Research on the construction of ecological teaching models for college English education in the era of artificial intelligence

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Abstract: Against the backdrop of rapid advancement in information technology and artificial intelligence, various technologies have been widely applied across multiple industries, demonstrating significant value. Influenced by the era of artificial intelligence, the teaching and learning methods in the university have been continuously evolving, providing new opportunities for teaching in the new era. Taking college English teaching as an example, this paper analyzes the construction issues of ecological teaching models for college English in the era of artificial intelligence. By examining the current application status of ecological teaching models and college English ecological teaching models, the paper focuses on analyzing the key points in building ecological teaching models for college English in the era of artificial intelligence to better adapt to the development of the era of artificial intelligence, guide new approaches to college English teaching, and enhance the effectiveness of English education.

Key words: era of artificial intelligence; college English; ecological teaching models; key points in construction

1 Introduction

The teaching models and methods for college English are evolving along with the development of teaching philosophies, educational technologies, and pedagogical reforms, especially with the development of artificial intelligence technology and its application in the field of education. With the advancements in artificial intelligence, college English teaching can now incorporate more artificial intelligence technologies, leading to breakthroughs in both teaching methods and student learning approaches. In the college learning process, students are encouraged to be more proactive, relying on their autonomous learning abilities to complete their studies, while in basic education, teachers often need to prompt students to learn and complete assignments [1]. At the same time, the large-class teaching model employed in college English education, where teachers are responsible for knowledge transmission and students passively receive information, often results in less than ideal teaching outcomes. The era of artificial intelligence presents endless possibilities for college English teaching and student learning, laying a foundation for the construction of ecological teaching models for college English. Drawing upon existing literature and the author's own teaching experiences, this paper delves into the specifics of constructing ecological teaching models for college English in the era of artificial intelligence, as detailed below.

2 Overview of ecological teaching models

Ecological teaching models, a new type of teaching models proposed in recent years, emphasize the comprehensive consideration of factors such as teaching, learning, market demands, and social environments in the teaching process. In ecological teaching models, the focus is on students as the primary actors. During teaching and learning, emphasis is placed on the central role of students, guiding students to develop autonomous and cooperative learning abilities, thereby fostering continuous improvement in their knowledge acquisition and application skills [2].

In accordance with ecological teaching models, teachers are required not only to convey knowledge throughout the teaching process but also to act as guides, collaborators, and partners. When designing teaching activities, teachers should emphasize that stimulating students' learning interests and motivations in learning can help students enhance their abilities and apply acquired knowledge to solve problems that they encountered in their studies and daily lives. In essence, ecological teaching is the application of ecological principles and methodologies to guide practical teaching activities.

3 The application status of ecological teaching models in college English

The research on ecological teaching models in China started relatively late, and there is relatively limited research on ecological teaching models for college English. Based on the current application status, the following points are noteworthy:

3.1 Superficial understanding and application of ecological teaching models

Some college English teachers lack a deep recognition of ecological teaching models, which hinders their flexible application in actual college English teaching. Some college English ecological teaching models overly emphasize the cultivation of professional competencies, neglecting the functional aspect of English as a language, thereby impeding the enhancement of students' English literacy [3]. Some college English ecological teaching models overly focus on the model itself during application, neglecting the integration with the college English curriculum, thereby affecting the practical application effectiveness of ecological teaching models.

3.2 Lack of effective pathways for applying ecological teaching models

While some college English teachers have a profound understanding of ecological teaching, they lack effective methods in specific practical applications. College English textbooks are constantly being adjusted and optimized, and there are varying demands for English literacy among professionals in the market. In addition, education itself is complex, requiring college English teachers to possess not only English knowledge but also essential knowledge in psychology, educational management, interpersonal communication, and more. Different scholars adopt different teaching pathways in the application of college English ecological teaching models, resulting in varying levels of efficacy. Overall, the current application of ecological teaching models in college English teaching has not yet achieved the anticipated outcomes.

