

# Retraction

# Retracted: The Cultivation of Cross-Cultural Communicative Competence in English Teaching under the Background of Artificial Intelligence and Big Data

### Wireless Communications and Mobile Computing

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

#### References

 Z. Zhang, "The Cultivation of Cross-Cultural Communicative Competence in English Teaching under the Background of Artificial Intelligence and Big Data," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 9566066, 13 pages, 2022.



# Research Article

# The Cultivation of Cross-Cultural Communicative Competence in English Teaching under the Background of Artificial Intelligence and Big Data

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Artificial intelligence refers to the intelligence expressed by machines made by humans and is a manifestation of human intelligence. On the whole, artificial intelligence includes two aspects: "artificial" and "intelligence." Artificial is created by man, and information work covers a number of areas, for instance thinking and consciousness. The process from feeling memory to thinking is called "wisdom." The result of wisdom is behavior and language. The expression process of behavior and language is called "ability," and the two are collectively called "intelligence." However, there is no unified explanation for intelligence at present, but there is no doubt about the widespread. Big data processing includes multiple data processing processes, but data quality is the most important link in the entire process, and each data processing link will have an impact on the quality of big data. The big data processing process mainly includes data collection, data preprocessing, data storage, data processing and analysis, data display/data visualization, data application, and other links. The aim of this paper is to explore the studies on the development of intercultural intercommunication skills in English language learning and teaching in the context of artificial intelligence and big data. It is hoped that this will be done in the light of AI and big data technologies. We can explore the current situation of cross-cultural communication, provide new learning directions for cross-cultural communication, and promote cultural exchange and dissemination. This paper investigates students' attitudes towards cross-cultural communication by means of a questionnaire and then briefly tests students' cross-cultural communication ability. The experimental results of this paper show that 4 students have mastered cross-cultural knowledge, accounting for 3%; 8 students have mastered cross-cultural knowledge very well, accounting for 4%, and 9 students have mastered cross-cultural knowledge, accounting for 7%. There are 12 people who are very knowledgeable about cross-cultural knowledge, accounting for 9%. These data show that the current students have very little knowledge of intercultural communication, and their intercultural communication skills need to be improved.

## 1. Introduction

Due to the development of economic globalization and the advancement of science and technology, exchanges around the world are becoming more and more popular. The exchanges between countries are becoming more and more frequent, and the differences between national cultures lead to constant conflicts, which challenge the cultural exchanges between countries. Language is the carrier of culture, and the language of any country cannot be separated from the national culture. To improve the intercultural communication ability, it is necessary to understand the intercultural communication level of the students at this stage. Learning a foreign language is not only about mastering basic phonetics, grammar, and vocabulary but also requires making or speaking many sentences that conform to grammatical and semantic rules. With the continuous advancement of science and technology, artificial intelligence technology is widely used in the field of social production and plays a pivotal role. The range of AI applications is very wide, including medicine, diagnosis, financial trade, robot control law, scientific discovery, and toys. How to link artificial intelligence technology with cross-cultural communication and the analysis of the current situation of cross-cultural communication are the key points to be explored. With the increasing popularity of Internet technology, the information data in life is increasing exponentially, so the concept of big data came into being. Big data refers to the huge amount of data involved that cannot be captured, managed, processed, and organized into information that helps companies make more active business decisions within a reasonable time through mainstream software tools. How to find the required information from massive data has become a major challenge in big data processing. With the continuous optimization of big data processing technology, people have been able to select the required information by keywords, which also improves work efficiency and saves time and cost.

This paper systematically sorts out the cross-cultural communicative competence training models. Each model contains a certain theoretical basis, which has profound theoretical guiding significance for the exploration of future training strategies. Familiarity with cultural knowledge is the key to learning language knowledge. Incorporating culture into English classrooms can improve students' crosscultural communication skills and better master the language. Introducing cross-cultural communication into the classroom can make the theory of cross-cultural communication have more opportunities for practice and at the same time can improve the knowledge reserve and communication ability.

