

Original Paper

Intelligent English Teaching Based on the Pedagogy of Performing Another Culture and ChatGPT Technology

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Abstract

In the background of digital education, the intelligent capabilities of ChatGPT-based technology in teaching have emerged as a powerful tool for facilitating teachers' preparation for lesson, improving students' learning motivation and effectiveness, and promoting the development of intelligent curriculum. This study put forward a novel model of ChatGPT-based English teaching grounded in the "Pedagogy of Performing Another Culture" proposed by Galal Walker. From the three aspects of teaching design, application scenarios, and learning effect evaluation, this model explores the application of ChatGPT in the four fundamental language domains of listening, speaking, reading, and writing, with the objective of enhancing students' language proficiency and cultural sensitivity, while also fostering their digital learning capabilities. To uphold academic integrity and ethical use of ChatGPT in English teaching, a C++-based ChatGPT application has been designed and tailored to the specific needs of English language learners. The school-based intelligent courses based on ChatGPT are available for students to carry out more diverse and effective English learning, promoting the rational use of ChatGPT in learning.

Keywords

the Pedagogy of Performing Another Culture, ChatGPT technology, intelligent English teaching

1. Introduction

Since the official release of the generative artificial intelligence system ChatGPT in November 2022, it has rapidly become the focal point of the education sector. With outstanding capabilities in text-based content generation and contextual understanding, ChatGPT is expected to have a significant impact on education. This impact includes alleviating teachers' routine and repetitive workloads, advancing personalized teaching, and enhancing overall teaching quality (Lu et al., 2023). ChatGPT can be

applied to personalized learning needs, such as speech recognition and pronunciation exercises, reading practice, writing exercises, translation practice, grammar exercises, and more.

This article, focusing on English language teaching, explores how to integrate ChatGPT into English language instruction to promote the development of intelligent courses. Drawing on the “The Pedagogy of Performing Another Culture” proposed by American scholar Galal Walker, the article examines the specific application of ChatGPT in English teaching through teaching design, application scenarios, and learning effectiveness evaluation. Additionally, the article attempts to develop a C++-based ChatGPT English teaching application program to enable students to use the program for English learning, addressing concerns about students abusing ChatGPT for assignment ghostwriting (Lu et al., 2023).

2. The Pedagogy of Performing Another Culture

2.1 The Pedagogy of Performing Another Culture Overview

The core concepts of “The Pedagogy of Performing Another Culture” are “performance” and “culture.” The term “performance” integrates multiple layers of meaning from the fields of drama, anthropology, sociology, and linguistics, involving immersive and hands-on language and culture learning experiences for learners (Yu, 2010). Similar to theatrical performance, all human verbal behaviors encompass five key elements: time, place, characters, audience, and script (Walker & Noda, 2000; Qin, 2017). “Culture,” defined in various ways across different domains, is conceptualized in the methodology as “how people conduct themselves” (Walker & Noda, 2000). From the perspective of foreign language learning, culture can be categorized into achievement culture, information culture, and behavior culture (Hammerly, 1986). The Pedagogy of Performing Another Culture aims to cultivate students’ intercultural communication competence through practical experiences, helping them better understand and immerse themselves in culture. The approach advocates diverse teaching methods, emphasizes student initiative and creativity, enabling learning through experience and growth through practice.

2.2 Application of the Pedagogy of Performing Another Culture in English Teaching

2.2.1 Application in English Listening

English Listening Teaching Guided by the Pedagogy of Performing Another Culture aims to help students master English phonetics, intonation, understand the inherent cultural characteristics of the English language, and enhance listening proficiency. Teachers can employ the following methods: ① Incorporating Situation-Specific Listening Training: Situation simulation is a crucial aspect of this instructional methodology. In listening teaching, teachers can design various scenario simulations based on students’ real situations and learning needs. This approach allows students to immerse themselves in the context during listening exercises, experiencing the interconnection between language and culture. ② Emphasizing Phonetics and Intonation Training: In the Performance and Culture Instructional Methodology, training in phonetics and intonation holds significant importance. Accurate phonetics and

