

An Exploration of Blended Teaching of College English in the Context of Artificial Intelligence

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Abstract. In the context of the current era of big data, artificial intelligence has become a widely utilised technology in higher education, providing technological support for university teaching. In contemporary educational contexts, the role of the teacher has evolved beyond that of a mere transmitter of knowledge, becoming instead a mentor and facilitator of learning. As AI technologies continue to evolve, the challenge arises of integrating these technologies in ways that enhance the efficacy and efficiency of blended university English instruction. This paper examines the potential benefits of AI in blended university English teaching and delves into its practical applications in reading and writing. The aim is to gain a deeper understanding of how AI technology can inform research related to blended university English teaching.

Keywords: artificial intelligence; college English; blended teaching.

1. Introduction

Artificial intelligence (AI) technology represents the cutting-edge power of the information age and has become an important part of the reform and practice of university English teaching, with a revolutionary impact on English teaching. Technologies such as human-computer interaction, intelligent analysis, deep learning and others are being increasingly integrated into the field of education, creating intelligent and personalised learning environments that effectively optimise traditional classroom teaching. Concurrently, the advent of artificial intelligence has markedly transformed the learning milieu of students and the pedagogical approach of instructors in the dissemination of knowledge. The application of artificial intelligence in the field of education has the potential to create intelligent and personalised learning environments, while simultaneously offering novel approaches and methodologies for English language instruction. This represents a significant advancement in the reform and practice of university English teaching. The use of blended teaching is becoming an increasingly important method of reforming the teaching of information technology in foreign language education and higher education. The academic community is committed to utilising this approach to promote the comprehensive integration of information technology and foreign language education and teaching, and to further realise the foreign language education and teaching system, particularly in terms of the structural change of classroom teaching.[1] The objective of this study is to identify effective strategies for integrating artificial intelligence into the English course in order to enhance pedagogical innovation and address the challenges associated with English reading, writing and assessment.

2. Advantages of Artificial Intelligence and Blended teaching

The pervasive implementation of artificial intelligence (AI) technology in the domain of blended teaching has precipitated a transformative shift in the landscape of education. With the advent of big data, machine learning, and other cutting-edge technologies, AI has not only augmented the pedagogical toolkit but also opened up novel avenues for blended teaching. The blended teaching approach circumvents the limitations of traditional learning and offers students a more flexible and personalised learning experience by integrating online and offline resources. Blended teaching effectively integrates teaching modes, software tools and various resources through information

technology, which has now become a new trend in the development of university foreign language teaching in China. [2] The reform of the university English curriculum places an emphasis on the integration of information technology and the English curriculum, with the objective of enhancing the efficacy of English teaching. This provides an unparalleled opportunity for the integration of AI and English teaching.

2.1. Multi-terminal support

The platform is accessible via both PC and mobile terminals, affording students the opportunity to engage in learning, practice, testing and evaluation. The mobile client is available in two versions, one designed for educators and the other for learners. The advent of mobile technology has facilitated a paradigm shift in the way modern higher education is conducted, offering students and educators a convenient and ubiquitous means of accessing knowledge and resources. The "U Campus" app allows students to complete their learning tasks on the platform at any time and in any location on campus. This includes previewing and reviewing texts, submitting assignments, participating in teacher-student interactions, practising speaking and other skills, as well as accessing teachers' funds. Teachers can also use the platform to assign, test and evaluate students' work in a more straightforward and convenient manner. The platform allows teachers to assign homework and other tasks with greater ease and convenience, and to monitor the completion of students' tasks at any time, obtain feedback, and thereby facilitate more timely and effective teaching.

2.2. Enriching Teaching Resources

Blended teaching provides rich resources, surpasses the traditional teaching materials, meets the actual needs of students and improves the quality of teaching. [3] The source of teaching content is not limited to textbooks or teaching materials; the use of Internet technology has greatly expanded the range of available teaching resources, making them accessible to learners at different levels and addressing the diverse needs of students. UCampus offers a plethora of comprehensive digital courses, encompassing language, test preparation, competition preparation, and multilingual curricula, catering to a multitude of learning requirements. The content of general college English textbooks, such as "New Generation College English" and other textbooks, includes micro-course videos that can be employed as pre-course preparation, classroom teaching materials, post-course supplementary exercises, or in a variety of scenarios according to the teaching and learning plan. It assists educators in enhancing their pedagogical approaches, enables students to engage in independent study alongside the textbooks, and fosters a more profound comprehension of the subject matter. Furthermore, it effectively addresses the limitations of textbook updates and the constraints on time for comprehensive learning.

