

AI-Empowered Cultivation of Cross-Cultural Pragmatic Competence in Business English

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Abstract: In the context of economic globalization and the continuous development of digital trade, cross-cultural pragmatic competence has become a core competency for business English talents. In response to the prominent problems of a lack of real teaching scenarios, a lack of personalized guidance, and lagging and subjective teaching feedback in traditional business English teaching, this study is supported by cross-cultural pragmatics and constructivist learning theory, and constructs an artificial intelligence-empowered cross-cultural pragmatic competence training framework. An integrated intelligent training program is designed from three dimensions: intelligent scene simulation, personalized learning matching, and real-time teaching feedback, and an intelligent training system is built based on a large language model and a business English-specific corpus. This study conducted a 12-week teaching control experiment and verified the scientific and practical effectiveness of the AI empowerment training model constructed in this study through multidimensional teaching evaluation. It can effectively improve students' cross-cultural pragmatic competence in business English and provide practical and theoretical references for the digital and intelligent teaching reform of business English.

Keywords: AI-empowered; Business English; Cross-cultural pragmatic competence; Multimodal assessment methods

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1. Introduction

Under the background of the digital economy and trade globalization, cross-border business activities are becoming more and more complex. The use of business English has been extended to multiple scenes such as negotiation, teamwork, etiquette, and communication. Cross-cultural pragmatic competence has become the core quality of talents, covering three kinds of abilities: language use, social pragmatics, and cultural adaptation. However, the current domestic business English teaching focuses on the explanation of language knowledge points, and cultural teaching is scattered, lacking real scene training; The standardized classroom cannot take into account the basis of differentiation, and the manual feedback is lagging and subjective, which makes students prone to pragmatic bias and low fitness in the workplace.

This paper aims at business English major students, taking business negotiation, e-mail, and meeting as

the main scenes, to explore the cultivation path of AI-enabled cross-cultural pragmatic competence. At the theoretical level, it integrates cross-cultural pragmatics and intelligent education to improve teaching theory. At the practical level, it designs and implements intelligent training programs to cultivate digital foreign trade talents.

The core technology includes three modules: the intelligent scene generation module, which combines the large model and business corpus to generate multicultural graded scenes to dynamically adapt to the level of learners; The personalized path module pushes personalized training according to learners' portraits to strengthen the weak pragmatic dimension; The intelligent feedback module can detect pragmatic problems in real time and push optimization examples, and automatically generate learning data reports to assist teachers' teaching. The paper is arranged as follows: the second chapter reviews the research at home and abroad and analyzes the deficiencies; The third chapter describes the system construction method and process; The fourth chapter analyzes and discusses the teaching experimental data; The fifth chapter summarizes the conclusions, analyzes the shortcomings, and puts forward the prospects.

2. Related work

The deep integration of artificial intelligence and education has promoted AI-enabled foreign language pragmatic competence, cross-cultural teaching, and professional education innovation to become a research hotspot. Wang *et al.*^[1] explored the innovative path of integrating AI into professional education, providing a general idea for discipline teaching reform; Wang *et al.*^[2] built an AI enabled financial data mining model and verified the application value of AI in professional scenarios; He *et al.*^[3] analyzed the enabling mechanism of AI knowledge on students' innovative behavior, providing theoretical support for the cultivation of high-level talents. Chatha^[4] took the in-depth search of AI as a case to provide a practical basis for the application of domestic AI platforms in cross-cultural foreign language teaching; Yue and Huan^[5] explored the application path of AI translation agent based on wisdom spectrum and diction, and provided paradigm reference for cross-cultural pragmatic practice of business English. Wang *et al.*^[6] analyzed the opportunities and difficulties of AI enabled business education and put forward countermeasures; Xiaodong^[7] explored the cultivation mechanism of improving pragmatic competence in academic English; Sari *et al.*^[8] verified the feasibility of integrating intelligent technology into pragmatic teaching; Bingjie^[9] combed the current situation and shortcomings of second language pragmatic competence research; Zhanysbekova and Syrlybayeva^[10] improved the theoretical basis for the cultivation of pragmatic competence. To sum up, there are still obvious deficiencies in the existing research: the academic research on AI enabling education focuses on general disciplines and scenes, and there is a lack of special research on the cultivation of intercultural pragmatic competence specific to business English; Most studies only focus on the instrumental application of AI or the cultivation of general pragmatic competence, and do not combine the particularity of business scenes to build an exclusive AI enabling teaching system.