This paper proposes for the first time how to cultivate cross-cultural communication competence in English teaching, which is a new attempt to combine cross-cultural communication with disciplines. Combining the characteristics of the course in the practice process, this paper constructs the framework of cross-cultural communication competence in English teaching, analyzes the problems in teaching, and gives strategies to solve the problems. The solutions and research status of the massive data of the Internet of Things are summarized and analyzed. In this paper, an intelligent recommendation model is introduced to provide users with a scientific algorithm recommendation scheme by means of a knowledge base. Through the knowledge classification ability of rough set theory, the intelligent recommendation of the algorithm can be realized.

### 2. Related Work

China is a Chinese-speaking country. When communicating with other countries, there will be frictions due to cultural differences. In order to reduce friction, it is necessary to improve intercultural communicative competence in English teaching. Hasler et al. present an example of an easy-to-use prototype in cross-cultural interaction. They help achieve the aim of communicating across cultures by means of gestures that translate culturally specific gestures to increase reciprocal communication awareness [1]. Nadeem et al. adopted the IMICC and retested it in an Asian setting in Malaysia. The study employed questionnaire techniques to capture evidence from 300 IM students at a single government college. The findings suggest that feeling search and attitudes about other cultures (ATOC) impact directly on ICC and that the agency of ATOC is plausible empirically.

However, the mediating role of motivation for intercultural communication (MTEIIC) on sensation seeking and ethnocentrism in relation to ICC has not been established [2]. Moore and Díaz look at the perspectives of scholars of linguistic pedagogy on language and how these are translated into their approaches to teaching and learning. As a project on the analysis of language teaching, they interviewed ten language teachers and a coordinator of study visits with a background in language teaching. The teachers' explanations and methods were shaped by their teaching histories, and while there is a range of approaches to integrating interculturalism into language teaching, this approach is more rigorous than previous studies have reported [3]. As an emerging field of industrial applications and an effective solution for fault identification, artificial intelligence (AI) technology is gaining increasing attention from both academia and industry. However, artificial intelligence methods face enormous challenges under different practical operating conditions. Liu et al. provide a comprehensive review of artificial intelligence algorithms in rotating machinery fault diagnosis from both theoretical background and industrial application. They survey the extensive literature on the industrial applications of these AI algorithms. Finally, they discussed the advantages, limitations, practical significance of different artificial intelligence algorithms, and some new research trends [4]. Polina et al. outline the new breed of AI and brainwashing blockchain technology, proposing creative ways in which it can be applied to speed up healthcare investigations in biomedicine. It enables pioneering new tools for patients to gain control and monetise their individual data, as well as incentives for ongoing health monitoring. They introduced new concepts for assessing and valuing personal records, including the combined value of data, the value of time, and the value of relationships [5]. The increasing popularity and development of data mining technology has brought a serious threat to the security of sensitive personal information. In recent years, an emerging research topic in data mining, known as privacy-preserving data mining (PPDM), has been extensively studied. Xu et al. take a broader perspective on privacy issues related to data mining and studies various methods that help protect sensitive information. It is designed to efficiently execute data mining algorithms without compromising the security of sensitive information contained in the data, reducing privacy risks brought by data mining operations [6]. In order to reduce the amount of data collected by IoT, increase the processing speed of big data. Xue et al. proposed the method of compressed sensing sampling. In view of the high computational complexity of the compressed sensing algorithm, they use the multiobjective optimization particle swarm optimization algorithm to improve the search term of the gradient projection sparse reconstruction algorithm (GPSR-BB). The application results show that the proposed multiobjective particle swarm optimization genetic algorithm (MOPSOGA) reduces the number of iterations by 51.6% compared with the traditional GPSR-BB algorithm [7]. In order to provide a more convenient healthcare service and environment, Zhang et al. propose a cyberphysical system for patientcentric healthcare applications and services based on cloud

and big data analysis technology, called Health-CPS. The system consists of a unified standard data acquisition layer. The results of this study suggest that cloud and big data technologies can be used to improve the performance of healthcare systems, enabling better protection of human health [8]. Although these theories have explored artificial intelligence, big data technology, and cross-cultural communication to a certain extent, the combination of the two is not enough, resulting in insufficient practicality.

