

Application of Artificial Intelligence in College English Listening Teaching

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ABSTRACT

Artificial intelligence is playing an increasingly important role in college English teaching. Guided by Krashen's Input Hypothesis in second language acquisition, this study uses the large language model *Doubao* to adapt a news text from China Daily into listening material for the College English Test Band 4 (CET-4). The research explores audio production and vocabulary list creation for the listening material, clearly demonstrating the application of artificial intelligence in college English news listening teaching. This approach effectively addresses problems in traditional teaching such as outdated news content and difficulty in obtaining appropriately leveled materials, providing an effective path for improving teaching efficiency and quality.

Keywords: large language model; college English news listening; listening material adaptation; audio production; vocabulary list creation.

1. INTRODUCTION

Amid the global wave of digitalization, large language models (LLMs) are playing a pivotal role in college English teaching. College English instruction primarily encompasses the teaching of five core English skills: listening, speaking, reading, writing, and translation. Scholars around the globe have actively explored the role of LLMs in teaching these five skills. Zhang Yanlu (2019) proposed a corpus-based AI-aided college English teaching model; Pang et al. (2025a) noted that LLMs facilitate personalized listening instruction. Dizon & Tang (2020) argued that students' oral English communication with LLMs can provide them with a sense of accomplishment and engagement similar to that of real-life communication. Chen et al. (2022) suggested that the use of AI tools in oral communication helps alleviate students' anxiety and improve their learning performance. Pang et al. (2025b) discussed how human-machine interaction can enhance students' oral narration abilities. Yu Hui (2024) developed a model for LLM-assisted discourse analysis, while Kong Lei (2024), based on human-machine interaction, systematically analyzed the effectiveness of LLMs in parsing the structure of long and complex sentences, semantic relationships, and pragmatic meanings in textbook discourses. In terms of writing, LLMs have shown significant potential as

"evaluators" (Jeon & Lee, 2023). Their ability to detect surface-level errors in writing has been verified (Seo, 2024), and there is no significant difference between their scoring results and human scoring—this enables them to effectively assist teachers in homework review and grading (Li et al., 2024). As early as 2018, Wang Jinquan et al. argued that LLMs can not only check the grammatical accuracy and naturalness of wording in translations but also compare translations with the original text to verify whether the translation accurately reflects the original meaning and even evaluate the effectiveness of pragmatic equivalence between the two.

Scholars at home and abroad have achieved important results in research on the application of LLMs in enhancing the five English skills. However, a closer examination reveals that current studies on the application of LLMs in listening improvement mostly focus on two directions: the implementation of personalized teaching and the stimulation of students' learning interest. Specialized research targeting the specific field of CET-4 news listening remains relatively scarce. As a key criterion for measuring college students' English proficiency, the news listening section of the CET-4 has long suffered from the issue of outdated content, which urgently needs to be

addressed. Nevertheless, existing studies are particularly insufficient in conducting in-depth exploration on the in-depth integration of LLMs with the update and iteration of CET-4 news listening materials, difficulty gradient adaptation, and scientific design of question types. This research gap needs to be filled through more empirical studies and teaching practices to effectively improve the quality of CET-4 news listening teaching and help students better meet the requirements of examinations and practical language application.

Guided by Krashen's Input Hypothesis in second language acquisition, this study selects a sports topic that garners high attention among college students—the news report titled 'International Universities Rowing Open kicks off in East China' (published in China Daily on September 13, 2025), which covers the 2025 International Universities Rowing Open held in Nanjing, Jiangsu Province. By designing specific prompts on the *Doubao* platform, the study adapts this news text into listening practice material suitable for CET-4, with a difficulty level slightly higher than the conventional requirements of CET-4 listening. The research examines the application effectiveness of LLMs in three dimensions: listening material adaptation, supporting audio production, and specialized vocabulary list creation, culminating in a replicable model for applying LLMs in teaching listening and offers innovative approaches to address traditional issues in the teaching of listening.

2. ADAPTATION OF READING MATERIALS INTO LISTENING MATERIALS

2.1 Theory

Krashen (1982, 1985) proposed five hypotheses in the field of second language acquisition, among which the Input Hypothesis is the core. The "i+1" input theory forms the central concept of this hypothesis—where "i" represents the learner's current language proficiency, and "i+1" refers to language input that is slightly above the learner's existing level. Only when learners are exposed to language input at the "i+1" level can their language proficiency be effectively improved.

