

# On the Application of Generative AI in College English<sup>\*</sup>

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With the rapid advancement of AI technology, especially the emergence of generative AI such as ChatGPT and ERNIE Bot, the field of education is undergoing profound changes. While they change the way information is obtained and processed, these AI technologies challenge traditional teaching models. Based on evaluating the feasibility of various generative AI tools for teaching and comparing their respective advantages and disadvantages, this paper delves into the application scenarios of these generative AI tools in English reading, writing, and translation, and explores their specific applications in the pre-class, in-class, and post-class parts of “College English Reading, Writing, and Translation”. It is hoped that through innovative teaching methods, both students’ learning effectiveness and teachers’ teaching efficiency can be improved. At the same time, it is crucial to guide students in recognizing the misinformation and biases that exist in generative AI, while emphasizing the significance of originality and intellectual property. Moreover, their critical thinking skills and proper academic concepts could be cultivated and help them prevent academic misconduct.

*Keywords:* generative AI, college English, teaching reform, critical thinking, academic integrity

## Introduction

In the field of natural language processing, large language models are considered to have the potential to achieve artificial general intelligence (Xu & Zhao, 2024), and can efficiently complete tasks such as automatic summarization and machine translation (Devlin, 2018). When users input “prompt” in natural language on the software interface, the large language model can effectively get users’ instructions and generate corresponding content according to the requirements. Therefore, this round of technological innovation is also called “Generative Artificial Intelligence” (GAI) (Xu, Zhao, & Sun, 2024). Artificial intelligence technology is providing impetus for the digital transformation of education, including infrastructure upgrades, changes in learning methods, and the reengineering of educational processes (Shang & Li, 2023).

This paper focuses on the course “College English Reading, Writing, and Translation”, and analyzes the application of generative AI tools in teaching to address current issues such as lack of student interest, large differences in proficiency, low quality of teaching feedback, and insufficient teaching technology content. Through evaluation and comparison of the advantages and disadvantages of different generative AI tools, this paper thoroughly analyzes the potential applications of these tools in English reading, writing, and translation

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teaching, as well as how they can be integrated into various teaching stages such as pre-class preparation, in-class teaching, and after-class review. This is not only of great significance for improving students' English abilities of reading, writing, and translation, but also brings innovation and progress to the education field, promoting the development of education models towards a more personalized and intelligent direction.

### **Problems and Challenges in Teaching College English Reading, Writing, and Translation**

As for public English education, the ability cultivation of reading, writing, and translation is crucial to students' academic development and career success. However, the current teaching of this course is facing a series of challenges which not only have an effect on students' learning outcomes but also pose a test to teachers' teaching efficiency.

#### **Lack of Learning Interest**

The elective course "College English Reading, Writing, and Translation", designed for sophomores, often focuses on rote memorization and exam-taking skills, lacking practicality and interest combined with actual application. In addition, the teaching methods of this course are similar to the compulsory "College English" course in the first year, lacking innovation and failing to inspire students' enthusiasm for learning. Under this teaching model, students often find it difficult to see the related connection between learning and their future development, which leads to a lack of learning motivation.

#### **A Big Gap Between Different Learning Level Students**

The course "College English Reading, Writing, and Translation" is open to students of different majors. Due to the significant differences in students' English proficiency, this diversity increases the complexity of teaching to a certain extent. Students with different English proficiency are studying in the same classroom, and there are differences in the acceptance of teaching content and learning progress, which poses a challenge for teachers to design a unified and effective teaching plan.

#### **Limited Teaching Feedback**

In the course of teaching, teachers often need to undertake teaching tasks for multiple courses or classes at the same time. Faced with numerous students who are significantly different in their English proficiency, it is difficult for teachers to provide timely, targeted, and personalized feedback for each student. This limits the teacher's ability to meet students' learning needs, affecting students' learning experience and teaching effectiveness.

#### **Lack of Modern Teaching Technology**

Traditional "College English Reading, Writing, and Translation" course often relies on classroom lectures and written assignments, lacking diverse teaching methods and interactive learning atmosphere. The teaching process suffers from a lack of vitality and innovation due to the absence of modern educational technology and tools. This teaching model fails to fully utilize existing teaching resources and technology, limiting the modernization of teaching methods and the richness of teaching content.

To address these challenges, educators need to explore new teaching methods and tools to enhance the attractiveness, effectiveness, and interactivity of teaching, while ensuring the diversity and personalization of instructional content to meet the needs of different students.

## The Application of Generative AI Tools in the Teaching of the Course

The integration of generative AI tools provides new opportunities for the teaching reform of the course. The following part will explore the feasibility of various generative AI tools for teaching purposes and compare their advantages and disadvantages.

### Feasibility of the Generative AI Tools for Teaching Applications

The accessibility, usability, quality of language models, and interaction methods of various generative AI tools are comprehensively considered. Based on the characteristic of the teaching, a specific evaluation is conducted to choose tools suitable for the “College English Reading, Writing, and Translation” course.

