

Research on the Path of Integrating English Culture into College English Teaching Assisted by AI

Meirong Qi*

School of Humanities and Foreign Languages, Xi'an University of Science and Technology, Xi'an 710054, Shaanxi, China

**Author to whom correspondence should be addressed.*

Copyright: © 2026 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Against the backdrop of in-depth advancement of educational digitalization and continuous deepening of college English teaching reform, cultural integration has become an important part of improving students' cross-cultural communication competence and cultivating high-quality foreign language talents. With the technological advantages of natural language processing, virtual simulation and big data analysis, artificial intelligence effectively solves practical problems in current college English culture teaching, such as scattered teaching content, single teaching form, insufficient practical training and backward evaluation mechanism. Supported by cross-cultural communication theory and constructivist learning theory, this paper analyzes the current situation and dilemmas of English culture integration teaching in college English teaching, explores the prominent advantages of artificial intelligence applied in culture teaching, constructs the implementation paths of English culture integration teaching from the perspective of intellectualization, and puts forward corresponding safeguard measures. It aims to promote the in-depth integration of college English language teaching and cultural education and to comprehensively improve students' foreign language literacy.

Keywords: AI-assisted teaching; College English; Cultural integration; Cross-cultural communication

Online publication: April 26, 2026

1. Introduction

1.1. Research background

The in-depth implementation of digital education strategies has boosted the integration of artificial intelligence into campus teaching, strongly driving the reform of traditional disciplinary teaching. As a fundamental compulsory public course in higher education, college English focuses on fostering students' five core language skills, and also undertakes the vital mission of cultural inheritance, vision broadening and cross-cultural thinking cultivation.

Driven by new curriculum reform, universities have begun to attach importance to English cultural teaching and to incorporate cross-cultural knowledge in daily teaching^[1]. Nonetheless, such teaching still stays at a shallow level, featuring fragmented content, scarce practical activities and insufficient learning enthusiasm, which cannot achieve the goal of cultural education.

Popular intelligent teaching devices and platforms possess multiple powerful functions, which provide reliable technical support to innovate English cultural teaching modes and effectively resolve practical teaching predicaments.

1.2. Research significance

Theoretically, this study combines artificial intelligence technology with college English culture teaching, further enriching the research system of English subject teaching from the perspective of digital teaching, clarifying the internal logic of intelligent technology facilitating cultural infiltration, making up for the deficiencies of traditional culture teaching research, and providing a theoretical reference for subsequent related academic research^[2].

Practically, based on the actual front-line English teaching in colleges and universities, this paper sorts out the existing problems of cultural integration and puts forward feasible intelligent teaching implementation strategies, which can provide practical guidance for English teachers to carry out cultural teaching. Building a diversified cultural learning environment by means of intelligent teaching can help students consolidate their language foundation but also deepen their understanding of Chinese and foreign cultures, effectively improve their practical cross-cultural communication ability, and meet the social demand for compound foreign language talents in the new era.

1.3. Research status at home and abroad

Foreign studies on the integration of intelligent technology and foreign language teaching started early, focusing on the research and development of intelligent learning systems, the construction of virtual communication scenarios and the push of personalized learning resources^[3]. It has been confirmed that artificial intelligence can effectively mobilize students' initiative in foreign language learning and improve their ability in language communication and cultural understanding. Nevertheless, foreign studies are mostly in line with local education modes, which have poor adaptability to the college English teaching system in China and cannot be directly applied.

The number of relevant domestic studies has been increasing in recent years. Many scholars have explored the application of AI technology in college English listening, speaking and reading teaching, and gradually paid attention to cultural infiltration teaching. However, most existing studies focus on the shallow use of intelligent tools, lack research on the systematic implementation paths of cultural integration, fail to closely combine technical application with cultural connotation excavation, and fail to form a complete and mature intelligent culture teaching mode.

1.4. Research methods and innovations

This paper mainly adopts the literature research method, case analysis method and logical analysis method to sort out relevant theoretical documents and combine actual teaching cases in colleges and universities to deduce reasonable teaching implementation strategies.

The innovation of this study lies in breaking the traditional single offline cultural teaching mode, building an all-round cultural teaching system relying on cutting-edge artificial intelligence technology, attaching importance to both Western culture learning and the external communication of excellent traditional Chinese culture, establishing the educational concept of two-way cultural exchange, and realizing the coordinated development of intelligent technology empowerment and humanistic literacy cultivation^[4].

