

AI-Assisted Teaching in College English

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Abstract: The rapid development of artificial intelligence technology has become an important force in driving educational innovation. AI technology has transformed traditional teaching methods, including personalized learning pathways and intelligent assessment and feedback systems. For instance, according to Education Weekly, the average grades of students in schools using AI-assisted teaching are 15% higher than before. This is mainly because AI systems can adjust teaching content and difficulty in real-time based on students' learning habits and comprehension abilities, achieving the goal of personalized teaching. Additionally, the advantage of artificial intelligence technology in data analysis can help teachers gain a deeper understanding of students' learning progress and existing problems, and thus formulate more precise teaching strategies.

Keywords: College English; AI; Assisted Teaching

Introduction

With the application of AI technology in the field of education, traditional teaching models are gradually changing. Traditional teaching methods rely on teachers' lectures and students' participation in the classroom. AI-assisted teaching provides students with a more flexible and efficient learning experience through personalized learning paths and immediate feedback mechanisms. Additionally, applying AI technology to pronunciation correction has shown its unique advantages. Speech recognition technology allows students to receive immediate voice feedback without the guidance of a teacher. This instant feedback mechanism not only improves students' learning efficiency but also enhances their motivation to learn. Assisted teaching is igniting the flame of students' learning through technological means, making students more proactive in the learning process.

1. The Application of AI Technology in English Teaching

1.1 The Role of Speech Recognition Technology in Pronunciation Correction

With the rapid development of artificial intelligence technology, speech recognition technology is increasingly being applied to college English teaching, especially in pronunciation correction. It provides timely and personalized feedback to students, greatly enhancing their learning experience. For instance, speech recognition systems can analyze the waveform and spectral characteristics of students' pronunciation to accurately identify mistakes and subsequently offer targeted suggestions for improvement. This technology not only helps students correct the pronunciation of individual phonemes but also uses big data analysis models to recognize students' pronunciation patterns in specific contexts, thereby providing learners with more precise guidance. The application of speech recognition technology in pronunciation correction is a combination of technology and the art of teaching, which not only improves teaching efficiency but also stimulates students' interest in learning, opening a new chapter in future education.

1.2 The Application of NLP Technology in Writing and Reading Comprehension

The extensive application of Natural Language Processing (NLP) in the fields of English writing and reading is gradually transforming traditional teaching models. NLP technology can provide in-depth analysis of students' compositions and timely feedback. For example, using advanced algorithms, the system can deeply analyze errors in students' writing and offer suggestions for improvement, even emulating the writing styles of excellent authors to guide students. The application of this technology allows students to practice their weaknesses, thereby improving their writing skills.

NLP technology is also an essential component of reading comprehension. Based on intelligent analysis, it achieves an understanding of the content of the text and designs corresponding exercises for students according to their reading abilities. For example, through machine learning models, the system can analyze reading comprehension and recommend reading materials of moderate difficulty, helping students gradually improve their reading level. The application of this technology not only improves students' learning efficiency but also enhances their interest in learning and strengthens the autonomy of their studies.

At the same time, the application of NLP technology in writing and reading comprehension will also profoundly affect the role of teachers. Teachers can use these tools to track students' learning progress and conduct targeted analysis of common issues in writing and reading, adjusting their teaching strategies accordingly. NLP technology can stimulate students' enthusiasm for learning, improve teaching efficiency, and inspire students' interest in learning English.

2. Challenges and Opportunities in College English Teaching

2.1 Current Challenges Faced by College English Teaching

At present, college English teaching is facing numerous challenges, including the uneven English proficiency levels of students, limited teaching resources, and the limitations of traditional teaching methods. Surveys indicate that over 60% of college students find difficulties in learning English, particularly in speaking and listening. This necessitates teachers to design courses that are more personalized and flexible. At the same time, with the acceleration of globalization, the importance of English as an international language is self-evident. English learning requires students not only to master certain language knowledge but also to possess cross-cultural communication skills. However, traditional teaching methods often fail to meet these demands, leading to poor teaching outcomes. Therefore, it is required that college English teaching needs to innovate in order to better meet the educational requirements of students and the changes in their learning styles.

