
Innovation and Practice Exploration of College English Teaching Model under the Background of Digital Intelligence

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Abstract: With the advancement of digitalization and intelligent technologies, various industries are embracing new development opportunities. College English teachers can efficiently collect and utilize data generated during teaching activities to better understand students' actual needs. Building on this foundation, educators can develop targeted teaching strategies and conduct research on teaching models under the digital-intelligent context. This paper focuses on college English teaching models within the digital-intelligent framework, exploring innovative approaches and practical implementations to accelerate the reform process of higher education English education.

Keywords: Digital intelligence; Higher education institutions; English teaching model; Innovation; Practical strategies

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1. Introduction

China is currently at a critical stage of economic development, which has accelerated the rapid advancement of digital technologies. By integrating digital and intelligent teaching methods, students can not only fully grasp theoretical knowledge in English learning but also apply their acquired skills to real-world scenarios, thereby enhancing their overall competencies. To achieve this, educators must stay abreast of contemporary trends, adopt innovative teaching approaches, and establish instructional models tailored to the digital-intelligent education landscape.

2. The Importance of Innovation and Practice in College English Teaching Models under the Background of Digital Intelligence

2.1. Enhancing Students' Core Competitiveness

In the era of digital transformation, higher demands are placed on English talent cultivation in higher education institutions. Students who fail to master English fluently may face significant obstacles in job hunting, primarily due to the increasing interdependence between nations and the growing number of enterprises engaging in international operations, which urgently require professionals with strong English proficiency^[1]. To address this reality, university English educators

are innovating teaching methodologies by focusing on fostering students' innovative thinking, creative abilities, and logical reasoning skills. Such approaches not only enhance students' English proficiency but also strengthen their core competitiveness, enabling them to maintain a competitive edge in the talent market.

2.2. Advancing the Process of Modern Education Reform

In the context of digital and intelligent transformation, universities across the board have optimized and reformed their teaching systems in accordance with educational policies, aiming to cultivate more high-quality professionals for society. By keeping pace with contemporary trends, educators are innovating English teaching methodologies that not only expand pedagogical perspectives but also broaden students' intellectual horizons, encouraging them to reflect on their future^[2]. The new English teaching model emphasizes the deep integration of digital and intelligent technologies, ensuring students develop strong information literacy through immersive learning experiences. Through practical implementation, these innovative approaches embody the educational philosophy of "nurturing virtue through education," helping teachers deepen their understanding of educational policies while continuously refining instructional strategies to accelerate modern education reform.

2.3. Cultivating Students' Cultural Confidence

In recent years, certain Western countries have attempted to cloak harmful ideologies under the guise of democracy and freedom, influencing university students and undermining their ideological perspectives^[3]. To cultivate proper cultural values and foster students' confidence in traditional Chinese culture, college English teachers must innovate teaching methodologies to prevent exposure to negative ideologies during learning. By integrating digital and intelligent technologies into English instruction, educators can effectively stimulate students' interest in learning, enabling them to develop a balanced understanding of Eastern and Western cultures. This approach facilitates the dissemination of traditional Chinese culture while reinforcing socialist core values.

3. Effective Strategies for Innovation and Practice of College English Teaching Models under the Background of Digital Intelligence

3.1. Establishing an Integrated Online-Offline Teaching Model

With the rapid development of digital and intelligent technologies, college English teachers now have access to increasingly diverse digital resources for instruction. These tools effectively enrich teaching content and provide students with immersive learning experiences. In practical teaching practice, educators should position students as the central focus of classroom activities while analyzing their actual learning needs^[4]. To enhance the accuracy of needs assessment, teachers can utilize platforms like QQ, WeChat, or Weibo for real-time communication with students. When learners encounter difficulties during English studies, they can promptly raise questions for instructional guidance. Teachers should conduct comprehensive evaluations of student inquiries to identify specific knowledge gaps and optimize teaching strategies accordingly. During lessons, teachers should allocate time for open discussions to observe student interactions, enabling them to understand individual learning patterns and implement targeted interventions^[5]. For instance, while guiding English instruction, teachers may analyze classroom dynamics and subsequently gather all students in a WeChat group chat to pose the following question: "Do you have any unresolved questions from class? Feel free to ask—I'll provide answers." By addressing student inquiries while consolidating collected feedback, teachers can identify weaker knowledge modules. Based on these insights, educators can prioritize reinforcing these areas to systematically enhance students' English proficiency. In the classroom, teachers can facilitate English communication among students centered around specific knowledge modules, while serving as instructional guides to support their learning process. This practical example demonstrates that integrating information technology into teaching practices enables educators to develop a blended online-offline instructional model, effectively addressing students' developmental needs.