# 3. Methods on the Cultivation of Cross-Cultural Communicative Competence in English Teaching under the Background of Artificial Intelligence and Big Data

3.1. Intercultural Communication Competence. Culture is a very complex concept, and because of its wide range, there are different concepts in different academic fields [9]. Each individual will be influenced by a specific regional culture. The exchanges around the world are more and more frequent, making cross-cultural exchanges the norm [10, 11]. In fact, the phenomenon of cross-cultural communication has already appeared in the middle of the last century. After World War II, the diplomats sent by the US government knew little about the language and culture of their region, which greatly reduced their work efficiency. To solve this particular case, the United States took the lead in establishing the Diplomatic Academy, which provided a base for cultivating professional talents [12, 13]. In terms of academic concept, cross-cultural communication refers to the communication between native speakers and nonnative speakers and in layman's terms is the process of dealing with foreigners [14, 15]. Figure 1 shows the research content of cross-cultural communication:

The cultivation of intercultural communication ability is not only very important for the improvement of personal ability but also can play a certain role in harmonious coexistence in the world [16]. With the emergence of the importance of cross-cultural communication, the society has paid more and more attention to cross-cultural communication. Therefore, more emphasis has been placed on the cultivation of cross-cultural communication ability in education [17, 18]. With the rise of AI, the combination of education and AI is becoming more and more common. To improve intercultural communications skills, the combination of intercultural communications training and artificial intelligence is a widely used approach today [19, 20]. Figure 2 shows the structure of the intelligent support system:

3.2. Artificial Intelligence Algorithms. This section mainly discusses the relevant theories about artificial intelligence algorithms and deepens the understanding of artificial intelligence algorithms through the discussion of relevant theories to prepare for in-depth discussions.

$$y(a|c) = \frac{y(c|a)y(a)}{y(c)} = \frac{y(c|a)y(a)}{\int y(c|a)y(a)da}.$$
 (1)

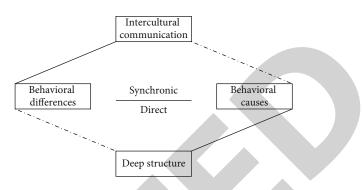


FIGURE 1: Research content of cultural communication.

y(c|a) represents the likelihood function and y(a) represents the probability density.

The research progress of neural network can accelerate the development of artificial intelligence. Convolutional neural network is the most concerned branch of artificial neural network, which can process complex information and store valuable information.

$$l = g\left(\sum_{0}^{1} \sum_{0}^{1} n_{a+o,b+p} u_{op} + c\right).$$
 (2)

Formula (2) represents the neural network function expression.

In the specific analysis, the data input in the network is attributed to the image. However, if there is too much data in the system, there will be redundancy, and the whitening operation can solve this problem. The whitening operation works by reducing the correlation of the input data so that the data have the same variance. Its function expression is as follows:

$$A_{\text{white},c} = \frac{A_c}{\sqrt{\alpha_c}} * \frac{A_c}{\alpha_c},$$
(3)

where  $\alpha_c$  represents the matrix diagonal elements,  $A_c$  represents the scaled matrix diagonal elements, and  $A_{\text{white}}$  represents the whitened identity matrix.

The neural network model needs to use the Gaussian distribution method when optimizing the training parameters, and its function expression is as follows:

$$w = \sqrt{\frac{9}{S_i + S_{i+1}}},\tag{4}$$

where  $S_i$ ,  $S_{i+1}$  represents the hidden layer size before and after parameter optimization.

The forward propagation process of convolutional neural network is similar to that of ordinary artificial neural network. The formula is as follows:

$$u^{x} = w^{x} y^{x-1} + b^{x}, (5)$$

where x represents the current level,  $u^x$  represents the

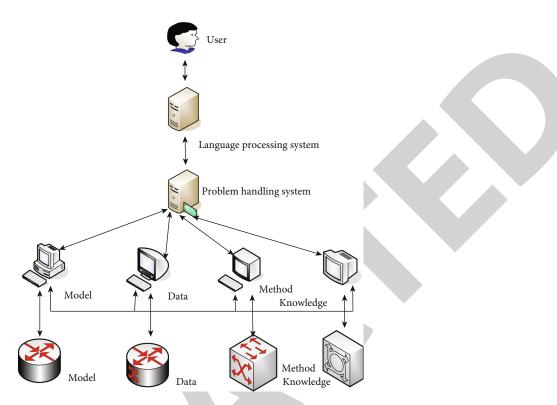


FIGURE 2: Smart support system structure.

received input,  $y^x$  represents the output, and  $w^x$  and  $b^x$  represent the connection weight and additive bias, respectively.