3. Methods

3.1. Construction of an AI-enabled model for cultivating cross-cultural pragmatic competence

This article combines the big language model and business corpus technology, based on cross-cultural

pragmatics and constructivist learning theory, to construct an AI-empowered cross-cultural pragmatic competence training model of “scenario path feedback” trinity, aiming to enhance the cross-cultural pragmatic competence of business English majors ^[11]. Research on adding cultural adaptation dimensions to the existing two-dimensional framework of pragmatic competence, and constructing a three-dimensional competence system adapted to business scenarios. The model consists of a three-layer architecture including a data resource layer, an intelligent processing layer, and an application service layer. It relies on three core modules: intelligent scene generation, personalized path matching, and real-time feedback evaluation to form a complete learning and training loop. It can accurately match students’ learning shortcomings, intelligently diagnose pragmatic errors, effectively solve the problem of homogenization in traditional teaching, and achieve efficient pragmatic ability training that is personalized and contextualized ^[12].

3.2. Design of controlled teaching experiment

This article uses a comparative experimental method to verify the effectiveness of the cultivation model (Figure 1). 68 junior students from two parallel classes of Business English major at a certain university were selected as the subjects and randomly divided into an experimental group and a control group. After initial testing verification, there was no significant difference in basic abilities between the two groups ($P > 0.05$), indicating comparability. The experimental period is 12 weeks, with 2 classes per week. The control group adopts traditional teaching, case analysis, and role-playing teaching; The experimental group adopts an AI empowerment mode, combining AI for scenario-based training in the classroom, and practicing independently through an intelligent platform after class. Teachers provide personalized guidance based on platform data. The two sets of teaching content and class hours are the same; only the teaching mode is different. Simultaneously collecting learning behavior data during the experiment, conducting pragmatic competence tests and satisfaction questionnaires after completion, and conducting semi-structured interviews with 12 experimental group students to collect qualitative data ^[13].

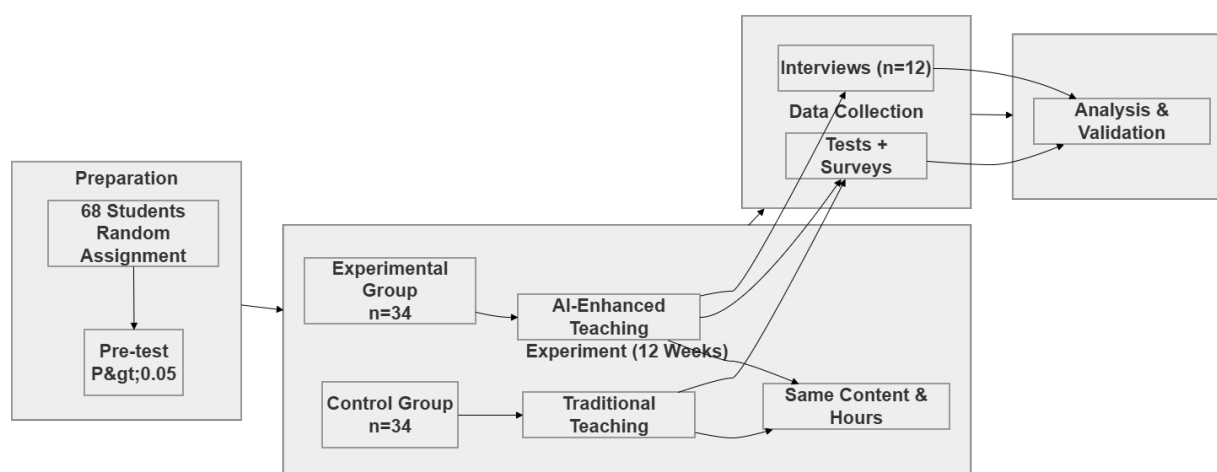


Figure 1. Teaching control experiment design

3.3. Construction of a multi-dimensional pragmatic competence assessment system

To scientifically evaluate the effectiveness of AI empowerment models in cultivating cross-cultural pragmatic competence, this paper breaks through the limitations of traditional single pen-and-paper tests and constructs