Krashen (1985) also pointed out that ideal second language input must meet three key characteristics:

Comprehensibility—understandable language input is a necessary prerequisite for second language acquisition to occur;

Sufficiency—adequate input volume provides the foundation for learners to broadly acquire linguistic knowledge and improve language abilities;

Interestingness—engaging language materials can

effectively stimulate learning interest, reduce negative psychological burdens during the learning process, enhance learning autonomy, and ensure high-quality language learning.

2.2 Practice

In CET-4 news listening teaching practice, using LLMs to convert reading materials into listening materials offers significant advantages. In traditional teaching, teachers must consider multiple factors when selecting and preparing listening materials, such as topic suitability and reasonable difficulty progression. These constraints often result in a narrow range of material choices and insufficient personalization. The introduction of LLMs effectively overcomes these limitations and provides dedicated support for efficient listening instruction.

The advantages are mainly reflected in three aspects: (1) Rich resources : massive reading materials provide abundant register resources and topic options for adaptation, helping students encounter diverse language styles, accumulate extensive target vocabulary, and broaden their language input dimensions; (2) Personalization: LLMs can precisely customize listening materials and flexibly adjust their difficulty based on students' actual language proficiency. This not only adapts to the needs of personalized teaching but also balances the comprehensibility and interest of listening materials, meeting personalized teaching needs and implementing the principle of "teaching students in accordance with their aptitude"; (3) Efficiency: the rapid adaptation capability of LLMs significantly reduces teachers' material preparation time and improves teaching efficiency.

Sports-related news is often of high-interest to college students. In the following section, the news report titled "International Universities Rowing Open kicks off in East China" (published in China Daily on September 13, 2025), which covers the 2025 International Universities Rowing Open held in Nanjing, Jiangsu Province, will be used as the original text. Using the *Doubao* platform with specifically designed prompts, this text will be adapted into CET-4 level listening material. The specific prompts and adaptation results are as follows.

(1) Prompt to AI

Please modify the following reading material into a CET-4-level listening material that is slightly more difficult than the CET-4. Here is the material:

NANJING -- Amidst waves of cheers and shouts, the 2025 Nanjing International Universities Rowing Open kicked off

Saturday in Nanjing, East China's Jiangsu province, attracting over 300 rowers from 30 universities worldwide.

This year's event boasts an expanded lineup, featuring foreign rowing teams from institutions such as Yale Graduate School, Oxford University and Cambridge University, alongside Chinese teams from top universities including Tsinghua University, Nanjing University and Xi'an Jiaotong University. Additionally, emerging Asian rowing forces from Korea University and Universiti Tun Hussein Onn Malaysia have also joined the contest.

After two rounds of men's 1,000m sprint and a men's 3,000m chase, four rowing teams from Tongji World Union Rowing Club, Shanghai Tech University, Nanjing University and Nanjing Normal University excelled from the Chinese domestic group and advanced to the second day's competition.

On Sunday, rowing teams from both domestic and international universities will take part in different contests like 1,000m sprint heats and indoor rowing machine relays. For the first time ever, the competition will feature a standalone women's rowing division. Moreover, the popular bumps races will also be retained as an exhibition match.

Fang Hongqing, a rower from Southeast University in Nanjing, noted that rowing boasts a longer development history overseas, with universities like Oxford University and Cambridge University having long been hosting their own rowing competitions. "I believe this event can promote exchanges among rowers from different countries and boost the development of rowing in China," he said.

(2) Results from AI

Section A: News Report

Directions: In this section, you will hear a news report. At the end of the report, you will hear five questions. Both the report and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D).

Now, listen to the news report.

NANJING -- Cheers and shouts filled the air as the 2025 Nanjing International Universities Rowing Open started on Saturday in Nanjing, a city in East China's Jiangsu province. The event drew more than 300 rowers from 30 universities around the world.