The forward relay formula of the convolutional layer is as follows:

$$u_n^x = f\left(\sum_c u_x^{x-1} \times W_L^x + C_n^x\right),\tag{6}$$

where *n* represents the subscript,  $W_L$  represents the set of the x-1-th layer connected to the *x*-th layer feature maps, and *C* represents the convolution window.

$$W = \int_{S} H(a) da.$$
 (7)

S is a random region in space, and W is multiple integrals.

$$W = \int_{S} h(a)y(a)da.$$
 (8)

 $y(a) \ge 0$  and  $\int_{S} y(a) da = 1$  in Formula (5).

$$u_o = 0.6 \sum_{1}^{B} (t^o - y^o)^3.$$
(9)

In the formula,  $t^{o}$  represents the expected output, and for

*l* samples, the global error formula is as follows:

$$u = 0.6 \sum_{1}^{A} \sum_{1}^{B} (t^{o} - y^{o})^{3} = \sum_{o=1}^{A} u_{o}.$$
 (10)

First, consider the output layer weight change of *u*.

Convolutional neural networks can solve the parameter problem on the model. Using this model can reduce the parameters that need to be learned and improve the performance of the algorithm. The first layer network learns the edge features of the target, while the second layer network learns the high-level features composed of edge features. According to this algorithm, high-level features are continuously learned in units of levels, and the expected value is finally obtained. Convolutional neural networks consist of multiple 2D planar data, which all contain multiple neurons. The specific situation is shown in Figure 3:

$$h_k = \frac{1}{k} \sum_{1}^{k} h(a_1).$$
(11)

Formula (6) represents the arithmetic mean.

$$Q(1) = Q(h(a)) = \frac{1}{k} \sum_{1}^{k} h(a_1), \qquad (12)$$

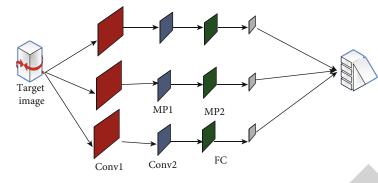


FIGURE 3: Convolutional neural network model.

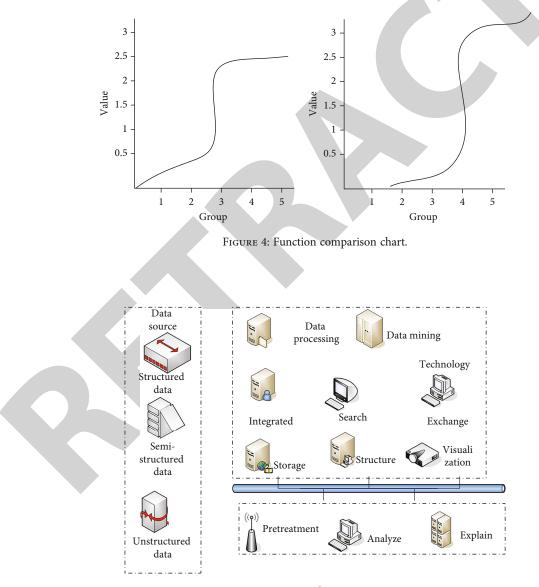


FIGURE 5: Big data structure.

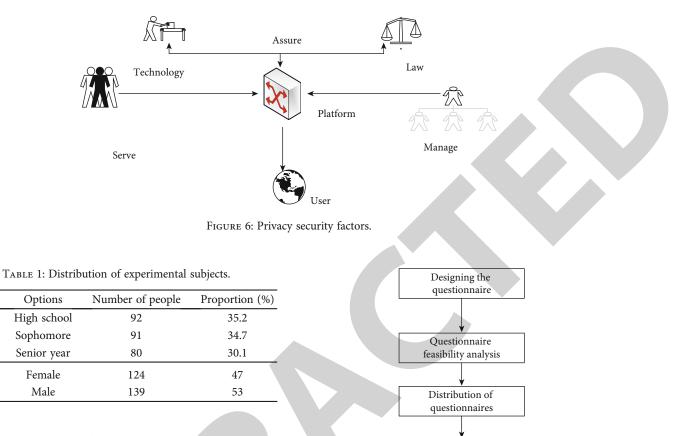


TABLE 2: Distribution of students' performance in English.