2.3. Enhancing Classroom Effectiveness

It is a fundamental tenet of effective teaching that students must listen attentively and participate actively in activities organised by the teacher. The blended teaching mode necessitates that students engage in online study prior to the classroom session, with the teacher-led activities subsequently assessing the students' comprehension of the subject matter. This approach serves to reinforce the teacher's classroom management. As students are adequately prepared in advance, it also encourages their participation in class, thereby enhancing the effectiveness of the classroom teaching activities. The format of the teaching has evolved from a unidirectional transmission of information to a multitude of approaches, including group discussion, collaboration and the integration of theoretical instruction with practical application. This shift has enhanced the cognitive engagement of students in the classroom and optimised the efficacy of instructional activities.

2.4. Developing students' independent learning skills

The reform of 'teaching' itself is not a problem, the problem lies in whether this reform can effectively promote the learning of students' language knowledge and enhance their language application

ability.[4]In the context of conventional writing courses, students are primarily evaluated by their instructors. The practice of teacher evaluation in the traditional classroom also has its merits. Teachers occupy a dominant position in the writing class and play a pivotal role in students' acquisition of English writing skills. Teachers' familiarity with their students enables them to make more precise assessments and provide constructive feedback on students' compositions. Teachers not only identify and correct students' errors in vocabulary, grammar, and syntax during the revision process, but they also provide effective feedback to help students comprehend the structure of chapters, the context of ideas, the logic of arguments, and other aspects of writing. Consequently, students' writing is highly dependent on teachers. Peer mutual assessment in a blended teaching mode involves the provision of mutual assessment standards by one party and mutual assessment training in the classroom by another, under the guidance of the teacher. This effectively addresses the fundamental issue of students' mutual assessment. The combination of peer assessment, platform revision and teacher feedback represents an effective approach to enhancing students' independent learning abilities.

2.5. Improving the quality of writing

One of the key objectives of English teaching is to cultivate the ability to write effectively. However, the negative attitude of students towards writing under traditional teaching methods and the heavy and inefficient workload of teachers' evaluation have consistently positioned the teaching of writing as the weakest link in China's university English teaching. The implementation of blended learning facilitates the structured organisation of classroom teaching by educators, while students' online content learning enables the expansion and deepening of face-to-face content. The teaching of English writing should encompass four key elements: preparation, writing, revision and feedback. The blended mode of teaching facilitates a diversified process of mutual assessment, which in turn engenders a favourable environment conducive to cooperative learning and mutual competition. Furthermore, it encourages students to assume responsibility for the revision and improvement of the quality of their writing.

3. Application of Artificial Intelligence in English Language Teaching

In the modern world, the teacher is no longer the sole source of knowledge. Neither teaching nor learning is a synchronised process that takes place at the same time and in the same place. Often the processes of teaching and learning are asynchronous, anonymous and invisible, which changes the practice of teaching and the competencies expected of teachers. Teachers are not only teachers but also managers of teaching and learning processes and classrooms. This requires teachers to combine their expertise with management skills, and teaching becomes more flexible to meet learners' needs. The teaching and learning process involves extensive and complex interactions between teachers, learners, the classroom environment and learning activities.

3.1. Artificial Intelligence in Teaching English Reading

In the era of informationization and intelligence, college English teachers should make full use of the network teaching platform to provide students with online and offline independent learning paths and rich independent learning resources that combine classroom teaching with modern information technology, so as to prompt students to change from 'passive learning' to 'active learning'. The students are encouraged to change from 'passive learning' to 'active learning'[5]. Thus, during the teaching process, teachers can use U Campus to log in online, and students can log in within the specified time according to the graphic password shared by teachers, so that teachers can conveniently and quickly grasp students' attendance in class, eliminating the traditional roll call, saving teaching time and effectively improving students' participation in class. In the classroom, teachers can integrate the content of the textbook based on the feedback from students' pre-study results and learning reports, determine the teaching progress according to students' actual situation, rationally arrange the important and difficult points of teaching, and guide students to discuss the theme of the text, analyse the long and difficult sentences, describe the structure of the text, and retell the text, so as to flexibly

adjust the teaching design. In addition, teachers can also enliven the classroom atmosphere and enrich the classroom activities through online functions such as random questions or polls, so that the classroom can truly implement the concept of student-centeredness, so that teachers can become the guides and facilitators of students, improve the interest of the classroom, and enhance the effect of teacher-student interaction.

The integration of technology into the classroom has the potential to address the limitations of traditional teaching methods. By providing students with a multifaceted learning environment, blended teaching allows for a more active, independent, and collaborative approach to education, ultimately enhancing student engagement and learning outcomes. [6] In addition, teachers can also help students digest the knowledge through group cooperation, thematic discussion, individual presentation, role-playing and other teaching activities, guide students to carry out effective knowledge output, cultivate students' practical communication ability, stimulate students' critical thinking, deepen the expansion of learning content and build a diversified teaching mode. The post-course stage is mainly for students' post-course development and online improvement. After the presentation and communication in class, students can revise and improve their learning outcomes and summaries according to the suggestions from teachers and peers, and write a reflection report and submit it to the "Course Discussion Forum" on the U campus to share their learning outcomes with their peers as part of formative assessment. In this way, on the one hand, students can review the course content online after class and think deeply about the content to achieve real understanding and mastery. On the other hand, teachers can turn this content into resources for the next lesson.