Compared to previous years, this year's open has a larger group of participants. Foreign teams from well-known institutions are taking part, such as Yale Graduate School,

Oxford University, and Cambridge University. On the Chinese side, top universities like Tsinghua University, Nanjing University, and Xi'an Jiaotong University have also sent their rowing teams. Besides, some rising Asian rowing teams from Korea University and Universiti Tun Hussein Onn Malaysia have joined the competition too.

On the first day, there were two rounds of the men's 1,000-meter sprint and one man's 3,000-meter chase. After these races, four Chinese teams stood out from the domestic group and moved on to the second day's competition. These teams are from Tongji World Union Rowing Club, Shanghai Tech University, Nanjing University, and Nanjing Normal University.

Sunday will see more races. Both domestic and international university teams will compete in events like the 1,000-meter sprint heats and indoor rowing machine relays. A special change this year is the first-ever standalone women's rowing division. Also, the popular bumps races will stay as an exhibition match for spectators to enjoy.

Fang Hongqing, a rower from Southeast University in Nanjing, shared his thoughts on the event. He said that rowing has a longer history of development overseas. For example, universities like Oxford and Cambridge have been holding their own rowing competitions for a long time. "I think this open can help rowers from different countries communicate with each other. It will also push the development of rowing in China," Fang added.

Now, listen to the questions.

Question 1: When and where did the 2025 Nanjing International Universities Rowing Open begin?

- A) On Sunday in Nanjing, Jiangsu province.
- B) On Saturday in Nanjing, Jiangsu province.
- C) On Saturday in Shanghai, East China.
- D) On Sunday in Suzhou, Jiangsu province.

Question 2: Which foreign university is NOT mentioned as a participant in the event?

- A) Yale Graduate School.
- B) Harvard University.
- C) Oxford University.
- D) Cambridge University.

Question 3: How many Chinese teams advanced to the

second day's competition after the first day's races?

- A) Three.
- B) Four.
- C) Five.
- D) Six.

Question 4: What is special about this year's rowing open compared to previous ones?

- A) It added a men's 5,000-meter chase.
- B) It included an indoor rowing machine race for the first time.
- C) It has a standalone women's rowing division for the first time.
- D) It canceled the bumps races as an exhibition match.

Question 5: What did Fang Hongqing think of the Nanjing International Universities Rowing Open?

- A) It will make rowing less popular in China.
- B) It can promote exchanges between rowers from different countries.
- C) It is not as good as the rowing competitions held by Oxford University.
- D) It will only attract rowers from Asian countries.

Answer Key: BBBCB

(3) Authors' Analysis

The listening questions designed by the large language model for the adapted material generally met the requirements specified in the prompts, with the generated questions mimicking the format of the College English Test Band 4 (CET-4), primarily in the form of multiple-choice questions. The difficulty of the generated material is slightly higher than that of CET-4 news listening, particularly in terms of vocabulary and sentence patterns.

Vocabulary Level:

Dense specialized sports terminology — terms such as “rowing” (a sport rarely included in CET-4), “sprint” (requires contextual understanding of its racing meaning), “chase” (specialized sports events noun usage), “bumps races” (specialized term without basic reference), “relays” (often appearing in full form in CET-4). Additionally, proper nouns like “Universiti Tun Hussein Onn Malaysia” (non-top-tier institution with complex spelling) and “Tongji Worldunion Rowing Club” (compound organization name with high information density) present significant challenges for memorization and comprehension.

Abundant abstract and formal words, words such as “standalone” (not in CET-4), “spectators” (event-specific term, different from the core CET-4 word audience), “division” (requires associating with sports events context), “rising” (in abstract phrase “rising forces,” more complex than CET-4 “new teams”), increase the threshold for immediate listening comprehension.

Sentence Pattern Level:

Numerous multi-dimensional modified long sentences — using structures like “Compared to previous years” for comparison, “from well-known institutions” as attributives, “such as” for listing multiple institutions, personification like “Sunday will see” and “both...and...” connecting complex subjects with multiple event examples. The information density and sentence length exceed the simple subject-verb-object structures typically found in CET-4.

Deeply embedded viewpoints — opinion structures followed “main viewpoint + illustrative examples + supplementary viewpoint”, requiring listeners to connect logical chains rather than the simple direct quotes found in CET-4 news listening, making information easier to miss.