2.2 How AI Technology Brings New Opportunities to College English Teaching

The rapid advancement of artificial intelligence technology has brought about an unprecedented transformation in college English teaching. AI technology is capable of providing students with personalized learning experiences and optimizing teaching strategies through data analysis, significantly enhancing teaching efficiency. For example, by employing natural language processing technology, AI can analyze students' compositions and provide timely feedback, thereby improving their writing skills and alleviating the burden on teachers to grade assignments. Additionally, the application of AI technologies such as speech recognition in pronunciation correction allows for real-time monitoring of students' pronunciation and offers corrections, assisting students in improving their pronunciation even when a teacher is not present. Thus, the integration of AI technology in English teaching aims to elevate students' language proficiency and achieve the ultimate goal of education.

3. AI-Assisted Teaching Tools and Platforms

3.1 Introduction to Common AI English Teaching Software and Platforms

In today's rapidly developing field of artificial intelligence technology, AI English teaching software and platforms have become an indispensable part of college English teaching. For instance, platforms like Duolingo and Rosetta Stone utilize advanced algorithms and big data analysis to provide students with personalized learning experiences. These platforms collect data on students' learning processes, analyze their study habits and progress, and offer tailored learning solutions. Rosetta Stone, in particular, employs an immersive learning method that combines images with audio, allowing students to learn without the need for translation. Additionally, platforms such as Google Classroom integrate AI-assisted tools like automatic grading systems and speech recognition technology, which can greatly enhance teachers' grading processes and assess students' pronunciation. These tools not only reduce the workload for teachers but also provide timely feedback to students, enabling them to maintain continuity and interactivity in their learning experiences.

3.2 How to Choose the Right AI Teaching Tools

When selecting AI teaching tools that suit their needs, English teachers should first consider the tool's adaptability and functionality. Adaptability refers to the ability of the tool to integrate seamlessly with existing syllabuses and course objectives, while functionality refers to whether the tool can provide comprehensive language learning support for students, including pronunciation correction, writing guidance, reading comprehension, and the development of personalized learning paths. For instance, an effective artificial intelligence teaching platform needs to have advanced speech recognition technology that can analyze and provide feedback on students' speech in real-time. Additionally, teachers should consider whether the tool can collect and analyze students' learning data to assist teachers in making data-driven teaching decisions to optimize teaching strategies.

Additionally, the selection of AI teaching tools should also take into account aspects such as ease of use and human-computer interface design. An intuitive and user-friendly interface reduces the difficulty of student learning and enhances learning efficiency. For example, the tool should provide clear navigation and instant help to ensure that students can quickly master the use of the learning tool. At the same time, teachers should also evaluate whether the tool can support personalized learning, that is, whether it can tailor learning content and exercises according to students' proficiency levels and mastery. In data-driven teaching decisions, teachers should choose tools that can provide detailed learning reports and analytical models to assist teachers in understanding students' learning behaviors and outcomes, and thereby make more targeted adjustments to the classroom.

4. Conclusion

In summary, with the continuous advancement of artificial intelligence technology, the application of AI assistance in English teaching is undergoing an unprecedented transformation. The use of AI assistance in English teaching is becoming increasingly widespread, from the development of personalized learning paths to the establishment of real-time feedback and evaluation systems, all are applications of AI assistance in English teaching. AI will provide students with more accurate and effective learning experiences. For instance, AI can use big data analysis to track students' learning progress, identify their strengths and weaknesses, and then offer personalized learning resources and exercises based on this information. This data-driven approach to teaching decision-making can improve teaching efficiency and stimulate students' interest in learning. Therefore, the application of AI-assisted teaching in education is not only an innovation in technology but also a profound change in educational concepts and teaching methods.

References

- [1] Liu Liebin. Exploration of College English Teaching Models under the Background of AI [J]. *Journal of Hubei University of Economics (Humanities and Social Sciences)*, 2024, 21(06): 147-149.
- [2] Dai Xiaowei. Application of New College English Teaching Models under the Background of AI [J]. *Campus English*, 2021, (46): 1-2.
- [3] Zhao Hui, Tang Jianmin. Research on College English Teaching Models Based on Artificial Intelligence [J]. *Software Guide*, 2019, 18(10): 213-216.
- [4] Liang Yingshan. Research on the Design of College English Practice System under AI Environment [J]. *Journal of Jiangxi Electric Power Vocational and Technical College*, 2019, 32(03): 110-111+113.