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Expanding College English Textbook Content with the Help of AI Tools

Jingquan Huang*

Guangzhou College of Commerce, Guangzhou 511363, Guangdong, China

**Author to whom correspondence should be addressed.*

Abstract: With the rapid development of artificial intelligence (AI) technology worldwide, its revolutionary impact on the field of education is becoming increasingly prominent. College English, as a public basic course in higher education, aims to develop students' language application ability, cross-cultural communication ability and self-study ability. This paper takes specific unit themes from actual college English textbooks as examples and elaborates in detail how artificial intelligence tools are used in the four core teaching modules of listening, speaking, reading and writing to expand the content of the textbooks. The article emphasizes that teachers should take responsibility for ensuring the authenticity and accuracy of AI-generated content, strive to provide practical AI-assisted teaching strategies for college English teachers, maximize the effectiveness of teaching materials, and ultimately enhance students' comprehensive English application ability.

Keywords: College English teaching; Artificial intelligence technology; Textbooks

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1. Introduction

With the rapid development of artificial intelligence (AI) technology worldwide, its revolutionary impact on the field of education is gradually emerging. From the generation of teaching resources to the innovation of teaching models, AI technology is constantly reshaping every aspect of teaching. College English, as a public basic course in higher education, shoulders the important mission of cultivating students' language application ability, cross-cultural communication ability and self-study ability. The richness, timeliness and interactivity of textbooks, which are the core carriers of curriculum implementation, are directly related to teaching quality and learning outcomes.

This article will closely combine the actual teaching materials used in college English classrooms, take specific unit themes as cases, and start from the four core teaching modules of listening, speaking, reading, and writing to elaborate in detail how to use artificial intelligence tools to expand the content of teaching materials. Each module is based on the existing themes of the textbook and designs practical AI application plans, analyzing

their specific roles in assisting teachers' teaching and promoting students' learning. At the same time, the article emphasizes the teacher's responsibility for controlling the authenticity and accuracy of the content during the application of artificial intelligence. It aims to provide practical AI-assisted teaching strategies for college English teachers to maximize the effectiveness of teaching materials and ultimately improve students' comprehensive English application ability.

2. How to use AI tools to expand college English listening content

Listening is an essential part of college English teaching and a key channel for students to input language. However, the listening materials in traditional college English textbooks often have problems such as limited quantity, single scenarios, and outdated content, which are difficult to meet the diverse listening practice needs of students and cannot fully cover the rich content related to the textbook topics. Artificial intelligence tools, with their efficient audio generation and question design capabilities, can quickly build personalized listening resource libraries around textbook themes, effectively expand listening teaching content, and enhance students' listening practice effectiveness and learning interest [1].

Take the unit topic "A matter of taste" in a college English textbook as an example, which focuses on food and dietary culture. Textbooks usually include listening materials about food preferences, table manners, or specific food introductions, but the content is often brief and the countries and cultural scenarios covered are very limited. At this point, teachers can expand the listening content in a targeted manner around the topic with the help of artificial intelligence tools. In practice, teachers should first clarify the core objective of the listening material: first, to supplement the food cultures of different countries that are not covered in the textbook and enrich students' cross-cultural cognition; second is to design listening questions that match the knowledge points in the textbook to enhance students' ability to capture and understand key information. Under this premise, teachers can input detailed generation instructions to the AI tool, such as: "Generate a short English passage of about 400 words around the theme of 'special foods of different countries.' The content should cover the origin, ingredient characteristics and cultural significance of four foods: Japanese sushi, Mexican tacos, Thai tom yum goong soup and Italian pizza. The language difficulty should be at CET-4 level, and obscure words should be avoided; Then design five multiple-choice questions based on the content of the article, each with four options A, B, C, and D. The questions should cover the core information of the article, such as the origin of food, main ingredients, cultural symbols, etc., along with detailed explanations of the answers."

After the artificial intelligence tool generates the listening text and questions, the teacher needs to conduct a strict review of the content, which is a key step to ensure the validity and accuracy of the listening materials. After the review is passed, the teacher can use the text-to-speech function of the AI tool to select the type of speech (such as American English or British English) that fits the pronunciation habits of native English speakers and the speaking speed (it is recommended to initially set the normal speaking speed and then adjust it to slow or fast according to the student's level) to convert the text into an audio file.

This way of expanding the listening content with the help of AI tools has significant teaching advantages: on the one hand, the listening materials are closely related to the theme of the textbook, ensuring the coherence and relevance of the teaching content and avoiding the disconnection between the extended resources and the textbook; On the other hand, rich cultural scenarios and diverse training forms can effectively stimulate students' interest in learning and increase their enthusiasm for actively participating in listening practice. At the same time, the generated audio and text materials can be distributed to students as after-class review resources to facilitate

their self-practice, further extend the learning time and enhance the effect of listening practice [2,3].

