connect classroom activities with students' existing knowledge and personal experiences. Through tasks related to Chinese festivals, food culture, and traditional values, students can develop both language ability and intercultural communication awareness.

GenAI can support such activities by helping students explore possible expressions, organize information, and compare different ways of presenting cultural meanings. However, students must remain active participants because cultural communication involves interpretation rather than simple translation.

3. Methodology

3.1 Research Design

This study adopted an action research approach. Action research was selected because the purpose of the study was to examine and improve teaching practices within an authentic classroom environment. Rather than measuring the effectiveness of GenAI through experimental comparison, the study focused on understanding how AI-supported activities developed during the teaching process and how students responded to these practices.

3.2 Research Context and Participants

The participants were approximately 60 first-year undergraduate students enrolled in a

compulsory College English course. The students demonstrated diverse English proficiency levels. Some students were relatively confident in English communication, while others experienced difficulties with vocabulary use, writing organization, and oral expression..

3.3 AI Tool and Classroom Implementation

The AI tool used in this study was Doubao AI, a generative artificial intelligence application developed for interactive language support.

The tool was selected because it provided accessible interaction in both Chinese and English and was suitable for students with different levels of English proficiency.

3.3.1 AI-supported Language Learning Activities

The learning process required students to complete their own initial work before consulting AI. After receiving AI suggestions, students evaluated the feedback and decided which revisions were appropriate.

3.3.2 AI-supported Chinese Cultural Communication Activities

AI was used as a supporting resource to help students organize information and explore English expressions. Meanwhile, students were encouraged to examine whether AI-generated explanations accurately represented Chinese cultural meanings.

3.4 Data Collection and Analysis

Multiple qualitative data sources were collected, including classroom observations, student reflections, semi-structured interviews, and teacher reflective journals.

The collected data were analyzed through thematic analysis.

3.5 Ethical Considerations

Participation in interviews and reflection activities was voluntary. Students' personal information was protected, and all collected materials were used only for research purposes.

4. Findings and Discussion

Based on classroom observations, student reflections, interviews, and teacher reflective journals, four major themes emerged from the implementation of GenAI-supported College English teaching: supporting language development, enhancing cultural communication, developing critical AI literacy, and promoting autonomous learning. Meanwhile, several challenges were identified during the process of

integrating GenAI into classroom practice.

4.1 Supporting Language Development through AI-Assisted Learning

One significant observation during the implementation was that GenAI provided students with additional opportunities for language practice.

In traditional College English classrooms, limited class time often makes it difficult for teachers to provide individualized feedback for every student. This situation is particularly challenging in classes with diverse proficiency levels. Some students require more support in vocabulary selection, sentence organization, and expression improvement, while others need opportunities for more advanced language exploration.

The integration of Doubao AI created an additional learning space beyond classroom interaction. Students used AI to explore vocabulary usage, revise writing drafts, and prepare oral presentations. Instead of directly receiving teacher corrections, students could interact with AI and examine different possibilities for expressing their ideas.

For example, in writing activities, students first completed their own drafts and then consulted AI for suggestions. They were encouraged to compare AI-generated feedback with their original expressions and decide whether modifications were appropriate. Through this process, students gradually developed greater awareness of language choices and sentence structures.

However, classroom observations indicated that AI support alone did not automatically lead to meaningful learning. Students benefited most when AI activities were connected with clear learning objectives and guided by teachers. Without instructional guidance, some students tended to focus on obtaining polished answers rather than understanding the language learning process.

Therefore, GenAI should be considered a supportive resource that expands opportunities for language engagement rather than a substitute for language instruction.

4.2 Enhancing Cultural Communication through AI-Supported Learning

A distinctive feature of this study was the integration of Chinese cultural content into English learning activities.

In many College English classrooms, students spend considerable time learning about English-speaking countries. However, in the context of global communication, students also need the ability to explain their own cultural experiences and perspectives in English.

During the implementation, students participated in English tasks related to Chinese festivals, traditional food culture, and cultural values. These activities aimed to help students use English as a means of cultural communication rather than merely as an academic subject.

AI provided support by helping students explore possible expressions and organize information. For example, when preparing presentations about traditional Chinese festivals, students used AI to search for English expressions related to cultural practices and historical background.