Group	Number of people	Proportion (%)
Less than 90 points	39	15
90-110 points	63	24
110-130 points	116	44
More than 130 points	45	17
Total	263	100

where A is an unbiased estimate of Q.

Female

Male

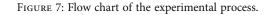
$$Q(j(a)) = \int j(a)y(a)da,$$
(13)

$$Q(j(a)) = \int j(a)\alpha(a)\beta(a)da, \qquad (14)$$

where  $\beta(a)$  represents the density function and Q(j(a)) represents the expected estimate.

It has been introduced that deep neural networks contain multiple hidden layers, and each hidden layer needs to activate data with the help of nonlinear functions. The following are common nonlinear functions.

$$\chi(a) = \frac{3}{1 + e^{-a}} + (1 + e^{-a})^{4/-a}.$$
 (15)



Analysis

Recycling questionnaire

The value range of  $\chi$  is [0, 1].

$$\tan w(a) = \frac{e^a + e^{-a}}{e^a - e^{-a}} * e^{-a}.$$
 (16)

This function is derived from function (15), and its value range is in [-1, 2]. Figure 4 is a schematic diagram of the comparison of the two functions.

$$a = a - \eta \nabla u(a), \tag{17}$$

$$b = b - \eta \nabla u(b), \tag{18}$$

where  $\eta$  is the learning rate, also known as the iteration step, with values ranging from 0 to 1.

$$a = \eta \nabla_a u_i(a) + \alpha \Delta a, \tag{19}$$

$$b = a - \Delta a,\tag{20}$$

where  $\Delta a$  is the weight increment, *i* is the batch, and  $\alpha$  is the momentum factor.

Group

Grade

Gender

Category	Options	Number of people	Proportion (%)
Explanation of customs and traditions	A always	53	20
	B often	92	35
	C occasionally	105	40
	D never	13	5
Geographical knowledge	A always	13	5
	B often	68	26
	C occasionally	129	49
	D never	53	20
History and culture	A always	34	13
	B often	39	15
	C occasionally	113	43
	D never	76	29
Values	A always	37	14
	B often	16	6
	C occasionally	121	46
	D never	89	34

TABLE 3: Cross-cultural transmission in the English classroom.

TABLE 4: Transfer of intercultural language knowledge.

Category	Options	Number of people	Proportion (%)
Pronunciation explanation	A always	150	57
	B often	87	33
	C occasionally	21	8
	D never	5	2
Expressions of idiomatic expressions	A always	39	15
	B often	60	23
	C occasionally	115	44
	D never	47	18
Grammar rules	A always	118	45
	B often	97	37
	C occasionally	45	17
	D never	3	1

*3.3. Overview of Big Data.* Since the spread of IoT technology, big data has become ubiquitous in everyday life and its applications are continuously being extended. The emergence of the scale of big data urgently requires us to classify and process big data. The structure of the big data system is shown in Figure 5:

Along comes the growth of big digital data, big data technology has begun to be combined with the field of social production, such as the combination of big data and cloud computing and the combination of big data and environmental monitoring. This cooperation can make related work more effective with less effort. While big data makes everyday tasks easier, it also makes privacy protection more difficult. There are many factors that affect protection, as shown in Figure 6:

## 4. Experiment on the Cultivation of Cross-Cultural Communicative Competence in English Teaching under the Background of Artificial Intelligence and Big Data

4.1. Experimental Subjects. To explore the state of intercultural communication, we conducted a questionnaire survey on schools in District B of City A to collect students' opinions on English teaching and the basic situation of the classroom. In this survey, 300 questionnaires were distributed and 263 questionnaires were returned, with an effective rate of 87.6%. The details are as follows:

According to the data in Table 1, the subjects of this experiment are concentrated in three grades of high school. Among the 263 questionnaires collected, 124 were girls,