Implicit logical connections — using words like “also” for coordination while implying contrasts between “special change” and “stay” (addition vs. retention), requiring semantic inference rather than relying on explicit logical markers common in CET-4, thus demanding higher listening comprehension skills.

Furthermore, by modifying the prompts, teachers can adjust the difficulty level of questions, as well as their quantity, type, and assessment methods. For questions designed by the large language model, teachers can adopt an “AI post-editing” approach to further refine them to meet listening teaching requirements.

3. LISTENING AUDIO PRODUCTION

Listening practice requires suitable audio materials, and teachers often want to set parameters such as speaking speed, male/female voices, and different English accents according to students' language levels. After finalizing the listening script, models like GPT can be used to convert the text into MP3 files for download. With ongoing model iterations and the development of text-to-speech (TTS) technology, various online tools such as *Hailuo AI*, *NaturalReader*, *TTSMaker*, and *TTSMMP3* can convert text into audio with adjustable speed and accent options.

Taking *Hailuo AI's* TTS interface as an example, audio production no longer requires specialized prompts. Simply paste the script into the input box, select parameters like voice type, speed, and tone in the "debug console", click "generate audio", and then download the resulting MP3 file.

4. LISTENING VOCABULARY LIST CREATION

For unfamiliar listening topics, providing students with a preview vocabulary list containing specialized terms and high-frequency phrases from the material helps improve expression fluency and enhances interest and confidence. These lists also facilitate review after classes and increase familiarity with specific topics or registers. Beyond basic vocabulary with definitions, teachers can request that the model provide common collocations and example sentences in news contexts to help students understand typical usage patterns.

In the following, the transcribed text of an English news report is taken as an example. Using *Doubao* as the operational platform, specific prompts are designed to generate common collocations of certain vocabulary in the news context as well as corresponding example sentences. The specific prompts and adapted results are as follows.

(1) Prompt to AI

You are an English news tutor, specializing in helping English learners. Your task is to create vocabulary lists from English news transcripts. For a given transcript, please follow these steps:

1. Identify and list uncommon words, along with highly frequent words and phrases that are typical in news reporting.
2. Provide the Chinese translation for each identified English term.
3. Clarify the grammatical usage of each term in English.
4. Upon request, give examples of how a target expression is used and list its typical collocations (words or phrases that frequently accompany the target expression).

NANJING -- Cheers and shouts filled the air as the 2025 Nanjing International Universities Rowing Open started on Saturday in Nanjing, a city in East China's Jiangsu province. The event drew more than 300 rowers from 30 universities around the world.

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(2) Results (abridged)

Vocabulary List from the Nanjing International Universities Rowing Open News Transcript. *Uncommon Words in the News*

Term	Chinese Translation	Grammatical Usage
rowing	赛艇运动（名词）	Uncountable noun（不可数名词）； refers to the sport of moving a boat with oars. Used in phrases like "rowing open"（赛艇公开赛）, "rowing team"（赛艇队）.
sprint	短距离竞速（名词）	Countable noun（可数名词）； refers to a short, fast race. Often used with distance units, e.g., "1,000-meter sprint"（1000米短距离竞速）.
chase	追逐赛（名词）	Countable noun（可数名词）； a race where competitors try to catch up with others. 搭配: "3,000-meter chase"（3000米追逐赛）.
heats	预赛（名词）	Plural noun（常用复数形式）； initial rounds of a competition to select finalists. 搭配: "sprint heats"（短距离竞速预赛）.
relay	接力赛（名词）	Countable noun（可数名词）； a race where team members take turns competing. 搭配: "indoor rowing machine relays"（室内赛艇机接力赛）.
division	组别； 赛区（名词）	Countable noun（可数名词）； a separate group or category in a competition. 搭配: "women's rowing division"（女子赛艇组别）.
bumps races	碰撞赛（名词短语）	Plural noun phrase（常用复数）； a type of rowing race where boats aim to bump the one ahead. 专有赛事术语，无单数形式.

spectator	观众（名词）	Countable noun: a person who watches an event. Plural form: spectators. 搭配: "attract spectators".
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High-Frequency News-Specific Words & Phrases