However, students were required to evaluate AI-generated explanations carefully. Some students noticed that AI responses sometimes described cultural practices from a general perspective but did not fully explain the deeper meanings behind them. Through classroom discussion, students learned that cultural communication involves interpretation, explanation, and adaptation rather than simple translation.

This process helped students recognize the relationship between language and culture. They became more aware that effective English communication requires not only accurate language use but also the ability to convey cultural meanings.

4.3 Developing Critical AI Literacy and Thinking Quality

The integration of GenAI also contributed to students' awareness of critical engagement with technology.

At the early stage of implementation, some students tended to regard AI-generated responses as reliable because the language appeared fluent and professional. They sometimes accepted AI suggestions without further evaluation.

Through continuous classroom guidance, students gradually developed a more reflective attitude toward AI-generated content. For example, during cultural presentation tasks, students compared AI-generated descriptions with their own understanding of Chinese traditions. When differences appeared, they discussed possible reasons and revised their presentations.

This process indicates that AI-supported learning can provide opportunities for developing thinking quality when students are encouraged to question and evaluate information.

In the current educational environment, where AI-generated content is becoming increasingly common, the ability to critically interact with AI is an important component of students' future learning competence.

4.4 Promoting Autonomous Learning Ability

Another important finding was the influence of GenAI on students' learning awareness.

Before the implementation, some students mainly depended on teachers for explanations and corrections. Their learning process was often teacher-directed, with limited independent exploration.

AI-supported activities encouraged students to take greater responsibility for their learning. Through interaction with AI, students learned to formulate questions, compare different expressions, and reflect on their own learning needs.

For instance, during writing revision activities, students were not simply asked to improve their texts but were required to explain why certain revisions were more effective. This encouraged them to become more active participants in the learning process.

4.5 Challenges of GenAI-Supported College English Teaching

Although the integration of GenAI demonstrated positive potential, several challenges were also identified.

The first challenge was students' tendency to rely on AI-generated responses. Some students initially used AI mainly to complete assignments quickly rather than to improve their learning. This indicates that teachers need to establish clear guidelines for AI use and emphasize students' responsibility in the learning process.

The second challenge concerned students' ability to evaluate AI responses. Because AI-generated content is often fluent and convincing, students with limited language knowledge may find it difficult to identify inaccurate information or inappropriate expressions.

Therefore, AI literacy education should become an important component of College English teaching.

Students also showed differences in their ability to use AI effectively. Some students quickly

learned how to communicate with AI and obtain useful support, while others required additional guidance.

5. Conclusion

This study explored the integration of generative artificial intelligence into College English teaching from a core competency perspective through an action research approach.

The classroom evidence indicates that GenAI can support students' development of language ability, cultural awareness, critical thinking, and autonomous learning when integrated with purposeful pedagogical activities. Through AI-supported writing tasks, cultural communication activities, and reflective learning practices, students were provided with additional opportunities to engage with English and reconsider their learning strategies.

The study also highlights that the educational value of GenAI depends largely on teacher guidance and instructional design. AI itself does not automatically create meaningful learning. Instead, meaningful learning occurs when teachers design appropriate tasks, guide students' interaction with AI, and encourage reflection.

Several implications can be drawn for College English teaching.

First, teachers should integrate AI based on learning objectives rather than technological novelty. AI activities should focus on supporting students' thinking and engagement instead of simply generating finished products.

Second, students' AI literacy should be systematically developed. Learners need to understand both the possibilities and limitations of AI and develop the ability to evaluate AI-generated information critically.

Third, Chinese cultural content can provide valuable contexts for AI-supported English learning. When students use English to introduce their own culture, they develop not only language skills but also intercultural communication competence.

This study has several limitations. It was conducted in one private university with approximately 60 students, and the findings mainly reflect a specific classroom context. In addition, the study adopted qualitative methods and did not use statistical measures to evaluate changes in students' language performance.

Future research could combine qualitative and quantitative approaches to further investigate the

relationship between GenAI-supported teaching and student learning outcomes. Long-term studies may also explore how students' AI literacy develops over time.

Overall, this study suggests that GenAI has meaningful potential in College English education when it is integrated thoughtfully. The future of AI-supported language teaching should not focus on replacing teachers but on creating more interactive, reflective, and learner-centered educational environments.

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