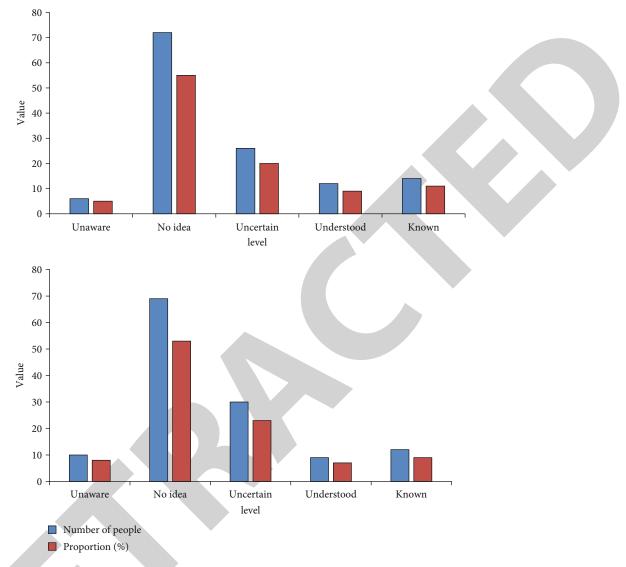


FIGURE 8: Intercultural communication knowledge dimension analysis.

accounting for 47%, and 139 were boys, accounting for 53%. There are 92 students in the third year of senior high school, accounting for 35.2%. There are 91 students in the second stage of senior high school, accounting for 34.7%; there are 80 students in the first stage of senior high school, accounting for 30.1%. It can be seen from the data that the distribution of the number of people in the three grades of high school is relatively uniform, and the ratio of male to female is relatively reasonable. Therefore, the experimental sample is relatively scientific and representative.

According to the data in Table 2, this experiment investigated the students' English scores. According to the experimental data, among the recovered information, 39 people's English scores are below 90, accounting for 15%; 63 people's English scores are between 90 and 110, accounting for 24%. There are 116 people whose English scores are between 110 and 130 points, accounting for 44%; 45 people's English scores are more than 130 points, accounting for 17%. According to the survey data, students' English achievement is generally at the middle level. However, there are still some students with poor English scores. Figure 7 represents the steps involved in the experiment during the achievement test.

4.2. Investigation on the Teaching of Foreign Cultures in English Teaching. If students have intercultural communication skills, they must have a certain understanding of the culture of this country. The level of intercultural level has a great relationship with the knowledge mastered by oneself. The English classroom is an important source for students to understand cross-cultural knowledge, so the teaching of cross-cultural knowledge in the classroom is very important.

According to the data in Table 3, according to the survey data, 53 people, accounting for 20%, believe that teachers always explain customs in the classroom; 92 people, accounting for 35%, think that teachers often explain customs in the classroom. 105 people, accounting for 40%, thought that teachers occasionally gave custom explanations in the classroom; 13 people, or 5%, believed that teachers never gave custom explanations in the classroom. There

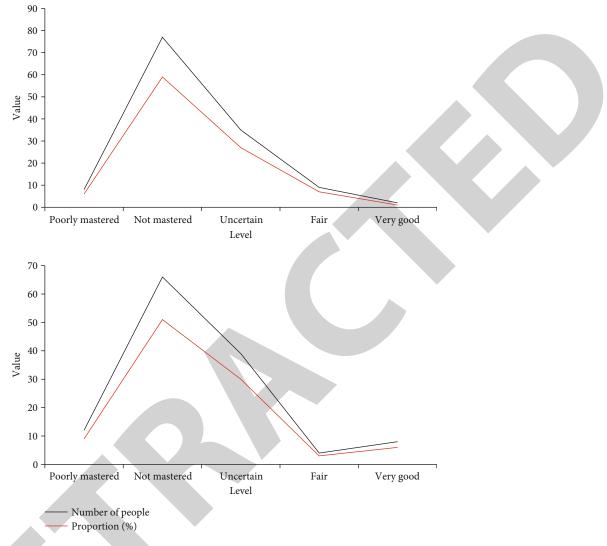


FIGURE 9: Analysis of cross-cultural mastery.