**Evaluation of the feasibility of AI tools.** The existing mainstream generative AI tools are investigated, including ChatGPT, ERNIE Bot, Zhipu AI, Tencent Hunyuan, iFLYTEK Spark, etc., and their accessibility and usability are assessed from the perspectives of teachers and students. Although ChatGPT is talented in the field of Chinese to English translation, its account is not open to domestic users. Even if the project team can access it through a translation platform purchased by the organization, it is difficult for students to operate. Compared to others, the basic functions of mainstream AI such as ERNIE Bot, Zhipu AI, Tencent Hunyuan, and iFLYTEK Spark are currently free in China, and only advanced functions of some models require membership purchase to use. Therefore, it is more feasible in the teaching of “College English Reading, Writing and Translation”.

**The advantages and disadvantages of AI tools.** We analyze the advantages and disadvantages of different generative AI tools in improving students’ English abilities, including comparing the quality of the language models, interaction methods, level of automation, user-friendliness, etc., in order to choose the most suitable tool for course teaching. For example, the response speed of iFLYTEK Spark and Zhipu AI is relatively fast while ERNIE Bot occasionally is stuck and needs to be instructed repeatedly before giving the result.

### Application Scenarios of Generative AI Tools in Teaching

In the field of natural language processing (NLP), generative AI tools such as ChatGPT, ERNIE Bot, Zhipu, Tencent Hunyuan, and iFLYTEK Spark have demonstrated their extensive application potential. This study conducted a thorough analysis and evaluation of these tools in the three aspects of reading, writing, and translation in English teaching.

**Aspect of reading.** AI tools have demonstrated their powerful teaching assistance function. For example, the rapid reading assistance feature of Zhipu can help students quickly extract key information from literature, while ERNIE Bot excels in deep reading assistance, accurately capturing the details and implicit meanings of the text. Tencent Hunyuan provides support for in-depth analysis of textual content. In addition, iFLYTEK Spark can provide necessary background knowledge for teachers and students to enhance their understanding of reading materials. These tools can also recommend suitable thematic reading materials based on students’ reading level and needs, thereby promoting continuous improvement in students’ reading abilities.

**Aspect of writing.** AI tools in writing can help students reduce the difficulty of writing, improve output quality, and increase students’ interest and confidence in writing. However, compared to ERNIE Bot, Tencent Hunyuan, and iFlytek Spark, Zhipu can automatically present grammar errors in English; meanwhile its results are also relatively more accurate.

**Aspect of translation.** In terms of translation, generative AI technology has been widely used to generate text in fluent target language, especially when dealing with common sentences and expressions. Compared to traditional translation software, generative AI models like ChatGPT do exceptionally well in overall translation

quality and performance, especially for high-resource language pairs (Peng et al., 2023; Wu, Zhao, & Zong, 2023), demonstrating impressive lexical and grammatical accuracy (Wang & Xie, 2023). Each AI tool can also identify grammar errors, inappropriate word usage, and provide multiple translation strategies and styles to meet the translation needs of different scenarios. Each AI tool has its own advantages in different fields. For example, ChatGPT is more accurate in grammar and vocabulary when the target language is English. Tencent Hunyuan and iFlytek Spark provide corresponding background knowledge for translators to refer to when translating texts with Chinese characteristics to help improve accuracy.

### **The Specific Application of Generative AI Tools in College English**

In the teaching of the course “College English Reading, Writing, and Translation”, AI tools such as ERNIE Bot, Zhipu, Tencent Hunyuan, and iFLYTEK Spark can play important roles in the pre-class, in-class, and after-class stages.

**Pre-class stage.** Teachers can take use of various AI tools to integrate teaching resources and prepare pre-reading materials. For example, ERNIE Bot can help teachers generate reading materials, writing topics, or translation exercises related to the curriculum content. These materials can be customized according to the students’ level and interests. Zhipu is conducive to organizing the key points of the curriculum and generating clear knowledge maps, so that students can have a rough understanding of the course content before class. iFLYTEK Spark can quickly create English courseware, including ppt slides and lesson plans. All of these could make teachers save their preparation time and improve efficiency while ensuring the relevance and diversity of teaching content.

**In-class stage.** Various AI tools can enhance teaching interaction and provide real-time feedback, while also cultivating students’ critical thinking skills and preventing the misuse or overuse of AI tools. For example, when teaching reading, teachers can ask students to analyze the same article from both positive and negative perspectives or from different angles by using different AI tools. In this way, students’ critical thinking could be cultivated. When teaching writing, they can use different AI tools to instantly score students’ compositions and then guide students to discuss the rationality of the scores. In the course of translation, the same original sentence can also be translated into different versions when using different AI tools, and then teachers can guide students to correctly evaluate the advantages and disadvantages of various translations. In addition, teachers can use various AI tools to create interactive learning environments, such as online group discussions, real-time Q&A, etc., to increase students’ engagement in these activities.