intonation are crucial for English listening comprehension. Teachers can assist students in understanding the rules of English phonetics and intonation through methods such as imitation, comparison, and explanations, thereby enhancing their listening comprehension abilities. ③ Highlighting the Use of Listening Strategies: The Performance and Culture Instructional Methodology emphasizes the active use of various listening strategies, such as prediction, inference, judgment, summarization, etc. These strategies help students more effectively comprehend listening materials.

2.2.2 Application in English Speaking

Guided by the Pedagogy of Performing Another Culture, English oral teaching aims to enhance students' English speaking proficiency and provide an understanding and experience of the cultural nuances of the English language. Teachers can employ the following methods: ① Organizing Cultural Role-Playing Activities: Engage students in role-playing activities within simulated contexts where they use English for communication, such as simulating international business negotiations. This approach not only helps improve students' oral expression skills but also allows them to gain a deeper understanding of English culture. ② Encouraging Students to Watch English Movies and Listen to English Songs: Foster a contextual understanding of the cultural nuances represented by the English language by encouraging students to watch English movies and listen to English songs. This exposure helps students better comprehend and apply English. Additionally, students can enhance their pronunciation, intonation, and listening skills through these activities. ③ Actively Facilitating Language and Cultural Exchange Activities: Utilize online platforms, including video communication, to facilitate language and cultural exchange activities between students and those from English-speaking countries. This enables students to authentically experience English culture, thereby enhancing their cross-cultural communication skills. ◦

2.2.3 Application in English Reading

Guided by the Pedagogy of Performing Another Culture, English reading instruction aims to equip students with reading skills in English and foster a deep understanding of the inherent features of English culture. Teachers can employ the following methods: ① Selecting Culturally Relevant Reading Materials: Teachers can choose reading materials that incorporate elements of English culture, such as traditional British festivals or historical figures in the United States. This approach enables students to gain insights into English culture through reading. ② Encouraging Emotional Engagement: Teachers can guide emotional engagement through questioning and discussions, allowing students to emotionally connect with the reading materials. This involvement helps students perceive the emotional elements inherent in English culture, including emotions like joy, anger, sorrow, and traditional cultural values. ③ Creating Cultural Contexts: Teachers can establish cultural contexts by providing background information, delivering cultural explanations, or showcasing cultural videos. This approach immerses students in cultural scenarios, facilitating a deeper understanding of the cultural nuances within English culture.

2.2.4 Application in English Writing

Guided by the Pedagogy of Performing Another Culture, English writing instruction aims to develop students' writing skills and delve into the intrinsic values of English culture. Teachers can employ the following methods: ①Selecting Culturally Relevant Writing Topics: Teachers can choose writing topics that incorporate elements of English culture, such as describing historical landmarks in the UK or crafting a biography of an American historical figure. This approach allows students to explore English culture through the act of writing. ②Encouraging Emotional Engagement: Teachers can foster emotional engagement through questioning and discussions, enabling students to emotionally connect with the writing process. This involvement helps students experience the emotional elements inherent in English culture, such as the beauty of nature and cultural heritage. ③Creating Cultural Contexts: Teachers can establish cultural contexts by showcasing culturally relevant images, videos, or other materials. This approach creates cultural scenarios, allowing students to gain a deeper understanding of the cultural nuances within English culture. °

3. On the Intelligent English Teaching Based on the Pedagogy of Performing Another Culture and ChatGPT Technology

Teachers should guide students in critical and creative thinking, encouraging them to make better use of AI-driven technologies (Jiao, 2023). In the following sections, a ChatGPT intelligent English teaching model based on the Pedagogy of Performing Another Culture will be designed. Students will explore acceptable AI technologies and engage in English learning through AI-enhanced courses utilizing ChatGPT technology.