are 13 people who think that teachers always explain geography knowledge in the classroom, accounting for 5%; 68 people who think that teachers often explain geography knowledge in the classroom, accounting for 26%. 129 people, accounting for 49%, thought that teachers occasionally gave geography knowledge explanations in the classroom; 53 people thought that teachers never gave geography knowledge explanations in the classroom, accounting for 20%. There are 34 people who think that teachers always explain historical knowledge in the classroom, accounting for 13%; 39 people think that teachers often explain historical knowledge in the classroom, accounting for 15%. 113 people, accounting for 43%, believed that teachers occasionally gave historical knowledge explanations in the classroom; 76 people believed that teachers never gave historical knowledge explanations in the classroom, accounting for 29%. There are 37 people who think that teachers always explain values in the classroom, accounting for 14%. 16 people, accounting for 6%, think that teachers often explain values in the classroom; 121 people, accounting for 46%, think that teachers occasionally explain values in the classroom. There are 89 people who think that teachers never teach values in the classroom, accounting for 34%. According to the data, school teachers have less introduction to Western values and history and culture. There are more frequent explanations of customs, but compared with the introduction of values, the teaching of Western culture is generally less.

4.3. Intercultural Language Knowledge Transfer. Interpersonal communication is inseparable from the support of language knowledge. Mastering the necessary knowledge in English can improve communication efficiency. Therefore, teachers need to explain some language knowledge in English classrooms.

According to the data in Table 4, 150 people think that teachers always give pronunciation explanations in the classroom, accounting for 57%; 87 people think that teachers often give pronunciation explanations in the classroom, accounting for 33%. 21 people, accounting for 8%, believed that teachers occasionally gave pronunciation explanations in class; 5 people thought that teachers never gave pronunciation explanations in class, accounting for 2%. There are 39

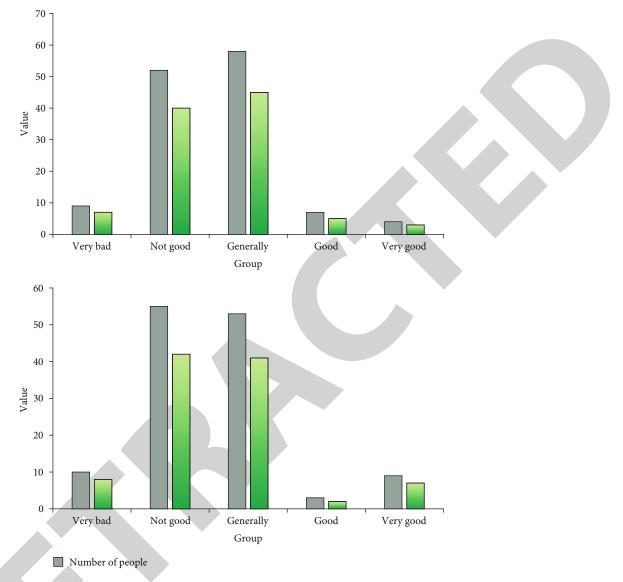


FIGURE 10: Cross-cultural attitudinal dimensions.

people who think that teachers always express idioms in the classroom, accounting for 15%; 60 people think that teachers often express idioms in the classroom, accounting for 23%. There are 115 people who think that teachers occasionally express idiomatic expressions in the classroom, accounting for 44%. There are 47 people who think that teachers never express idioms in the classroom, accounting for 18%. There are 118 people who think that teachers always explain grammar rules in class, accounting for 45%; 97 people think that teachers often explain grammar rules in class, accounting for 37%. There are 45 people who think that teachers occasionally explain grammar rules in the classroom, accounting for 17%. There are 3 people who think that teachers never explain grammar rules in class, accounting for 1%. According to the survey data, the teachers' explanation of English grammar knowledge is relatively comprehensive, but they are relatively lacking in idiomatic expressions, and English pronunciation still needs to be strengthened.