**After-class stage.** Teachers can use various AI tools to recommend suitable English articles based on students’ reading history and interests. Also, AI tools can be used to assign writing and translation exercises, and the AI scoring system provides instant feedback to help them improve their writing and translation skills. At the same time, in order to prevent students from abusing AI technology, and make students establish academic integrity and avoid academic misconduct, teachers require students to submit complete records of reading, writing, and translation learning process that interact with AI. Teachers will incorporate these records into the formative evaluation scope to enhance their guidance role for students.

### **Risks and Challenges of Using Generative AI Tools in Teaching**

The official website of Open AI believes that GPT-4 has at least three limitations: “social biases”, “hallucinations”, and “adversarial prompts” (Du, 2023). In the field of medical practice, GPT has limitations such

as authenticity issues and fact-checking (Lee, Bubeck, & Petro, 2023); in the field of literature, it lacks originality and a sense of experience (Yan, 2023); in the field of translation, it has gender bias by translating neutral vocabulary into specific gendered vocabulary (Eleni, 2023). Therefore, although the application of generative AI tools in the reading, writing, and translation parts of college English has shown great potential, it also comes with a series of risks and challenges that may affect teaching effect and academic integrity.

### **The Spread of Error Information**

Although generative AI tools have the ability to quickly generate and process information, they may also disseminate inaccurate or erroneous information. These tools typically depend on a large amount of data for learning, but biases or incompleteness in the data itself can lead to misleading AI outputs. If students lack of sufficient discernment ability, they may take these erroneous information as reliable sources of knowledge, which can impact their learning outcomes and the accuracy of their academic research. Thus, teachers need to cultivate students' information discernment ability and appropriately verify and guide the output of AI tools in teaching.

### **Increasing Dependence of Students on AI Tools**

With the popularization of AI tools, students may rely too much on these technologies to complete assignments and solve problems, which could weaken their ability for independent learning and critical thinking. Students who rely on ready-made answers for a long time may gradually lose their ability to think independently and solve problems, which conflicts with the goal of cultivating students' innovative thinking and independence. To avoid this situation, teachers need to design activities that can promote students' active learning and critical thinking, and guide students to use AI tools reasonably.

### **Academic Integrity Issues**

The convenience of generative AI tools also brings challenges in academic integrity. Students may apply these tools to generate content without proper citation or paraphrasing, resulting in plagiarism and academic dishonesty. This behavior not only violates the principles of academic integrity, but also may harm the development of the academic community. Educational institutions need to strengthen education on academic integrity, clarify the standards for using AI tools, and utilize technological means to detect and prevent academic misconduct. The misuse of AI tools may also undermine the fairness of education. For example, if someone improperly uses AI tools during exams or assignments, it will be unfair for students who are studying honestly. Moreover, the misuse of AI tools may also affect the assessment of students' real abilities. To prevent abuse of them, educational institutions need to establish clear policies, monitor the use of AI tools, and take appropriate measures during the evaluation process to ensure fairness.

### **The Transformation of the Teacher's Role**

Although generative AI tools can provide personalized learning experiences based on students' learning habits and abilities, it is challenging to achieve such personalization while meeting the requirements of the syllabus and adapting to the specific needs of different students. Educators need to design flexible learning paths to accommodate the individualized needs of each student while ensuring comprehensive and in-depth coverage of instructional content. The introduction of AI tools requires teachers to shift their role from traditional knowledge providers to learning guiders and facilitators. This requires teachers to update their teaching philosophy and enhance their understanding and application abilities of technology. Teachers need to master how

to effectively integrate AI tools into teaching, while guiding students to use these tools correctly to promote their comprehensive development.

It can be seen that the application of generative AI tools in teaching is a double-edged sword, bringing both innovation and convenience, as well as risks and challenges. Educators and policymakers need to work together to establish corresponding guiding principles and regulatory measures to ensure the effective, safe, and ethical use of AI tools. By cultivating students' critical thinking and academic integrity, as well as teachers' professional development, it can maximize the potential of AI tools while mitigating their potential risks, and promote the healthy development of education.

### Conclusion

This study thoroughly explores the application of generative AI tools in the reading, writing, and translation parts of college English, and evaluates their feasibility and effectiveness in the teaching process. By comparing the advantages and disadvantages of different AI tools, this study proposes a series of educational reform measures to improve students' learning outcomes and teachers' teaching efficiency through innovative teaching methods. However, the application of generative AI tools is not without risks. Challenges such as the spread of misinformation, students' over-reliance on AI, academic misconduct, risks of technological misuse, challenges in personalized education, shifts in the role of teachers, as well as ethical and legal concerns are all practical hurdles that must be addressed. In light of these challenges, educators, policymakers, and technology developers should work together to formulate comprehensive strategies that maximize the benefits of AI tools while mitigating their potential risks.

In summary, the generative AI tools provide new opportunities for the teaching reform of college English, specifically in the reading, writing, and translation parts. By making reasonable use of these tools and adopting effective strategies to address challenges, educators can drive the development of educational models towards a more personalized, efficient, and innovative direction. A deeper integration of AI technology and educational practice is expected to be achieved in the future, which would promote the development of talents with innovative abilities and a global perspective.

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