

# Research on the Cultivation of Chinese Culture Dissemination Ability Empowered by AI

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**Abstract:** This study focuses on the application of artificial intelligence (AI) technology in enhancing the ability to disseminate Chinese culture. Using the course An Overview of Chinese Culture as a practical carrier, an innovative teaching model of “AI+Cultural Dissemination” is constructed. By integrating AI technologies such as big language models and multimodal generation tools, combined with the PIA three-step teaching method (perception → internalization → application), the organic integration of cultural knowledge transmission, cross-cultural thinking, and communication practice is achieved. Research has shown that AI technology can effectively solve problems such as insufficient depth of content and weak practical links in traditional cultural teaching, significantly improving students’ cultural understanding and international communication abilities. The integration of ideological and political elements into the curriculum further enhances students’ cultural confidence and patriotism, forming a dual wheel driving model of “technological empowerment + humanistic guidance”. This study provides a transferable practical paradigm for the reform of cultural courses in foreign language majors, which has important reference value for cultivating international talents who can understand China and spread Chinese culture.

**Keyword:** AI technology; Cultural dissemination ability; Course ideology and politics; PIA three-step teaching method; Blended learning

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## 1. Introduction

In the context of globalization, enhancing the dissemination ability of Chinese culture is an important measure for universities to implement the fundamental task of cultivating morality and talents, and it is also a strategic requirement for the country to cultivate international communication talents. Jiang Hongxin (2019) pointed out that college teachers need to strengthen the subject awareness of foreign language teaching as cultural and cross-cultural teaching, and promote the cultural shift of foreign language education<sup>[1]</sup>. However, traditional cultural dissemination teaching has many problems, such as strong theoretical content, lack of practical elements, and insufficient student interest in learning. In recent years, the rapid development of artificial intelligence technology has brought new opportunities for cultural communication and teaching. AI technology, with its powerful text understanding and generation capabilities, can effectively solve problems such as insufficient depth of teaching content and a focus on theory over practice in the teaching process, providing new ideas and methods for cultivating culture dissemination ability.

## 2. Research Background

### 2.1. Importance of cultivating culture dissemination ability

Chinese culture has a long history and is the spiritual pillar of the Chinese nation. Improving the external dissemination ability of Chinese culture is not only a reflection of cultural confidence, but also an important component of the country's soft power. In recent years, many scholars have conducted multidimensional explorations on this topic. For example, Risager (2018), Zhang Hong and Yu Rui (2020), Yang Dongling and Wang Dongping (2022) have studied cultural elements in foreign language textbooks<sup>[2,3,4]</sup>. Gu Weixing (2019), Sun Shuguang (2023), Kong Lei and Yang Xinrui (2025) focus on the study of cultural teaching design for foreign language courses<sup>[5,6,7]</sup>. Cui Linlin (2023), Yang Hua and Li Liwen (2023) have done some research on the development process of Chinese cultural dissemination ability for college students and audience awareness cultivation<sup>[8,9]</sup>. Zhao Hong and Chang Yanqiao (2024) focus on the connotation and element framework of cultural dissemination ability<sup>[10]</sup>. Wei Wen (2024) elaborated on how to cultivate Chinese cultural awareness and cultural confidence among English major students in English major courses from the aspects of basic principles, textbook analysis, and teaching implementation process<sup>[11]</sup>. Lü Weisong (2024) believes that breaking down barriers and exploring new forms of human civilization as a guide is an innovative expression of adhering to China's cultural stance and enhancing international communication efficiency<sup>[12]</sup>. Chen Xishuo (2025) believes that with the rapid development of generative artificial intelligence (AIGC) technology, it is necessary to accelerate the construction of an independent technology ecosystem and further promote Chinese culture to the world<sup>[13]</sup>. Deng Xiujun and Zhao Yueyan (2025) explore the impact mechanism of the evolution of media technology on the construction of dialogue language system in the external dissemination of Chinese culture from the perspective of media change<sup>[14]</sup>. These studies provide important theoretical guidance and practical references for promoting the integration of Chinese culture into foreign language teaching, but research on the application of AI technology in the dissemination of Chinese culture is still limited.