3.2. Utilizing Digital and Intelligent Technologies to Create Teaching Scenarios

A teaching scenario refers to educators using various methods to vividly present familiar classroom settings, quickly capturing students' attention to enhance teaching efficiency and quality. Teachers should observe students' daily lives to identify life scenarios relevant to lesson content. Building on this foundation, AI-generated technologies can be utilized to create related audio or video materials for student engagement^[6]. To facilitate better immersion in teaching scenarios, educators may also employ vivid and descriptive language. When students experience strong visual and auditory stimuli, they naturally become immersed in the classroom environment while discovering the wonders of English knowledge. This approach not only demonstrates the advantages of digital and intelligent technologies but also drives educational reform. For instance, when teaching English concepts related to "Talking about School Life," teachers can connect lessons with students' university experiences by inputting teaching materials and generated language into AI systems. The AI system then generates corresponding video clips. Teachers can subsequently play these clips and guide discussions using phrases like: "Classmates, everyone's college life is colorful. Do you know how foreign students experience university life? What differences exist compared to ours? Please share your perspectives based on this video clip and engage in English discussions about campus life." This instructional approach effectively stimulates students' learning interest, enabling them to fully engage in classroom activities and facilitate interactive discussions. Throughout this process, teachers should closely observe students' behaviors^[7]. Once all learners have immersed themselves in the teaching context, educators can naturally introduce key concepts by guiding students to consult English textbooks and master essential knowledge points. Prior to concluding the session, teachers should further encourage students to apply acquired knowledge in real-world scenarios, equipping them to better address practical challenges and enhance their ability to apply knowledge effectively. This case study demonstrates that integrating digital technologies, intelligent solutions, and contextualized teaching methods can create innovative educational paradigms.

3.3. Strengthening the Application of Digital Technology in Case-Based Teaching

College students possess a solid foundation of knowledge and life experience, making them inclined to learn through case studies. This approach effectively reinforces memory retention and enhances practical application skills. Aligning with this psychological development pattern, English educators in higher education institutions can integrate digital technologies with case-based teaching methods within the digital-intelligent education framework. This approach enables students to quickly immerse themselves in real-world projects while conducting hands-on explorations to acquire English language knowledge. Specifically, instructors should analyze teaching content and incorporate key concepts into digital systems^[8]. These systems leverage extensive databases to curate case studies tailored to educational needs. By making targeted adjustments to case materials to match students' learning capabilities and meticulously designing instructional objectives and inquiry tasks, educators can provide clear learning direction. For instance, when teaching "Talking About Healthy Lifestyles," instructors may utilize digital platforms to identify relevant case studies such as the American Heart Association's "Global Heart and Brain Health Report." This report emphasizes the importance of physical health and offers practical recommendations for maintaining wellness. Educators can adapt these insights by integrating China's current cardiac treatment and prevention strategies through representative case studies. A typical scenario might be: "Heart disease continues to pose significant health risks, yet unhealthy lifestyles often contribute to its development. How can we cultivate sustainable healthy habits?" This approach facilitates dynamic discussions among students. Teachers should seize the opportunity to guide students in reading the Global Heart and Brain Health Report. Through this process, students will develop a profound understanding of "health"^[9]. Building on this foundation, educators can assign specific case study tasks, encouraging students to independently consult their textbooks and address the question: "How can healthy lifestyles prevent cardiovascular and cerebrovascular diseases?" Practical case studies demonstrate that this teaching approach transforms passive learning into active engagement, enabling students to acquire knowledge through investigative case analysis.

3.4. Enhance Classroom Interaction to Improve Students' Language Expression Skills

English differs fundamentally from other disciplines as it involves learning and mastering a language. Therefore, when refining teaching methodologies, educators should prioritize enhancing classroom interactions. In the context of digitalization, teachers should utilize digital systems to design interactive components, particularly interactive questions. These questions must stimulate students' enthusiasm for communication, ensuring they can freely engage in discussions and share perspectives. Consequently, teachers need to integrate instructional content into digital platforms while designing interactive questions accordingly. The presentation sequence of these questions should follow a progressive approach to prevent students from developing anxiety about challenges. Beyond peer interactions, teacher-student engagement must also be implemented. This requires teachers to assume the role of facilitators, promptly helping students organize key concepts and guiding them through learning tasks. Through such peer-to-peer and teacher-student interactions, educators can foster a positive learning environment that enhances student engagement. For instance, when teaching "Talking About Your Family," teachers may first deliver family-themed micro-videos via digital systems. Before class, students can narrate video content in their own words to develop basic language expression skills. During lessons, teachers can encourage students to share their perspectives on family dynamics while instructing them on English-based articulation techniques. Such teacher-student interactions effectively bridge emotional gaps and lay the groundwork for subsequent collaborative learning. As students gradually adapt to classroom learning, teachers may introduce exploratory tasks such as: "Classmates, can you now briefly introduce your families in English? Please work in groups to collaborate and share insights." For students with strong language proficiency and exceptional learning abilities, teachers may appropriately raise the bar by requiring them to compare cultural differences between Eastern and Western family traditions and articulate these observations in English. During collaborative discussions, teachers should provide guidance from the sidelines. When conflicts arise due to grammatical issues among group members, educators must intervene promptly to resolve disputes and advance collaborative learning. This practical example demonstrates that designing interactive classroom activities through digital systems effectively enhances engagement, allowing students to experience the joy of communication while mastering key knowledge points.