English Term	Chinese Translation	Grammatical Usage
kick off	开幕; 启动（动词短）	Phrasal verb（短语动词）; intransitive（不及物, 不接宾语）; used to describe the start of an event. 时态变化: kicks off（第三人称单数）, kicked off（过去式）.
participant	参与者（名词）	a person who takes part in an event. Plural form: participants. 搭配: "a group of participants"（一群参与者）.
stand out	脱颖而出; 表现突出（动词短语）	Phrasal verb (短语动词); intransitive（不及物）; describes someone/something that is better than others. 常与"from"连用, e.g., "stand out from the group"（从群体中脱颖而出）.
move on (to)	晋级（到.....）; 继续进行（动词短语）	Phrasal verb (短语动词); intransitive（后接介词"to"时可接宾语）; means to progress to the next stage. 搭配: "move on to the next round"（晋级到下一轮）.
first-ever	史无前例的; 首次的（形容词）	Attributive adjective（定语形容词, 仅用于名词前）; describes something that has never happened before. 搭配: "first-ever standalone division"（首个独立组别）.
standalone	独立的（形容词）	Attributive adjective (定语形容词, 常用在名词前); means operating or existing independently. 搭配: "standalone division"（独立组别）, "standalone event"（独立赛事）.
share one's thoughts (on)	分享（对.....的）看法（动词短语）	Fixed phrase（固定短语）; transitive（后接"on"引出谈论对象）; used to express someone's opinions. 搭配: "share one's thoughts on the event"（分享对赛事的看法）.

Example Sentences & Collocations

Example 1: "kick off"

Example Sentence: The 2024 Summer Olympics will kick off in Paris on July 26th.（2024年夏季奥运会将于7月26日在巴黎开幕。）

Typical Collocations: kick off (an event/competition/game)（开幕/启动一场赛事/比赛/活动）, kick off (a meeting/conference)（启动一场会议/研讨会）

Example 2: "stand out"

Example Sentence: Her excellent performance in the

qualifier made her stand out among all athletes.（她在预选赛中的出色表现让她在所有运动员中脱颖而出。）

Typical Collocations: stand out (from the crowd/group/competitors)（从人群/群体/竞争者中脱颖而出）, stand out (for one's skill/talent)（因技能/天赋而突出）

Example 3: "push the development of"

Example Sentence: This international cooperation project will push the development of renewable energy technology in the region.（这个国际合作项目将推动该地区可再生能源技术的发展。）

Typical Collocations: push the development of (technology/industry/sports/education) (推动技术/教育的发展), push the development of (local economy/social welfare) (推动地方经济/社会福利的发展)

Example 4: "exhibition match"

Example Sentence: After the final, the world champion will play an exhibition match with young players to motivate them. (决赛落幕之后,为了激励年轻选手,世界冠军将与他们展开一场表演赛。)

Typical Collocations: hold an exhibition match (举办表演赛), watch an exhibition match (观看表演赛), attend an exhibition match (参加表演赛)。

5. INTERPRETATION AND REFLECTION

This study selected the news article "International Universities Rowing Open kicks off in East China" as the original material and used *Doubao* with targeted prompts to adapt it into CET-4 level listening practice material, demonstrating the feasibility of converting reading materials into listening exercises using LLMs.

The theoretical foundation was Krashen's (1982, 1985) "i+1" input principle, which states that language input should generally be within the learner's comprehension while containing elements slightly above their current level. This allows learners to gradually improve their target language skills through continuous exposure and processing of such materials. Krashen (1985) also noted that low anxiety promotes second language acquisition, while high anxiety creates an emotional barrier that reduces effective input and hinders learning.

Based on this theory, the study focused on three aspects during material selection and adaptation: (1) Language style adaptation – converting written expressions into listening-friendly oral language to ensure smooth auditory comprehension; (2) Difficulty control – making the material slightly more challenging than typical CET-4 news listening to meet the "i+1" requirement; (3) Increasing engagement – selecting a high-interest sports topic to stimulate motivation and reduce anxiety.

This research provides a replicable model for applying LLMs in CET-4 news listening teaching and offers innovative approaches to address issues such as insufficient material adaptation and low student engagement, ultimately contributing to improved teaching quality and more effective second language acquisition.

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