### 2.2. Application of AI technology in culture dissemination

The integration of AI technology and cultural teaching is based on the following theoretical framework: firstly, Bloom's cognitive goal classification theory emphasizes the advanced process of knowledge from memory, understanding to application and creation, providing a theoretical basis for building a "cognition internalization application" teaching loop; The second is cross-cultural communication theory, which uses AI to simulate cultural conflict scenarios and generate comparative analysis reports to help students establish awareness of cultural differences; The third is constructivist learning theory, where multimodal practical activities supported by AI tools can promote students to actively construct cultural knowledge systems.

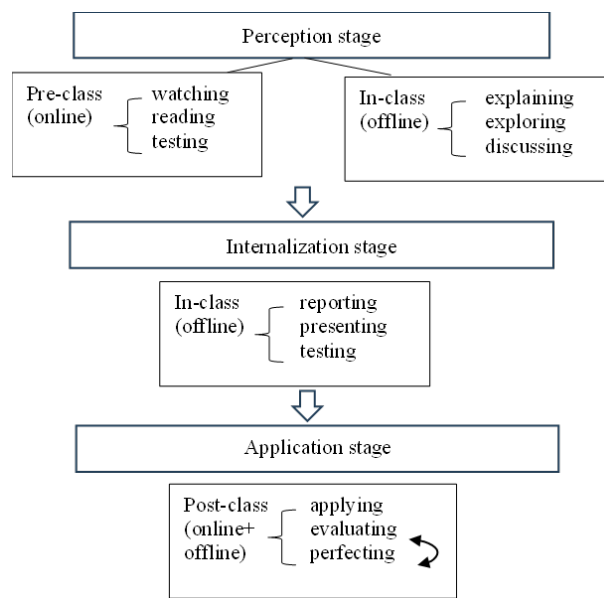
The application of AI technology has several advantages. At the content level, AI can quickly generate semantic network diagrams in both Chinese and English, deepening students' understanding of abstract concepts; at the level of expression, AI can optimize communication techniques based on the characteristics of the target audience, enhancing the accuracy of cross-cultural communication; at the practical level, AI driven multimodal creation, such as virtual cultural ambassadors and bilingual short videos, provides students with immersive communication practice scenarios.

## 3. Practical Exploration of AI Empowering the Cultivation of Chinese Cultural Dissemination Ability

### 3.1. Course design

#### 3.1.1. Innovative PIA three-step teaching method

The course adopts a hybrid online and offline PIA three-step teaching method, combined with regional cultural characteristics, to construct a teaching mode of "online knowledge graph+offline practical creation"<sup>[15]</sup>. The specific implementation process is as follows:



### Perception stage

Students learn about the knowledge graph AI course constructed through the online intelligent tree platform before class, and complete the learning and testing of online resources through watching, reading, and testing. Teachers in offline classrooms explain key and difficult points, guide students to further explore and think about them and new knowledge points, and then organize students to have group discussions, in order to achieve students' cognition and absorption of new knowledge.

### Internalization stage

Students use various AI tools in class to explore relevant knowledge points and have group discussions and speeches. They select chapter related knowledge points in groups and report them in class based on local elements. Finally, they complete tests on relevant knowledge points to achieve students' initial internalization of newly learned knowledge. In addition, students further internalize and absorb the knowledge they have learned by reviewing, reflecting on, and testing it outside of class.

### Application phase

After class, a combination of online and offline methods is used, and teachers assign cultural practice assignments to students, allowing them to apply the knowledge they have learned to cultural dissemination practices using various AI tools. Students upload their works to online platforms, and teachers evaluate their cultural practice assignments and provide suggestions for improvement, while implementing peer evaluation among students. Students further improve their cultural dissemination works based on the opinions of their teachers. Teachers upload excellent cultural works to overseas social media or recommend them to Confucius Institutes overseas, so that students can truly participate in the practice of cultural external dissemination.