2. Relevant theoretical foundations

2.1. Cross-cultural communication theory

Cross-cultural communication theory clearly points out that language is an important carrier of culture, and all language communication behaviors are carried out based on specific cultural contexts. Essentially, cross-cultural communication refers to the exchange and intercommunication between cultures of different nations and regions^[5]. The theory holds that qualified foreign language learners should not only master language knowledge, but also be familiar with social etiquette, folk customs, values and thinking modes of target language countries to reduce cognitive misunderstandings and communication barriers in cultural exchanges. The core goal of integrating cultural knowledge into college English teaching is to cultivate students' sound cross-cultural communication competence, and the functions of intelligent

interaction, cultural comparison and scenario simulation of artificial intelligence can perfectly meet the practical teaching requirements of this theory.

2.2. Constructivist learning theory

Constructivism emphasizes that learning is a process in which students independently construct knowledge systems by virtue of existing knowledge and experience and external learning resources, rather than passively accepting knowledge instilled by teachers^[6]. It attaches great importance to real learning situations, independent learning space and hierarchical learning content, and advocates teaching students in accordance with their aptitude. Based on big data, artificial intelligence can accurately analyze students' learning conditions, push cultural learning resources in layers, and build real simulated communication scenarios to guide students to explore cultural knowledge actively, which fully practices the core educational concepts of independent learning and situational teaching of constructivism.

2.3. Principles of artificial intelligence in educational applications

Artificial intelligence is mainly applied in college English culture teaching, relying on three core technologies: natural language processing, machine learning and virtual simulation^[7]. Natural language processing can analyze textual cultural connotations and interpret cultural allusions; machine learning can collect students' learning data and accurately locate learning weaknesses; virtual simulation technology can restore various real communication scenarios to make cultural learning more intuitive and vivid. Meanwhile, AI intelligent assistants can realize all-weather Q&A and practice accompaniment, effectively making up for the shortcomings of limited class hours and insufficient after-class tutoring in traditional classroom teaching.

3. Current situation and dilemmas of English culture integration in college English teaching

3.1. Teaching current situation

At present, most domestic colleges and universities have incorporated cultural content into daily college English teaching. Western culture and Chinese culture-related chapters have been added in the textbook compilation, and teachers will briefly explain basic cultural knowledge, such as festivals, diet and daily life, in the teaching process. Various online English cultural learning resources are increasingly abundant as well.

Overall, college English culture teaching is still in the shallow development stage, and cultural teaching always depends on language teaching without forming an independent and complete teaching system. The cultural knowledge mastered by students is relatively superficial, mostly limited to superficial daily culture, while their cognition of in-depth social ideas and ideological culture is insufficient, resulting in unsatisfactory improvement of practical cross-cultural communication competence.

3.2. Main teaching dilemmas

Firstly, cultural teaching content is disordered and lacks systematic planning. Most colleges and universities have not formulated special syllabi for English culture teaching. Cultural knowledge points are scattered in text explanations without hierarchical classification and integration. In addition, there exists an unbalanced phenomenon of emphasizing Western culture while ignoring local culture, which makes it impossible to construct a complete cultural knowledge system for students^[8].

Secondly, classroom teaching modes are rigid and old-fashioned, with insufficient practical interaction. Most teachers still adopt a cramming teaching mode, making the explanation of cultural knowledge dull. Even if intelligent devices are used, they are only applied to play courseware and listening materials, rather than carrying out practical teaching by virtue of virtual scenarios and intelligent dialogue. The lack of communication practice in class makes it difficult for students to

apply what they have learned.

Thirdly, high-quality cultural teaching resources are insufficient, with low adaptability. There are numerous online English cultural resources with uneven quality, most of which are fragmented and hard to adapt to systematic classroom teaching. Besides, there are few high-quality resources for the English communication of Chinese culture, which is not conducive to students telling Chinese stories well.

Fourthly, the teaching evaluation system is single and one-sided, lacking the assessment of cultural literacy. Current college English assessment still focuses on written examination results and grade examination scores, laying stress on language knowledge points. There is no sound evaluation standard for cultural literacy, and the assessment of students' cultural understanding ability and cross-cultural communication competence is neglected, leading to the general neglect of cultural learning by both teachers and students.