3. How to use AI Tools to develop students' ability to speak English boldly

Oral expression ability is an important indicator of students' comprehensive English application level and one of the difficulties in college English teaching. In traditional college English classes, oral practice is mainly based on imitation of textbook dialogues and group discussions, with problems such as limited practice opportunities, single scenarios, and lagging feedback. Artificial intelligence tools can effectively circumvent these problems by providing interactive practice scenarios for students and helping them overcome the difficulty of not speaking English.

Based on the unit topic in the textbook, "Is university gradually becoming a thing of the past?" Are universities slowly becoming a thing of the past? For example, this topic, which focuses on trends and values in higher education, has a strong critical thinking quality and is suitable for oral debate activities. Textbooks usually provide relevant reading materials or dialogue examples to guide students to think about the role of the university, but lack sufficient oral practice scenarios for students to express their views in depth. At this point, teachers can use artificial intelligence tools to design oral debate activities around the topic to create opportunities for students to practice speaking [3].

The implementation process can be divided into three stages: The first stage is the preparation stage. Teachers assign tasks to students 1–2 weeks in advance, clearly stating the topic of the debate as "Is university outdated?" (In line with the textbook theme), and let students choose either the affirmative side (thinking that university is outdated) or the negative side (thinking that university still has significant value). At the same time, the teacher guides students to sort out the debate ideas in combination with the reading materials and knowledge points in the textbook [4–6].

The second stage is the debate practice stage. Within a limited time frame (such as 30 minutes), students engage in one-on-one oral debates with the AI. The AI tool can act as a "debating opponent," presenting counterarguments based on the student's point of view. For example, when the affirmative student suggests that "online courses can replace university classrooms," the AI can retort: "Online courses lack the interactive learning environment provided by universities and the opportunity to interact face-to-face with professors, which are crucial for deepening knowledge understanding and solving complex problems." Meanwhile, AI can capture students' expressions in real time, make preliminary assessments of language fluency, vocabulary accuracy, and logical coherence, and give appropriate hints during the debate. For example, when a student stumbles or uses inappropriate words, the AI can gently remind: "You can use the phrase 'play an irreplaceable role in' to more accurately express the importance of college." The debate process can be written down by the AI for later use. It should be emphasized that the core objective of the debate is not to win or lose, but to enable students to boldly express their opinions in English and refute each other through interaction with AI, and to exercise their oral organization skills and on-the-spot adaptability. This approach is more effective in stimulating students' critical thinking and desire to express themselves than traditional daily conversation practice.

The third stage is the summary and feedback stage. After the debate, the teacher organizes students to give oral presentations in class. Each student is required to briefly present the main points of the debate with the AI, the core counterarguments raised by the AI, and their gains and shortcomings during the debate. For example, one student might share: "In the debate, the AI pointed out that my argument that 'university is outdated' lacked data support. This made me realize that more concrete cases are needed when expressing opinions in English."

The teacher then provided comments in combination with the textbook knowledge points and the students' presentation content, focusing on analyzing the students' strengths in oral expression (such as clear logic, rich vocabulary) and areas for improvement (such as grammatical errors, pronunciation problems), and reemphasizing the core points related to the topic in the textbook to help students deeply integrate the debate content with the textbook knowledge. In addition, students can review their own expressions by comparing the written records of the debate process and further optimizing their language use.

Through this AI-assisted oral debate activity, students can not only think deeply and express themselves around the subject of the textbook, but also overcome the fear of speaking English in a stress-free "human-computer interaction" environment and gradually build confidence in speaking English. Meanwhile, the real-time feedback and personalized guidance provided by AI can help students identify and improve their expression problems in a timely manner, effectively enhance the accuracy and fluency of their oral expression, and make up for the lagging feedback and limited practice opportunities in traditional classroom oral practice [7–9].

4. How to use AI Tools to expand textbook reading content

Reading is an important way for students to acquire language knowledge, develop reading comprehension skills and critical thinking. Although the reading articles in college English textbooks are carefully selected, due to space limitations, they often fail to fully expand on the topic and provide sufficient interactive discussion space, resulting in students' understanding of the articles remaining superficial and lacking in-depth thinking. Artificial intelligence tools can generate in-depth and personalized extended content and interactive questions based on the textbook reading text, guide students to conduct group discussions and in-depth analyses, effectively expand the breadth and depth of reading teaching, and help students understand the textbook topic more comprehensively [4].

Take the theme of the reading article "Being a learner for life" in the textbook as an example. Teachers can use AI tools to generate open-ended discussion questions around this reading article in the textbook, guiding students to think deeply and interact in groups.

The specific steps are as follows: First, the teacher inputs the full text of the reading article "Lifelong Learning" in the textbook into the AI tool before class, and clearly states to the AI the requirements for generating the question: First, the question should be closely related to the content of the article and not deviate from the textbook theme; Second, the questions should be open-ended and thought-provoking, capable of stimulating students' desire to discuss, rather than simply factual questions; Third, the questions should cover different dimensions and expand students' thinking comprehensively. Based on these requirements, AI tools can generate a series of high-quality discussion questions, such as:

(1) What does "lifelong learning" mean to you personally? How does it differ from learning only at school?