3.1 On the Intelligent English Teaching Design Based on the Pedagogy of Performing Another Culture and ChatGPT Technology

3.1.1 Teaching Objectives

The ChatGPT English teaching based on the Pedagogy of Performing Another Culture aims to achieve the following objectives: ①Enhance students' understanding and sensitivity to English language and culture through experiential learning and performance: Integrating intelligent courses based on ChatGPT technology, students engage in physical and linguistic interactions to gain a profound insight into the cultural nuances of the English language. ②Foster students' abilities and strategies for autonomous learning: Students will learn how to leverage intelligent courses based on ChatGPT for self-directed learning and assessment. They explore personalized learning methods, develop self-awareness, and enhance self-management skills. Through physical expression and role-playing, students cultivate interest and motivation for learning. ③Improve students' English expression and writing skills: Utilizing intelligent educational resources based on ChatGPT, students enhance their English expression and writing skills. Engaging in performance and interpretation activities contributes to increased confidence and accuracy in language application. Additionally, the course encourages students to discuss acceptable artificial intelligence technologies and understand the applications of

ChatGPT technology. Students will grasp the core principles and technological applications of intelligent education to adapt to the developmental needs of the digital era.

3.1.2 Teaching Process

(1) Before Class: ①Cultural Introduction and Understanding: Utilizing ChatGPT technology to provide customized cultural knowledge and background introductions for students. Through conversational interactions, ChatGPT can offer diverse and personalized cultural information and explanations based on students' needs and interests, helping them gain a deeper understanding of English culture.

(2) During Class: ①Script Writing and Practice: Utilizing ChatGPT technology to assist students in writing relevant practice scripts. ChatGPT can help students check grammar, vocabulary, pronunciation errors, and provide personalized feedback and suggestions. Tailored exercises based on students' language proficiency and cultural backgrounds can also be provided to enhance students' language and cultural abilities. ②Scenario Simulation and Experience: Using ChatGPT technology to construct diverse scenario simulations and experiential settings. ChatGPT can provide students with authentic, vivid, and multidimensional language practices and experiences. For example, using virtual reality technology to simulate real-life scenarios, online games, social platforms, etc., allowing students to immerse themselves in the target culture and practice. ③Performances and Shows: Leveraging ChatGPT technology to provide online platforms for students to perform and showcase their language and cultural skills. Through online video conferences, social platforms, live streaming, etc., students can demonstrate their language and cultural abilities anytime, anywhere, engaging in cross-cultural communication. ChatGPT can also use natural language processing and machine learning technologies for assessment and feedback, helping students improve their language and cultural skills.

(3) After Class: ①Personalized Teaching Feedback and Self-Evaluation: Utilizing ChatGPT technology to deliver personalized teaching feedback tailored to individual student needs. Providing students with opportunities for self-evaluation and proposing improvement plans. Enabling access to learning resources at any time and place, automating administrative tasks like record-keeping and grading through ChatGPT. ②Enhanced Cross-Cultural Communication Skills: Leveraging ChatGPT's conversational interactions to assist students in analyzing language and cultural proficiency. Facilitating peer review sessions among students using ChatGPT, fostering collaborative assessment and improvement. Strengthening cross-cultural communication abilities through interactive feedback and guidance. ③Accurate Evaluation and Adaptive Teaching Strategies: Employing ChatGPT's natural language processing for accurate assessment of students' oral, vocal, and grammatical skills.

- Providing instructors with precise teaching feedback and evaluation reports.