a three-dimensional comprehensive evaluation system that balances quantification and quality, process and results. The evaluation revolves around three core dimensions: pragmatic language competence, social pragmatic competence, and cultural adaptability. The study adopts a multi-dimensional evaluation method of “testing + questionnaire + interview + behavioral data,” relying on standardized testing, scale questionnaires, in-depth interviews, and AI platform learning behavior data tracking to ensure scientific and comprehensive evaluation. At the same time, a three-stage implementation process of pre-test, process tracking, and post-test is adopted. Through intergroup and intra-group comparative analysis, the effectiveness of the AI teaching model in cultivating cross-cultural pragmatic competence is systematically verified.

4. Results and discussion

4.1. Analysis of the overall improvement effect of students’ cross-cultural pragmatic competence

After the 12-week teaching experiment, it was found through the comparison of post-test data between the two groups of students that the experimental group has significantly better cross-cultural pragmatic comprehensive ability than the control group. Compared to the various pragmatic biases and cross-cultural communication errors commonly encountered by students in traditional teaching models, the AI-enabled teaching model can significantly optimize students’ cross-cultural pragmatic performance in business English, effectively improve core issues such as non-standard use of business language and insufficient adaptability to cross-cultural communication scenarios, and fully demonstrate the overall effectiveness of intelligent teaching models in cultivating cross-cultural pragmatic competence.

4.2. Analysis of the improvement effect of differentiated pragmatic competence in various dimensions

From the three dimensions of ability segmentation, the effectiveness of this teaching intervention in improving different types of cross-cultural pragmatic abilities shows differentiated characteristics. Among them, the optimization and improvement of students’ social pragmatic competence have the most significant effect. The reason for this is that the traditional classroom teaching model has limited coverage, making it difficult to systematically cover social etiquette norms and differentiated pragmatic rules in different countries and business scenarios. This leads to students being prone to social pragmatic problems such as scene adaptation errors, misuse of communicative politeness principles, and cross-cultural communication logic errors. And AI intelligent teaching can accurately replicate diversified cross-border business social scenarios, carry out targeted scenario-based training, and correct students’ social pragmatic deviations in real time. Therefore, the empowerment effect on social pragmatic abilities is the most prominent.

At the same time, students’ pragmatic language proficiency and cross-cultural adaptability have also been effectively improved. The intelligent teaching system can accurately identify various linguistic issues in students’ business English expression, including common problems such as improper vocabulary matching, awkward sentence structure, and non-standard business language, helping students solidify their language application foundation. Meanwhile, relying on immersive training in various cross-cultural business scenarios, students can continuously be exposed to business culture concepts and communication habits from different countries, weaken inherent cultural stereotypes, gradually establish flexible cross-cultural communication thinking, and comprehensively enhance their cultural adaptation and adaptability in business

scenarios.

4.3. Comprehensive discussion on teaching feedback and learning effectiveness

From the perspective of teaching, the big data statistical function of AI platforms can enable teachers to grasp the overall learning situation of the class and individual shortcomings of students in real time, break free from the limitations of traditional teaching experience based judgment, and achieve the transformation from “generalized teaching” to “precise teaching,” effectively filling the core shortcomings of personalized and feedback lagging in traditional business English teaching. Overall, the AI-enabled teaching model has significant advantages and promotional value in cultivating cross-cultural pragmatic competence in business English.

5. Conclusion

Aiming at the problems of lack of context, lack of personalization, and feedback lag in Business English teaching, this paper constructs a “situation path feedback” three-in-one AI training model, which is verified to be effective by a 12-week experiment. AI technology significantly improves intercultural pragmatic competence through situational immersion, personalized adaptation, and instant reinforcement. The research expands the interdisciplinary achievements of intelligent education and pragmatics, and provides reference for digital teaching. However, the sample size is small, and the cultural connotation of the AI scene is shallow. In the future, we will expand the sample, explore multimodal technology, deepen the cultivation of cultural thinking, and improve the training system.

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