## 3.1.2. Application of AI technology in curriculum

### 3.1.2.1. Knowledge graph course assisted teaching

Students learn the knowledge graph course on the Zhihuishu platform and utilize the platform's AI assistant to assist in offline course learning, achieving a blended learning mode of online and offline. AI assistants can provide personalized learning advice and guidance based on students' learning progress and feedback, helping students better understand and master course content.

### **3.1.2.2. In depth analysis of cultural concepts**

Students use AI tools such as DeepSeek to conduct in-depth analysis of the core concepts of Chinese culture and generate semantic network diagrams in both Chinese and English. For example, for abstract cultural concepts such as “harmony in diversity” and “unity of heaven and man”, AI can quickly search for a large amount of relevant literature, sort out their evolution and development in different historical periods and cultural backgrounds, and help students understand the connotation and extension of these concepts from a macro level.

### **3.1.2.3. Simulation of cultural dissemination scenarios**

Using AI generation technology to simulate scenarios related to Chinese culture and create a dynamic case library of “cultural exposition cultural experience”. In the classroom, teachers guide students to analyze these cases, explore communication barriers that may be encountered in different cultural backgrounds, and apply their learned knowledge of Chinese culture and cross-cultural communication skills to propose corresponding solutions. For example, Students can use AI tool to simulate a scene where foreign tourists who are exploring the culture behind the Terra Cotta Warriors when traveling in Xi’an. Students need to have scene dialogues and design reasonable communication strategies to help tourists better understand the culture of the Terra Cotta Warriors, so as to improve students’ cross-cultural thinking ability and problem-solving ability.

### **3.1.2.4. Practice of multimodal cultural dissemination**

Students use various AI tools to create high-quality multimodal Chinese cultural works. For example, they can use tools such as clip and iFlytek to generate multilingual dubbing and subtitles for cultural short videos, and use platforms such as Synthesia and Baidu AI Cloud to create virtual cultural ambassadors to complete cultural explanations, sitcoms and other tasks; Students can utilize visual materials such as Zhimeng and Canva to generate traditional cultural elements, and combine student creativity to create cultural posters and other promotional works. In the creative process, students not only need to apply their knowledge of Chinese culture, but also need to master certain AI technology operation skills, which cultivates their innovation and practical abilities.

## **4. Effectiveness Analysis and Reflection**

### **4.1. Quantitative analysis of students’ ability improvement**

#### **4.1.1. Significant increase in students’ interest and participation in learning**

By introducing AI technology and a hybrid online and offline teaching model, the course content is more diverse and the teaching form is more lively, greatly stimulating students’ interest in learning and enthusiasm for participation. According to the survey results, 86% of students believe that their interest in learning has been enhanced, their sense of identity and pride in local culture has been strengthened, thereby increasing cultural confidence, and their love and sense of responsibility for the country and nation. Meanwhile, 86% of students believe that their enthusiasm for participating in cultural practices has also been enhanced through the study of this course.

#### **4.1.2. Significant improvement in cultural dissemination ability**

With the help of AI tools and multimodal cultural dissemination practices, students can transform their knowledge of Chinese culture into practical dissemination ability. In cultural practice projects, students showcase the charm of Chinese culture to a wider audience by creating high-quality cultural works such as short videos, posters, virtual presentations, etc. At the same time, students continuously improve their cross-cultural thinking and communication skills through cross-cultural dissemination scenario simulations and practical activities. They are able to more accurately introduce Chinese culture to foreign friends, avoid cultural misunderstandings and conflicts, truly apply what they have learned, and significantly enhance their cultural dissemination abilities.