- Allowing teachers to promptly adjust teaching strategies based on real-time insights obtained through ChatGPT's monitoring and evaluation functions. (See Figure 1)

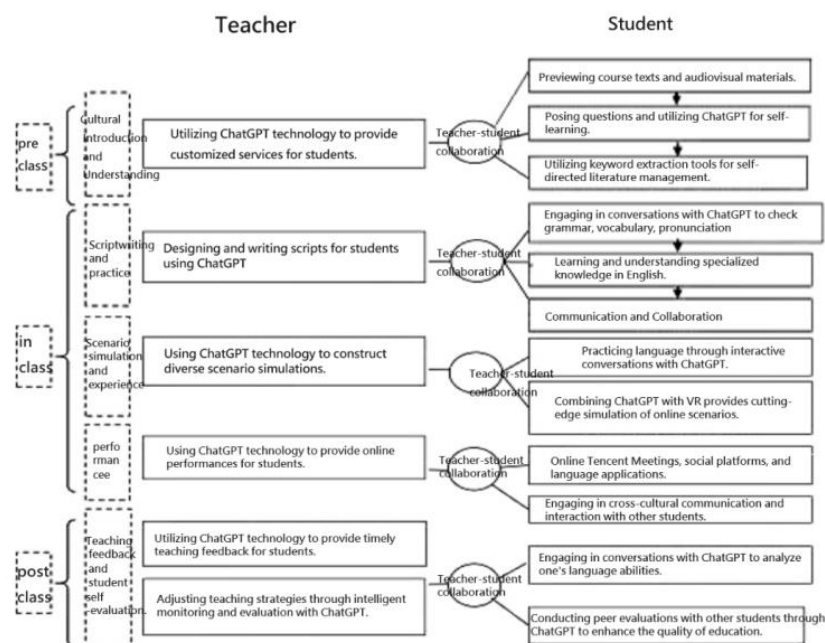


Figure 1. English Teaching Process Diagram Based on the Pedagogy of Performing Another Culture and ChatGPT

3.1.3 Teaching Evaluation

(1) Evaluation of English Expression and Writing Abilities: Intelligent English courses can utilize ChatGPT's language generation and natural language understanding capabilities to provide personalized language training and feedback, assisting students in enhancing their English expression and writing skills. Teachers can assess students' English expression and writing abilities by observing their performance in the classroom, assignments, and interactions with ChatGPT.

(2) Evaluation of Intuition and Cultural Sensitivity: Intelligent English courses can foster students' understanding and sensitivity to language and culture by providing cultural background knowledge, contextual information, and multimedia resources such as audio and video. Teachers can assess students' intuition and cultural sensitivity by observing their understanding and reactions to culture, as well as gathering feedback on multimedia resources.

(3) Evaluation of Autonomous Learning and Utilization of AI Tools: "The vigorous development of artificial intelligence technology has promoted the innovation of foreign language teaching concepts and learning methods" (Hong, 2018). "Traditional foreign language teaching methods and learning approaches can no longer meet the increasingly updated technological culture, and a new ecology and paradigm for foreign language teaching must be reconstructed" (Chen, 2017). Teachers can assess students' ability to use intelligent courses, gather feedback on learning suggestions and exercise questions, to evaluate students' autonomous learning and digital learning capabilities. Additionally, schools should establish regulations and guidelines to ensure that students comply with school

management requirements when using intelligent courses, ensuring the effectiveness of course teaching.

3.2 Intelligent English Application Scenarios Based on the Pedagogy of Performing Another Culture and ChatGPT Technology

3.2.1 Auditory Training and Cultural Introduction

Application 1 is an interactive language teaching program developed in C++. Different functional modules of the program are encapsulated into independent classes to achieve a modular and highly cohesive design. For example, modules such as auditory training, cultural introduction, and interactive dialogue are encapsulated as separate classes, each with clear interfaces and interaction methods. These classes are independent of each other, ensuring a well-defined structure.

The program focuses on auditory exercises and cultural introductions, aiding students in gaining a better understanding of language and cultural backgrounds, as well as common expressions. It provides various thematic options, including news and culture, randomly presenting content based on different themes to assist students in auditory exercises. In the cultural introduction segment, the program offers students background knowledge related to the selected theme, enhancing their comprehension of cultural nuances. Through interactive dialogue, students can seamlessly immerse themselves in the learning process. The following code represents a portion of the source code, demonstrating the ‘Cultural Introduction’ functionality within the auditory training. The ‘generate Culture Info’ function, based on the provided ‘topic’ parameter, returns a string containing cultural information relevant to that theme.”