4 The key points in constructing ecological teaching models for college English in the era of artificial intelligence

The era of artificial intelligence offers numerous opportunities and challenges for the application of ecological teaching models in college English, making it possible to construct efficient ecological teaching models for college English in the era of artificial intelligence.

4.1 Emphasize the foundational role of "Internet+"

Constructing ecological teaching models for college English requires the effective integration of knowledge and theories in education and ecology, and optimizing the college English teaching environment. Throughout college English teaching, leveraging the "Internet+" is essential to extend teaching resources and harness the technical advantages it offers [4]. By building upon traditional offline teaching methods, incorporating online teaching, micro-lessons, and cooperative group explorations, the dissemination of knowledge is significantly enhanced.

By utilizing the "Internet+", the fusion of conventional college English teaching with modern teaching methods is achievable, facilitating the transition from traditional education to intelligent education. Moreover, the "Internet+" fosters a more open educational environment, truly embodying the principles of ecological teaching models. With the "Internet+", teachers can access numerous resources related to teaching content and objectives, promoting interaction between teachers and students, enhancing educational flexibility, and guiding students to independently search for materials related to college English, thus improving students' learning abilities [5].

4.2 Prioritize the application of artificial intelligence technologies

Various artificial intelligence technologies can play a role in the development of college English ecological teaching models. Therefore, in the construction of ecological teaching models for college English, it is crucial to leverage the advantages of artificial intelligence technologies and stress their application. For instance, speech recognition technology can be used in oral English expression and vocabulary exercises for college students to improve their spoken English ability. In addition, intelligent translation technology, natural language processing, personalized learning recommendation systems, intelligent assessment systems, among others, can contribute to the enhancement of college English teaching quality from different perspectives. Those provide students and teachers with more teaching tools to promote pedagogical reform and development.

Considering the specific requirements of the ecological teaching models at different stages and the advantages of diverse artificial intelligence technologies, it is recommended to flexibly choose and apply various artificial intelligence technologies in actual college English ecological teaching models.

4.3 Focus on creating an ecological environment

During the construction and application of ecological teaching models for college English, it is essential to actively cultivate an ecological environment that aligns with the unique characteristics of college English teaching. Cultivating such an environment is vital to advancing the application and development of ecological teaching models, promoting the permeation of ecological concepts into college English teaching, and integrating artificial intelligence technologies into teaching to achieve the fusion of artificial intelligence technologies and college English ecological teaching models [6]. For instance, instead of traditional chalkboard teaching, which consumes significant time, artificial intelligence technologies can be employed in college English teaching to create presentations using PowerPoint, facilitating the transmission of course content via the Internet to computers and smart devices. This not only saves class time but also enables students to learn more efficiently through computers, allowing for more time in the classroom for teacher-student communication, interaction, discussions, group collaborations, etc. Respecting student diversity, allowing for individuality, and fostering a harmonious relationship between teachers and students are crucial for creating a harmonious and healthy ecological teaching environment.

4.4 Actively build a system and integrate more content into textbooks

In constructing ecological teaching models for college English in the era of artificial intelligence, it is imperative to move beyond the traditional textbook-centric teaching model. Existing textbooks often contain limited content, mostly comprising foundational knowledge, which may appear simple for some students while being complex for others. From the perspective of respecting students and focusing on individual development, it is essential to actively construct a system that extends and enriches knowledge through the application of artificial intelligence technologies on top of existing textbooks, thereby enhancing overall knowledge capacity. This system should balance textbook content and knowledge extension, catering to the diverse learning needs of students at different levels in alignment with differentiated teaching requirements [7].

5 Conclusion

The era of artificial intelligence presents both opportunities and challenges for college English course instruction. When utilizing ecological teaching models, it is crucial to deepen the understanding of such models, analyze issues arising in their application, and utilize the advantages of artificial intelligence technology to construct ecological teaching models for college English in the era of artificial intelligence, thereby better guiding the implementation of college English teaching practices.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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