#### **4.1.3. Significant effectiveness of ideological and political education**

By organically integrating ideological and political elements into curriculum teaching, students' cultural confidence and patriotism have been greatly enhanced. During the learning process, students gain a deep understanding of the profound and unique value of Chinese culture, and develop a strong sense of identity and pride in traditional Chinese culture, enhancing their love for the country and the nation. The students' works have been recognized and recommended by overseas Confucius Institute teachers, making their own contributions to promoting cultural exchanges between China and foreign countries. The implementation of ideological and political education in the curriculum not only enhances students' cultural literacy and moral level, but also cultivates their sense of social responsibility and mission, achieving the organic unity of knowledge imparting and value guidance.

#### **4.2. Promotion value of teaching mode**

This teaching model demonstrates transferability in the following aspects.

##### **4.2.1. Teaching reform level**

This course reform provides a "technology empowerment" paradigm for courses such as "Cross Cultural Communication" and "Chinese English Translation". Xi'an Peihua University has applied this model to the Business *Culture Communication course* and developed an "AI Business Scene Simulation" module. The resulting "Tool Adaptation Teaching Iteration" methodology can be replicated in other cultural courses.

##### **4.2.2. Cultural dissemination level**

The AI works created by students have become a new force in the international dissemination of Chinese culture, with 12 of them selected as teaching materials for Confucius Institutes; The dissemination model of "technology empowerment+youth perspective" provides a supplement to official external publicity, forming a multi-level cultural dissemination system.

##### **4.2.3. Social service level**

The research tries to cooperate with local intangible cultural heritage bases in Xi'an, invite intangible cultural heritage inheritors to campus for intangible cultural heritage exhibitions, and train them in digital communication skills; The optimized Zhihuishu AI course has served multiple universities across the country, expanding the coverage of high-quality teaching resources.

#### **4.3. Challenge and improvement direction**

Despite significant achievements, there are still three major challenges in practice.

##### **4.3.1. Technical adaptability issues**

There are still errors in the handling of cultural proprietary items by general AI tools, such as simply translating " 阴阳 " as "yin and yang" without elaborating on philosophical connotations; The operational complexity of multimodal tools is relatively high, with about 28% of students indicating a need for more technical support. In the future, more professional cultural teaching AI plugins need to be developed to simplify the operation process.

##### **4.3.2. Difficulties in humanistic screening**

AI generated content may have value biases, such as overly simplified interpretations of "filial piety culture"; Some students overly rely on AI creation, resulting in a lack of personal thinking in their works. Researchers need to establish a more comprehensive "AI generation manual review" mechanism to strengthen the cultural guidance role of teachers.

### 4.3.3. Optimization of evaluation system

The current evaluation focuses on technological application and cultural accuracy, with insufficient assessment of the “dissemination effect”; AI data analysis is difficult to fully capture implicit dimensions such as emotional resonance in cultural dissemination. A three-dimensional evaluation model of “technical indicators+humanistic indicators+dissemination effectiveness” needs to be constructed, and an audience feedback mechanism should be introduced.

Future research will deepen in the following three directions. One is to develop an AI assistant specifically designed for cultural dissemination, with a built-in cultural knowledge base and cross-cultural communication strategy library; The second is to build a “virtual cultural dissemination laboratory” and use VR technology to create immersive cross-cultural dissemination scenes; The third is to expand international cooperation and jointly establish AI cultural dissemination joint laboratories with overseas universities to enhance the internationalization level of research.

## 5. Conclusion

Through the three-dimensional innovation of “PIA teaching method+regional culture+AI technology”, the course of *An Overview of Chinese Culture* breaks through the bottleneck of traditional culture teaching that “theory is separated from practice, language and culture are separated”, and constructs the educational closed-loop of “knowledge acquisition - value identification - communication practice”. The research results indicate that the deep integration of AI technology and curriculum ideology provides an effective path for cultivating compound talents with international perspectives and patriotism. In the future, the research will further deepen the application of AI technology, such as developing virtual simulation cultural experience systems, optimizing multimodal teaching evaluation models, continuously improving the timeliness and educational effectiveness of courses, and providing solid support for cultivating international talents who understand China and can spread it.

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## Disclosure statement

The author declares no conflict of interest.

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