Application 1: Excerpt from an Interactive Language Teaching Program Based on C++

```
1.      string generate Culture Info(string topic) {  
2.          string cultureInfo = "";  
3.          if (topic == "news") {  
4.              cultureInfo = "In this culture, people are very interested in current events and news.";   
5.          } else if (topic == "culture") {  
6.              cultureInfo = "This culture has a long and rich history that dates back thousands of years.";   
7.          } else {  
8.              cultureInfo = "I'm sorry, I don't have any information about the culture related to that topic.";   
9.          }  
10.         return cultureInfo;  
11.     }
```

3.2.2 Oral Training and Performance

Application 2 is a real-time feedback program for spoken language, based on the C++ programming language. The program utilizes features such as class encapsulation, inheritance, and polymorphism to encapsulate student information within the Student class, enhancing the program’s scalability. Additionally, it provides an online performance platform using advanced network communication

technologies like WebRTC and WebSockets. This platform aims to offer students a highly interactive and personalized communication environment, fostering the improvement of their language expression and cross-cultural communication abilities. The following code excerpt demonstrates part of the source code, showcasing the implementation of the Student class and the generateExercise method. In this context, the Student class includes attributes such as the student's name, language proficiency, and cultural background. The generate Exercise method takes a Student object as a parameter and returns an exercise string. This method calls the get Culture Info method to retrieve the student's cultural background, randomly selects an exercise theme, and incorporates it into the exercise string.

Application 2: Real-time Spoken Language Feedback Program based on C++ (Excerpt)

```

1.      string generateExercise(Student student) {
2.          string exercise = "";
3.          string culturalInfo = getCultureInfo(student.getCulturalBackground());
4.          exercise += "Welcome " + student.getName() + " to the language and performance training
session.\n";
5.          exercise += "Today, we will focus on " + culturalInfo + " culture.\n";
6.          exercise += "Let's start with a warm-up exercise: ";
7.          string selectedExercise = exerciseList[rand() % exerciseList.size()];
8.          exercise += selectedExercise + ".\n";
9.          exercise += "Please take a few minutes to prepare and then start the exercise.\n";
10.         return exercise;
11.     }

```

3.2.3 Reading Comprehension and Cultural Experience

Application 3 is a multimodal language learning program based on the C++ language, aiming to provide language and cultural learning support for students. The program employs Natural Language Processing (NLP) and Deep Reinforcement Learning (DRL) technologies, utilizing OpenAI's GPT-3 to generate reading materials of varying difficulty and topics. It provides relevant vocabulary and grammar explanations to help students better understand the target language and culture. Additionally, NLP technology enables text sentiment analysis, topic classification, and text translation, while DRL technology automatically adjusts learning content and difficulty based on students' learning progress, achieving personalized teaching. The following code snippet is part of the source code, using articles generated by ChatGPT to provide vocabulary and grammar explanations, cultural background introductions, and explanations of key points to assist students in better understanding the text.

Application 3 is a multimodal language learning program based on C++

```

1.      // Provide more detailed explanations of relevant vocabulary and grammar.
2.      string vocab = generateVocabularyFromChatGPT(topic, difficulty, true);
3.      cout << "Vocabulary: " << vocab << endl;
4.      string grammar = generateGrammarFromChatGPT(topic, difficulty, true);

```



```

5.      cout << "Grammar: " << grammar << endl;
6.
7.      // Introduction to cultural background and explanations of key points.
8.      string culture = getCulturalBackground(topic);
9.      cout << "Cultural background: " << culture << endl;
10.     string knowledgePoints = getCultureKnowledgePoints(topic);
11.     cout << "Culture knowledge points: " << knowledgePoints << endl;