(2) What challenges do you think people might face in their efforts to become lifelong learners? How do you overcome these challenges?

(3) How do you think lifelong learning can help with our future career development or personal growth?

(4) With a vast amount of information available online, how do we, as lifelong learners, choose what to learn? What criteria should be adopted?

After generating the questions, teachers need to screen and adjust them to ensure that the difficulty of the questions matches the students' English proficiency and cognitive ability, while avoiding repetition or disconnection from the textbook content.

In the classroom, teachers can divide students into groups of 4–5 people, and each group selects an open-

ended question for discussion. Before the discussion, the teacher guides students to read the reading passage in the textbook again carefully and to look for evidence from the passage to support their point of view. For example, when discussing "The difference between lifelong learning and school learning," ask students to identify from the article the characteristics, such as "lifelong learning is autonomous and practical," and supplement them with their own experiences. During the discussion, the teacher walks around the groups and gives guidance, encourages students to express their views boldly in English, corrects language errors promptly, and leads students to think deeply. For example, when a group is discussing "How to choose learning content", the teacher may ask: "Can you give an example from the article to support your criteria for choosing learning content?" To ensure that the discussion always revolves around the subject of the textbook and avoids going off track.

After the discussion, each group selects a group leader to give an oral presentation summarizing the group's discussion results. For example, one group might report: "We think the main difference between lifelong learning and school learning is that lifelong learning is autonomous. As the article states, lifelong learners can choose what they learn based on their own interests, while school learning is more structured learning arranged by teachers." After the group leader reports, the teacher organizes the whole class to supplement and comment, integrate the viewpoints of each group, and at the same time return to the textbook article, emphasizing the core viewpoints related to the discussed question in the article to help students build a complete knowledge system.

This approach of generating discussion questions and expanding reading content with the help of AI tools has multiple advantages: on the one hand, the questions are closely integrated with the textbook reading article, ensuring the relevance of the expanded content to the textbook and helping students deepen their understanding of the main idea of the article; On the other hand, the form of group discussions and oral presentations can stimulate students' awareness of active thinking and cooperative learning, and develop their critical thinking and English expression skills [10,11].

5. How to use AI tools to assist students in writing practice

Writing is one of the most comprehensive and challenging modules in college English teaching, and it is also an important manifestation of students' language output. In traditional writing teaching, after students complete the writing tasks assigned in the textbook, they usually only receive batch feedback from the teacher, which has problems such as long feedback cycles, insufficient targeting, and difficulty in covering individual problems of each student (such as grammatical errors, single sentence patterns, logical confusion, etc.). Artificial intelligence tools, with their precise text analysis and real-time feedback capabilities, can provide personalized writing guidance for students, effectively helping them improve writing problems and expand writing ideas, and become an important supplement to textbook writing exercises [12,13].

Take the unit theme "A journey to the unknown" in the textbook as an example. This theme unfolds around "The unknown journey". Textbooks often assign related short essay writing tasks, such as "Talk about your views on travel and explain the meaning of travel." In the practice of writing instruction, teachers can use artificial intelligence tools to assist students in completing writing exercises in three stages, effectively expanding the writing tasks in the textbook. After students complete the essay as required, they can upload the text to the AI tool to obtain time-limited writing feedback. The AI tool can provide students with precise guidance in four aspects: grammar, sentence patterns, vocabulary, and logic. After students revise their essays based on the feedback from AI, they submit both the first draft and the revised version to the teacher, who then gives the final comments [14].

Using AI tools to assist writing practice can effectively make up for the shortcomings of traditional writing teaching: on the one hand, the real-time feedback and personalized guidance provided by AI enable students to promptly identify and correct their writing problems, especially basic errors in grammar and sentence patterns, and help students improve language accuracy through repeated revisions; On the other hand, the thought suggestions and vocabulary expansion provided by AI can help students expand their writing thinking, flexibly apply the knowledge points in the textbook to writing, and avoid writing content that is empty or disconnected from the textbook. At the same time, AI feedback reduces the workload of teachers in grading homework, allowing teachers to have more time to focus on students' advanced writing skills (such as logical thinking and viewpoint expression), achieving a collaborative teaching model of "AI-assisted basic error correction + teacher-guided in-depth improvement", significantly enhancing the effectiveness of writing teaching [15].

6. Conclusion

In the context of the deep integration of information and intelligence, artificial intelligence tools have become a key driving force for the reform of college English teaching. It centers on the themes of the teaching materials and, through its application in the four core modules of listening, speaking, reading, and writing, effectively expands the content of the teaching materials, optimizes the teaching process, and addresses the limitations of traditional teaching materials. Although the future development of artificial intelligence may bring immersive learning scenarios or personalized learning plans, textbooks remain at the core of college English teaching, with artificial intelligence serving only as an auxiliary tool. Teachers should focus on student development, organically integrate AI with teaching materials and teaching objectives, and explore efficient teaching models to improve students' English proficiency and cultivate their lifelong learning ability and cross-cultural communication skills.

Disclosure statement

The author declares no conflict of interest.

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