3.2. Artificial Intelligence in Teaching English Writing

In the practice of blended university English teaching, artificial intelligence technology brings new possibilities for English writing teaching. Through natural language processing technology, students can get real-time and personalized feedback when writing, so that they can express their thoughts more accurately and improve their writing. In the process of teaching college English writing, combined with artificial intelligence, the teacher can carry out activities in the classroom, including vocabulary review, intensive reading of model texts, sentence transfer and imitation writing tasks. Use the UCampus learning platform to set up vocabulary review exercises to consolidate vocabulary, statistically analyse students' weak points, and help students understand and use vocabulary correctly. The teacher records a video of the model text for the students in advance and uploads it to the U-Campus materials. The teacher sets relevant questions from the perspective of the content, coherence and sentence patterns of the model text, and the students study the model text with the help of online dictionaries and analyse and answer the questions through group work, as well as understand the chapter structure and paragraph development of the model text through the mind maps. Through sentence transfer, the teacher guides students to use the key sentence patterns of the model text to copy and rewrite sentences, so as to prepare the language for the writing task. Finally, according to the writing scenario created before the lesson, students use the Thinking Maps software to make an outline of the writing, use the method of paragraph development and the key sentence patterns to complete the writing task, and use the Criticism.com automatic correction software to revise the vocabulary and grammatical errors.

Natural language processing technology can analyse students' essay structure, grammar usage, vocabulary choices and provide specific suggestions and revisions. For example, the system can point out ambiguities in a student's use of a particular vocabulary word, or remind them to improve sentence structure to enhance clarity of expression. This kind of real-time feedback not only enables students to correct errors in time during the writing process, but also helps them develop a more standardized and fluent style of expression. In addition, the intelligent system is able to provide students with writing materials on specific topics and styles based on their writing history and individual needs. For example, in academic writing, the system may guide students to use richer disciplinary vocabulary and structures to enhance the academic level of their essays. Teachers need to keep track of student learning dynamics by collecting and analyzing data on the learning process and encouraging students

to participate in the whole process of the course.[7]Through the application of artificial intelligence technology, English writing teaching is no longer purely paper-based correction, but more personalized and real-time guidance, providing students with more targeted writing training and further promoting their overall development in English writing.

3.3. Artificial Intelligence in Intelligence Assessment and Testing

In the age of information technology, the traditional elements of teaching (materials, content, methods, etc.) are being replaced by new elements (computers, Internet, computerised resources, etc.). [2] Under the framework of blended teaching, teachers are able to make full use of AI technology to carry out intelligent assessment and evaluate students' learning outcomes in a more comprehensive and scientific way. For example, after completing the offline teaching activities, English teachers can combine the knowledge points of this lesson and the previous ones to design an intelligent assessment test for students, which is divided into two aspects. Firstly, through the AI system, the ability of English listening, reading and filling in the blanks can be intelligently approved. Speech recognition technology can accurately determine students' listening level, natural language processing technology can analyse students' reading comprehension ability, and fill-in-the-blank questions can be used to examine their grammar and vocabulary use. Blended teaching not only makes assessment more objective, but also provides students with timely feedback to help them better understand and improve. Secondly, for tasks such as compositions and translations that require manual assessment, teachers can still exercise their professional judgement to assess students' linguistic expression and creativity. Artificial assessment can more deeply understand the students' personality and subject quality, prompting teachers to be able to adjust the teaching content in a more targeted manner, help students overcome difficulties and improve their learning results. Overall, the application of intelligent assessment systems not only improves the science and efficiency of assessment, but also provides timely data support for teaching and helps the implementation of personalized teaching. This comprehensive assessment method effectively promotes the quality improvement of mixed university English teaching while ensuring fairness and equity.

4. Conclusion

The AI-based English blended teaching model has addressed the shortcomings of traditional teacher-centred, single-form teaching, passive student writing, and delayed feedback and evaluation of writing. The assistance provided by AI has led to notable improvements in students' motivation and writing output. However, there are inherent limitations to AI in terms of the logical coherence of the writing content and the complexity of the language, particularly for students with a weak foundation in English. Consequently, teachers must provide more guidance and support to effectively enhance their English writing abilities. Therefore, further exploration of this teaching model is essential to improve the writing abilities of students with a weak English foundation.

In general, the application of AI technology has brought significant innovation and enhancement to the blended teaching of university English. However, it is also important to recognise that technology is merely a means to an end, with the true value lying in the achievement of educational objectives. Consequently, while pursuing the application of AI in English teaching, it is vital to prioritise the quality of the teaching itself, ensuring that the technology can more effectively support students' overall development. It is hoped that in future educational practice, AI and blended teaching can be more effectively integrated to create a more productive and enjoyable learning experience for students.

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