```

3.2.4 Writing Training and Script Composition

Application 4 is a personalized style training and script writing program based on the C++ language. It aims to enhance students' English grammar, vocabulary, sentence structure, etc., by combining NLTK (Natural Language Toolkit) and OpenAI tools, thereby improving their creativity and learning outcomes. In terms of writing training, the program utilizes NLTK to check for grammar errors and provide correction suggestions. It also employs OpenAI to generate text based on writing prompts to inspire students' creativity and learning effectiveness. Additionally, the program, following the Pedagogy of Performing Another Culture, incorporates various experiential teaching methods such as role-playing, group collaboration, multimedia presentations, etc. The following code excerpt demonstrates the use of the "find_misspelled_words" function from NLTK to identify spelling errors in a given text and the "correct_spelling" function to offer correction suggestions. Correcting spelling errors contributes to improving the overall quality and readability of the text, reducing misunderstandings caused by spelling mistakes. It is evident that utilizing automated spell check is a highly beneficial writing tool, aiding in enhancing text accuracy and readability.

Application 4: C++-Based Stylistic Training and Script Writing Program (Excerpt)

```

1.      // Check for spelling errors in writing
2.      vector<string> misspelled_words = nltk.find_misspelled_words(paragraph);
3.      if (misspelled_words.size() > 0) {
4.          cout << "Misspelled words detected!\n";
5.          for (const auto& word : misspelled_words) {
6.              cout << "Did you mean '" << nltk.correct_spelling(word) << "'?\n";
7.          }
8.      } else {
9.          cout << "Spelling is correct.\n";
10.     }

```

3.3 English Learning Effect Evaluation Based on the Pedagogy of Performing Another Culture and ChatGPT Technology

The evaluation of English learning effectiveness based on artificial intelligence technology includes four aspects: listening, speaking, reading, and writing. Subsequently, a conceptual map for the assessment of learning outcomes has been devised in accordance with the Pedagogy of Performing

Another Culture (see Figure 2).

