Research and Practice of Artificial Intelligence-Based Hybrid Teaching of College English

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Abstract: The application of artificial intelligence technology in teaching can provide flexible and appropriate auxiliary support under appropriate spatiotemporal conditions by analyzing learners' learning behaviors, outcomes, and the virtual and real environments they are in based on their needs. Most domestic schools have introduced artificial intelligence technology in college English teaching, building a new teaching ecology integrated with mobile devices and online teaching platforms. This article analyzes the support of artificial intelligence for college English teaching, applies artificial intelligence technology in pre-class preparation, in-class teaching, and post-class feedback of hybrid teaching, optimizes students' learning effectiveness, enriches teaching materials, and conducts fair classroom behavior evaluations, promoting teachers to more comprehensively grasp teaching dynamics and effectively manage student classroom behavior.

Keywords: Artificial intelligence; College English; Hybrid teaching

1. Introduction

The deep integration of artificial intelligence (AI) technology with various industries has had a significant impact on industrial progress and has become a new driving force for enhancing industrial market competitiveness. In the field of education, the application of AI technology can effectively drive the innovation of teaching methods, solve the shortcomings of traditional teaching modes, enrich teaching methods, and improve teaching efficiency, which has had a profound and positive impact on both teachers and students [1]. At the same time, the application of AI in college English hybrid teaching marks a revolutionary change in higher education driven by emerging information technology.

2. Support of artificial intelligence in hybrid teaching of college English

Artificial intelligence possesses the capability to explore and simulate cognitive processes. The application

of deep learning techniques not only deepens students' understanding of the complex relationships between language learning, psychological mechanisms, and their evolution with thinking but also drives innovative steps in language learning research at the theoretical and modal levels [2]. By integrating multi-modal interaction technology, intelligent knowledge graphs, and learning analytics tools, AI can construct simulated intelligent teaching assistant systems that effectively support teachers in imparting knowledge and practical training, thereby enhancing students' emotional intelligence and innovative ability cultivation. This further promotes the development of big data-driven teaching models and AI-assisted language teaching systems. AI has profoundly impacted innovative teaching environments, manifesting in college English teaching where traditional education systems, teaching methods, and teaching outcomes cannot fully meet the diversified needs of students for foreign language learning, nor keep pace with the demands of students' career development and industrial progress [3]. Therefore, seizing the opportunity of current information technology reforms and applying AI in college English teaching to construct smart classrooms is crucial. Through the deep integration of AI with hybrid English teaching and management, AI actively explores new language teaching models in the "Internet+" era, becoming a key strategy to promote college English curriculum reforms and effectively address issues related to improving students' practical foreign language application skills [4].

3. Status quo of college English teaching models

3.1. Inappropriate application of information technology in classroom teaching

The goal of applying AI in hybrid college English teaching is to improve teaching efficiency and enhance education quality while promoting personalized and intelligent student development [5]. However, in current practice, many teachers still adhere to traditional educational concepts, using explanatory methods to interpret content on the screen point by point, which keeps students in a passive state of knowledge reception. This approach is not conducive to stimulating students' enthusiasm for active learning and limits the optimization of college English teaching effects [6]. Additionally, some teachers exploit the convenience of AI technology to increase learning outcomes through excessive practice, leading to increased learning pressure for students without fundamentally improving college English teaching effectiveness.

3.2. Insufficient subjective initiative of students

In the context of comprehensively promoting quality education, emphasizing the enhancement of students' subjectivity and initiative, and strengthening their intrinsic motivation, are the core objectives of educational practice [7]. However, with the advent of the AI technology era, many college English teachers are still constrained by traditional educational concepts, neglecting students' subjective initiative in the teaching process. In teaching practice, teachers often confine themselves to using the basic functions of AI technology, such as delivering knowledge through videos, animations, and pictures, without fully mobilizing students' autonomy and innovative potential. This leads to a weakening of students' thinking vitality, affects the progress of establishing efficient English AI classrooms, and adversely impacts students' comprehensive development.

4. Hybrid college English teaching strategies with artificial intelligence

4.1. Pre-class preparation stage

Firstly, with the support of AI technology, teachers need to create personal exclusive accounts to correspond with the classes they are responsible for. Secondly, teachers can access the AI system to develop innovative course content and save teaching resources. In the process of constructing online courses, teachers can not only integrate textbook knowledge points according to needs but also flexibly utilize multimedia materials such as images and videos to set up online evaluation tools and interactive discussions that promote student engagement. Teachers can focus on creating core features around the curriculum to provide main support functions during the course preparation stage. Based on this, a revision module can be constructed that utilizes AI technology to aggregate past key course content, facilitating students' online revision and effectively enhancing their learning efficiency. By observing students' online interactions, teachers can understand each student's academic progress, including whether they have prepared for the class and whether they show interest in the current course content [8]. Finally, in the hybrid teaching model of college English, enhancing listening skills is a fundamental aspect of cultivating students' English application skills and lays the foundation for learning English. Therefore, in the AI-based teaching system, teachers need to design listening learning resources at different levels, encourage students to choose suitable English listening materials based on personal preferences, and actively participate in online listening training according to their self-learning progress. This allows students to learn relevant vocabulary and sentence structure knowledge, deepen their understanding of word meanings, and continuously simplify the learning and practice process of English listening.