4. Advantages of AI-assisted English culture integration teaching

4.1. Pushing resources hierarchically to improve teaching pertinence

By integrating and analyzing students' academic performance, classroom performance, after-class exercises, learning interests and other learning situation data, artificial intelligence can accurately classify students' learning levels. It pushes basic cultural contents, such as daily communication and folk etiquette, to students with weak foundations, and in-depth learning contents, including literary connotation and social culture, to competent students. It can also push industry-specific communication culture according to students' majors, breaking the limitations of unified teaching and implementing stratified teaching in accordance with students' aptitude.

4.2. Building immersive virtual scenarios to enhance teaching effectiveness

With the help of virtual simulation technology, artificial intelligence can restore a variety of real communication scenarios, such as Western festival gatherings, foreign-related workplace communication and daily social interaction^[9]. Students carry out practical exercises through role-playing and situational dialogues, intuitively perceiving language habits and cultural etiquette in different scenarios, and transforming abstract cultural knowledge into practical abilities, which effectively solves the teaching problem of disconnection between learning and application. Meanwhile, AI can provide all-weather oral practice accompaniment to guarantee sufficient after-class practice time for students.

4.3. Enriching classroom teaching forms to stimulate independent learning interest

Artificial intelligence can create diversified, interesting teaching modes, such as cultural knowledge challenges, interesting comparisons between Chinese and foreign cultures, intelligent voice reading and popular science short videos on culture. These modes change the dull classroom atmosphere, popularize tedious cultural knowledge, fully mobilize students' enthusiasm for independent inquiry learning, and create a relaxed and efficient cultural learning atmosphere.

4.4. Constructing an intelligent evaluation system to realize accurate teaching feedback

Artificial intelligence can record the whole process data of students' cultural learning, and carry out comprehensive evaluation from multiple dimensions, including mastery of cultural knowledge, understanding of cultural connotation, practical application of communication and cultural values. It corrects errors in students' situational dialogues and oral expressions in real time and pushes targeted consolidated learning content. It also provides teachers with overall class learning situation data to facilitate timely adjustment of teaching plans and optimization of teaching contents and methods.

5. Implementation paths of English culture integration teaching assisted by AI

5.1. Building an intelligent teaching platform to consolidate the teaching foundation

Colleges and universities integrate various resources to build exclusive AI English culture teaching platforms and construct Chinese-English bilingual cultural resource libraries containing texts, audios, videos, scenario materials and other learning materials, paying equal attention to the construction of Western cultural resources and excellent traditional Chinese cultural resources. The platform is equipped with functions such as hierarchical resource push, virtual scenario practice, online interaction between teachers and students and learning situation data analysis, realizing the full-process intelligent management of college English culture teaching, facilitating teachers to assign learning tasks and students to carry out independent learning.

5.2. Integrating teaching contents to construct a systematic cultural teaching system

Relying on the powerful resource integration and classification capability of artificial intelligence, English cultural knowledge is divided into three levels: superficial daily culture, intermediate communication culture and in-depth ideological culture, which are taught in order from the shallow to the deep. Closely combining with college English textbooks, teachers use AI to dig deep into the cultural background and humanistic allusions behind texts, and integrate language knowledge points with cultural knowledge points in depth. Meanwhile, frontier cultural hot topics are updated in real time, and high-quality positive teaching materials are selected to adhere to the correct cultural education orientation.

5.3. Creating diversified teaching scenarios to promote the application of cultural knowledge

First, optimize offline classroom teaching. Based on AI virtual teaching equipment, teachers select corresponding cultural scenarios according to teaching contents and organize students to carry out interactive activities such as classroom dialogue exercises and cultural theme debates to make in-class cultural teaching more practical.

Second, expand online independent learning. Teachers assign after-class cultural learning tasks via intelligent platforms, and students finish cultural reading, listening exercises and virtual scenario simulation exercises in their spare time, solving learning difficulties with the help of the AI Q&A function.

Third, carry out extracurricular cultural practice. By virtue of intelligent cross-border communication tools, online cultural exchange platforms for Chinese and foreign students are built, enabling students to spread Chinese culture and learn foreign cultures in real exchanges so as to temper their cross-cultural communication competence.

5.4. Improving the intelligent evaluation mechanism to guarantee the effect of cultural integration

Establish diversified evaluation standards for cultural literacy and integrate formative evaluation. Artificial intelligence is used to record students' in-class performance, online learning duration, scenario practice achievements and other formative learning data. Combined with the results of final cultural literacy tests and oral communication assessments, students' cultural learning achievements are comprehensively evaluated. Personal learning growth reports are generated based on evaluation data to accurately make up for students' learning deficiencies and form a complete teaching closed loop of teaching, learning, evaluation and optimization^[10].