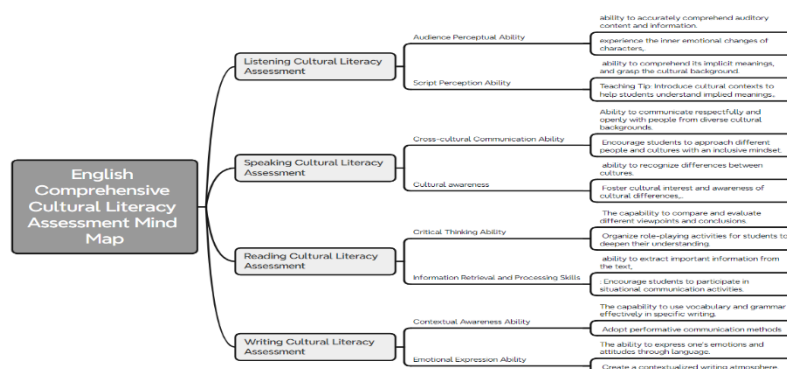


Figure 2. English Learning Effect Evaluation

As shown in Figure 2, the evaluation of English learning effectiveness encompasses four aspects: (1) English listening proficiency is assessed through audience perception and script comprehension abilities. To enhance students' audience perception, teachers should guide them to comprehend emotional changes while listening to materials. To improve students' script comprehension, teachers should introduce relevant cultural backgrounds to assist students in understanding implicit meanings and cultural connotations. (2) Evaluation of English speaking proficiency focuses on cross-cultural communication skills and cultural awareness. To enhance students' cross-cultural communication skills, teachers should encourage them to approach different cultures with an inclusive and open mindset. To cultivate students' awareness of cultural differences, teachers should increase students' understanding of the history and culture of other countries, emphasize respect for cultural differences, and enhance students' awareness of diverse cultures. (3) Evaluation of English reading proficiency includes critical thinking abilities and information acquisition and processing skills. English reading involves the interaction between readers and texts (Koda, 2005; Grabe, 2009), requiring readers to use various cognitive, linguistic, and non-linguistic skills to integrate and process textual information (Dhanapala & Yamada, 2015). Teachers can foster critical thinking skills by guiding students to identify gaps or errors in articles. Teachers can also promote information acquisition and processing skills by guiding students to read interesting texts, such as novels and news articles. (4) Evaluation of English writing proficiency includes context awareness and emotional expression abilities. Chinese students often lack mastery of English vocabulary collocations, pragmatics, and semantic evaluative meanings, making it challenging for them to flexibly use complex sentence structures. This is a significant factor contributing to the simplification of student writing (Zhao, 2003). Teachers can focus on students' understanding of context and cultural background, such as enhancing context awareness by analyzing literary works and famous speeches. Teachers can also improve students' emotional expression abilities by creating a communicative atmosphere through activities like performances and simulations.

4. Conclusion

In conclusion, ChatGPT effectively facilitates digitized English language instruction by providing personalized and diverse guidance and feedback, thereby enhancing students' interest and efficiency in learning. Guided by the Pedagogy of Performing Another Culture, students can gain a more comprehensive understanding of the English language and culture, ultimately strengthening their cross-cultural communication skills. Looking ahead to the future of intelligent English language instruction, educators can harness the advantages of ChatGPT technology to deliver even more diverse and effective English teaching. In prospect, ChatGPT technology is poised to find broader applications in English education, offering students a deeper and more personalized learning experience.

Reference

- Chen, J. L. (2017). Reconstructing a New Paradigm for Foreign Language Teaching in the Big Data Era. *Social Sciences in China*, 2017-10-12.
- Dhanapala, K., & Yamada, J. (2015). Reading processing skills among EFL learners in different proficiency levels. *The Reading Matrix: An International Online Journal*, 2015(1).
- Grabe, W. (2009). *Reading in a Second Language: Moving from Theory to Practice*. New York: Cambridge University Press. <https://doi.org/10.1017/CBO9781139150484>
- Hammerly, H. (1986). *Synthesis in Second Language Teaching: An Introduction to Linguistics*. Blaine: Second Language Publication.
- Hong, C. C. (2018). Research on the Construction of University English Ecological Teaching Model in the Era of Artificial Intelligence. *Computer-Assisted Foreign Language Education*, 2018(06).
- Jiao, J. L. (2023). ChatGPT Accelerates the Digital Transformation of School Education - What and How to Teach in the Era of Artificial Intelligence. *China Distance Education*, 2023(03).
- Koda, K. (2005). *Insights into Second Language Reading: A Cross Linguistic Approach*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139524841>
- Lu, Y. et al. (2023). Educational Applications and Prospects of Generative Artificial Intelligence: A Case Study of the ChatGPT System. *China Distance Education*, 2023(03).
- Qin, X. (2017). *Understanding Intercultural Misunderstandings between Chinese and American Cultures: Applying the Performed Culture Approach*. Beijing: Foreign Language Teaching and Research Press.
- Shen, S. S., & Zhu, Z. T. (2023). ChatGPT-like Products: Inherent Mechanisms and Their Impact on Learning Assessment. *China Distance Education*, 2023(02).
- Walker, G., & Noda, M. (2000). *Remembering the future: compiling knowledge of another culture*. In Birckbichler, D. (Ed.), *Reflecting on the Past to Shape the Future*. Lincolnwood: National Textbook Company.
- Yu, L. (2010). Performance in performed culture: A student's notes. In Walker, G. (2010), *The Pedagogy of Performing Another Culture*. Wuhan: Hubei Education Press.

Zhao, X. F. (2003). Evaluation of English Writing and Quantitative System of Language Style. *Foreign Language Teaching*, 2003(05).