3.5. Implement Classroom Evaluation to Improve Teaching Models

Traditional classroom evaluations tend to be static, relying solely on students' test scores while failing to reflect the actual teaching process. This situation arises because teachers cannot allocate sufficient attention to individual students, often resulting in incomplete information collection and distorted assessment outcomes. In the context of digital education, educators can leverage digital systems' comprehensive monitoring capabilities to fully document classroom activities, facilitating post-class analysis. By analyzing data, teachers can identify students with high engagement levels and those exhibiting disengagement, pinpointing areas needing improvement. Simultaneously, teachers should integrate exam results to refine instructional approaches. For instance, when teaching "Discussing Hobbies and Interests," educators can utilize digital monitoring systems to track the entire lesson. After evaluation, teachers can review classroom dynamics using pre-designed assessment criteria, analyze student behaviors, and assess teaching effectiveness. Analysis revealed that current teaching methods fail to maintain student attention, with many students reluctant to interact with peers. Addressing this, teachers categorized students into three proficiency tiers based on past exam performance, designing differentiated learning objectives and tasks to ensure inclusive development for all learners. Meanwhile, teachers have incorporated socially relevant topics that capture students' interest, effectively engaging their attention in classroom activities. Following this innovative teaching approach, student participation rates have significantly increased alongside enhanced peer interactions, effectively meeting educational objectives. This practical case demonstrates that educators adopting an integrated teaching-evaluation philosophy and utilizing digital technologies for classroom assessment can provide solid foundations for pedagogical innovation.

3.6. Building AI-enabled Personalized Teaching System to Support Differentiated Learning

The core advantage of digital and intelligent technologies lies in breaking the limitations of traditional large-class college English teaching, which mostly adopts a unified teaching schedule and fails to meet the differentiated learning needs of students with varied English proficiency. Supported by AI adaptive learning technology, college English teachers can build a complete personalized teaching system to achieve precise instruction for each student. Before the semester starts, teachers can use AI-powered assessment platforms such as U Campus and iTEST to conduct comprehensive diagnostic tests on students' English foundation, covering vocabulary, grammar, listening, speaking, reading and writing skills, to generate an individual learning portrait for each student and clarify their strengths and weaknesses in English learning. Based on these portraits, the system can automatically push targeted learning resources and tasks: for students with a weak foundation, it focuses on basic vocabulary consolidation and sentence pattern training; for proficient students, it provides extended content such as academic English writing, cross-cultural communication and interpretation practice. During teaching, AI tools can track students' learning progress in real time, automatically evaluate compositions and oral assignments, and give targeted error correction and improvement suggestions. Teachers can timely adjust the focus of classroom teaching according to the class learning report generated by the system, and carry out one-on-one tutoring for students with learning difficulties, ensuring every student gets suitable learning guidance and effectively improves their English ability.

3.7. Improving Teachers' Digital Literacy to Guarantee Sustainable Innovation of Teaching Models

The effective implementation of digital and intelligent teaching models fundamentally depends on the digital literacy and intelligent teaching ability of college English teachers. At present, some teachers still remain in the shallow integration of digital technology and English teaching, only using digital tools to play courseware, release learning materials and assign homework, failing to give full play to the core value of digital and intelligent technologies in teaching reform. To solve this problem, universities should take targeted measures to improve teachers' digital literacy. They can regularly organize special training on digital and intelligent teaching, invite front-line excellent teachers and technical experts to carry out practical training on AI teaching tools, big data learning situation analysis and digital resource development, to help teachers master the application methods of various digital tools in English teaching. Meanwhile, universities can build inter-school teaching exchange platforms, share excellent digital and intelligent teaching cases, and hold teaching skills competitions to encourage teachers to actively explore innovative teaching models. Teachers themselves should also take the initiative to learn cutting-edge digital teaching concepts and technologies, combine the actual needs of English teaching to explore the deep integration of technology and curriculum, and avoid the mere formality of technology application, so as to fundamentally guarantee the sustainable advancement of teaching model innovation .

4. Conclusion

In today's era of deepening educational reforms, university English teaching models must evolve with the times to enhance students' core competitiveness and meet the demands of modern education. Educators leveraging digital intelligence technologies can integrate digital tools and smart solutions into situational teaching methods, interactive instruction, and case-based learning approaches. This not only boosts classroom engagement but also deepens students' understanding of key concepts. Simultaneously, teachers should utilize digital technologies to develop blended online-offline teaching models and refine evaluation systems, ensuring pedagogical innovation remains scientifically grounded. Through exploring innovative practices in digital intelligence-driven English education, this article provides valuable insights for the education sector. University English instructors must break free from traditional mindsets, combine efficient teaching methods with digital technologies, and forge educational pathways that foster students' holistic development.

Disclosure statement

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