6. Safeguard measures for AI-assisted culture teaching

6.1. Strengthening the construction of teaching staff

Colleges and universities regularly organize special training on cultural knowledge and artificial intelligence teaching skills for English teachers to improve their cultural literacy and practical ability in intelligent teaching. On-campus teaching exchange platforms are built to encourage teachers to share excellent cases of intelligent cultural teaching and exchange teaching experience, so as to build a high-quality compound English teaching team.

6.2. Improving software and hardware teaching facilities

Increase investment in educational funds, upgrade hardware facilities such as smart classrooms and virtual simulation classrooms on campus, regularly maintain and optimize intelligent English learning platforms, and timely update and expand cultural teaching resources. Strengthen resource sharing and cooperation between colleges and universities, integrate high-quality teaching resources and reduce the cost of teaching, research and development.

6.3. Transforming teaching and learning concepts of teachers and students

Colleges and universities adjust the educational objectives of English courses and bring cultural literacy and cross-cultural communication competence into core training objectives. Guide teachers to change traditional teaching thinking and flexibly apply intelligent technology to innovate cultural teaching modes. Change students' exam-oriented learning thinking through cultural competitions and theme activities to make them attach importance to cultural learning voluntarily.

6.4. Perfecting the teaching management system

Formulate management norms for intelligent college English culture teaching, clarify classroom teaching standards, online learning requirements and assessment rules, and standardize the implementation process of intelligent teaching. Set up teaching supervision groups to regularly inspect the development of intelligent culture teaching, timely rectify problems such as formalistic teaching, and continuously optimize teaching management modes.

7. Conclusion and prospect

With the rapid digital development of education, applying AI to college English cultural teaching is an inevitable trend to advance teaching reform and achieve all-around education. At present, relevant teaching faces challenges in teaching content, modes, evaluation and teacher competence.

Featured by resource recommendation, scenario simulation, interesting teaching and intelligent assessment, AI can effectively resolve these difficulties. Constructing intelligent teaching platforms, optimizing teaching content, enriching teaching scenarios and perfecting evaluation systems can greatly improve teaching quality and enhance students' language ability and cross-cultural communication competence.

In the future, teachers shall optimize AI applications, spread outstanding traditional Chinese culture and cultivate students' cultural confidence. Rational use of AI helps cultivate high-quality foreign language talents with solid language skills, cultural literacy and international vision.

Funding

National Social Science Fund of China, "Research on the Representation of Information Structure in Chinese Learners' English Interlanguage" (Project No.: 23BYY144); Teaching Reform Project of Xi'an University of Science and Technology (Project No.: 26163)

Disclosure statement

The author declares no conflict of interest.

References

- [1] Zhang WX, Zhao C, Tian Y, 2025, Research on Paths and Strategies of AI Empowering College English Textbook

- Application. Foreign Language Education Research Frontiers, (4): 22–28.
- [2] Gu XY, 2026, An Empirical Study on AI Agent Empowering Regional Culture Integration into College English Teaching. Education Progress, (4): 56–61.
 - [3] Xu YR, 2026, Domestic Research Review on Artificial Intelligence and College English Teaching. Education Progress, (1): 13–19.
 - [4] Guo LP, 2024, Research on College English Teaching Reform from the Perspective of Cultural Power Strategy. Education Science, (5): 40–45.
 - [5] Liu M, 2025, Practical Research on Artificial Intelligence Empowering Chinese Culture into Foreign Language Teaching in Colleges and Universities. Foreign Language World, (1): 78–83.
 - [6] Wang L, 2024, Application of Virtual Simulation Technology in College English Cross-Cultural Teaching. Journal of Higher Education Research, (3): 66–71.
 - [7] Li H, 2024, Research on Hierarchical Teaching Mode of College English Based on Big Data. Modern Educational Technology, (7): 33–39.
 - [8] Chen Y, 2025, Exploration on Cultural Infiltration Strategies in Public English Courses. Campus English, (12): 102–105.
 - [9] Brown D, 2023, Principles of Language Learning and Teaching. Pearson Education Press.
 - [10] Smith J, 2024, Cross-Cultural Communication and Foreign Language Classroom Teaching. Journal of Language Teaching, (2): 47–52.

Publisher's note

Whioce Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.