4.2. In-class teaching stage

4.2.1. Online interactive teaching process

Firstly, universities should effectively utilize AI technology to create an offline smart interaction system, fostering a more open teaching and learning space. This will facilitate smoother communication between students and teachers, stimulating students' intrinsic motivation for learning English. Meanwhile, universities need to develop micro-courses tailored to classroom teaching needs, covering various aspects such as language knowledge construction, language skill improvement, learning strategies, and cultural quality. These micro-courses should be made into videos and embedded into the AI teaching system as online educational resources, enabling students to access and learn content that aligns with their needs and interests [9]. For difficult problems encountered during the micro-course learning phase, students can share them in the discussion group of the AI teaching system. This not only facilitates teachers' responses to questions but also allows other students to participate in the discussion. Students who complete micro-course learning tasks within the AI teaching system should first elaborate on their doubts or concerns in the online team. If the question is difficult, it can be transferred to a designated group for handling in offline learning. This group will collate all questions and discussion results and report them to the teacher. Secondly, teachers should attempt live-streaming teaching when using the AI teaching system. This stimulates instant interaction between teachers and students, helping students quickly overcome difficulties encountered in English learning. It not only guides students to independently research and master specific problems but also expands their exposure to English and opens up more scenes for practicing English in an efficient live interaction environment. This enhances students' English application skills, thereby improving the effectiveness of college English teaching. Additionally, when applying the AI teaching system, teachers should maximize its data analysis potential, comprehensively collecting data on students' online English

learning. This enables a comprehensive and multifaceted understanding of students' online learning status, facilitating accurate diagnosis of students' interest in English learning. Based on this, the AI teaching system needs to push interesting English-related content to students through mobile devices. This not only enhances the appeal of English to students, stimulates their enthusiasm for English learning, but also makes the interaction between teachers and students more targeted and effective.

4.2.2. Offline teaching verification process

During the offline teaching verification phase, teachers can instantly display answers and scoring results through the AI teaching system, facilitating timely error correction. In the offline teaching process, teachers can manage various teaching activities with the help of a smart foreign language teaching system. This system is not only innovative but also highly data-driven, aiding in the precise evaluation of students' learning progress and interaction. Supported by AI technology, teachers can conduct accurate evaluations based on students' learning paths and knowledge mastery nodes. For instance, online learning platforms like Coursera and Knewton have excellent learning progress feedback capabilities. With the assistance of AI technology, they utilize machine learning algorithms to analyze students' online learning data, examining details such as the accuracy of post-class tests and the time required to answer exploratory questions. This helps teachers deeply understand students' course learning status, effectively carry out educational evaluations, and adjust and improve teaching strategies accordingly. It also allows for reasonable adjustments to the content and pace of hybrid learning.

4.3. Post-class feedback stage

After class, teachers can use the data analysis function of the AI teaching system to understand students' classroom participation. By accessing the web page through Learning Pass, teachers can optimize their operational processes and obtain richer online learning data statistics that support direct downloads. This enables convenient presentation of students' entire learning phase materials at the end of the semester, achieving data-driven precise evaluation. It not only significantly reduces the time teachers spend on attendance records but also effectively improves students' classroom attendance rates. The AI teaching system can help teachers understand students' English learning situations through their online learning behaviors, such as interaction and course completion. It provides students with precise guidance and supervision. The education assistance system built into the AI system can effectively track students' learning progress and promote classroom interaction by analyzing data [10]. This helps students accurately understand their learning status and patterns, greatly relieving teachers' teaching pressure. Additionally, the course credit system reveals students' grade distribution in classroom activities. With the comprehensive statistical function provided by the AI teaching system, teachers can fully understand students' daily learning status. They can review participation in each class and comprehensively evaluate students' learning performance throughout the semester. Real-time course progress monitoring in the AI teaching system helps teachers timely identify students with learning difficulties and effectively organize and summarize the challenges encountered during the teaching process. The one-click export function in the AI system enables a more scientific and accurate presentation of students' daily learning performance, making it easier for teachers to conduct final learning assessments and confirm regular grades.

5. Conclusion

In summary, in the context of the rapid development of artificial intelligence technology, the application of AI teaching systems in college English education reform is not only an inevitable requirement of the times but also a powerful complement to the limitations of traditional educational models. With the help of AI technology, the teaching quality and efficiency of college English courses can be significantly improved. By optimizing and integrating teacher resources, student learning groups, and course content throughout the entire teaching process, including pre-class preparation, classroom teaching, and post-class feedback stages, remarkable results have been achieved. This promotes innovation in college English education models and is conducive to enhancing students' foreign language proficiency and comprehensive language skills.

Disclosure statement

The author declares no conflict of interest.

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