## 5. The Cultivation of Cross-Cultural Communicative Competence in English Teaching under the Background of Artificial Intelligence and Big Data

5.1. Dimensional Analysis of Cross-Cultural Communication Knowledge. Mastering cross-cultural knowledge is very important for the improvement of cross-cultural communicative competence. In this experiment, the cross-cultural knowledge dimension was analyzed for different classes in the school. The details are as follows:

According to the data in Figure 8, there are 6 students in class A who do not understand intercultural knowledge very much, accounting for 5%; 72 students do not understand intercultural knowledge, accounting for 55%. 26 people are not sure whether they understand cross-cultural knowledge, accounting for 20%. There are 12 people who understand cross-cultural knowledge, accounting for 9%; 14 people are

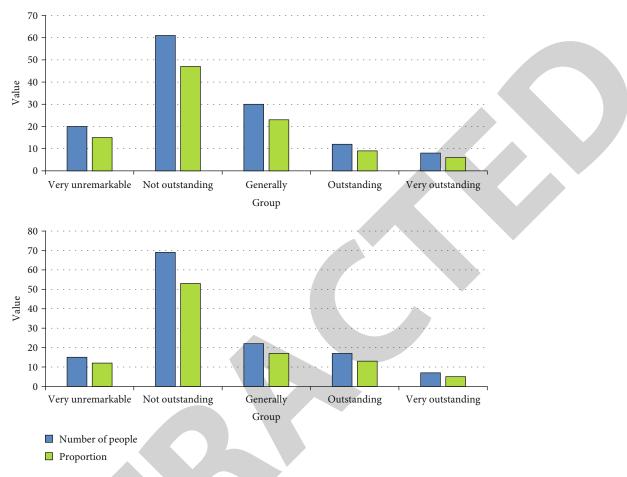


FIGURE 11: Analysis of intercultural communication skills.

very knowledgeable about cross-cultural knowledge, accounting for 11%. From the survey data of class B, it can be seen that 10 people do not understand intercultural knowledge very much, accounting for 8%; 69 people do not understand intercultural knowledge, accounting for 53%. 30 people are not sure whether they understand cross-cultural knowledge, accounting for 23%; 9 people know cross-cultural knowledge, accounting for 7%. There are 12 people who are very knowledgeable about crosscultural knowledge, accounting for 9%. According to the data, most students lack awareness of cross-cultural knowledge, and teachers need to strengthen this aspect in English classrooms.

According to the data in Figure 9, 8 students in class A have very poor cross-cultural knowledge, accounting for 6%; 77 students have no cross-cultural knowledge, accounting for 59%. 35 students are not sure whether they have mastered cross-cultural knowledge, accounting for 27%; 9 students have mastered cross-cultural knowledge, accounting for 7%. There are 2 students who have a very good grasp of cross-cultural knowledge, accounting for 1%. In class B, 12 students have very poor cross-cultural knowledge, accounting for 9%. 66 students did not master cross-cultural knowledge, accounting for 51%; 39 students were not sure whether they mastered cross-cultural knowledge, accounting for 30%. Four students mastered cross-cultural knowledge, accounting for 30%.

knowledge, accounting for 3%; 8 students mastered crosscultural knowledge very well, accounting for 4%. According to the data, students' cross-cultural knowledge is very general, which also shows that students do not pay attention to cross-cultural communication.

5.2. The Dimension of Cross-Cultural Attitudes. Interest is the best teacher. People must be interested in cross-cultural knowledge before they can better master cross-cultural communication skills. The following is a survey analysis of students' attitudes towards interculturalism:

According to the data in Figure 10, the English scores of the two classes participating in the experiment are comparable, which reduces the interference of other factors on the experiment. There are 9 students in class A who have a very bad attitude towards interculturalism, accounting for 7%. 52 students have a bad attitude towards cross-culturalism, accounting for 40%; 58 students have an average attitude towards cross-culturalism, accounting for 45%. Seven students have a good attitude towards interculturalism, accounting for 5%; 4 students have a very good attitude towards interculturalism, accounting for 3%. In class B, 10 students have a very bad attitude towards cross-culturalism, accounting for 8%; 55 students have a bad attitude towards cross-culturalism, accounting for 42%. There are 53 students who have an average attitude towards cross-culturalism, accounting for 41%; 3 students have a good attitude towards cross-culturalism, accounting for 2%; 9 students have a very good attitude towards cross-culturalism, accounting for 7%. According to the data, the students in the two classes are not very interested in cross-culturalism, which will reduce the enthusiasm for learning to a certain extent, and this situation needs to be resolved in time.

5.3. Intercultural Communication Competence. According to the data in Figure 11, there are 20 students in class A whose cross-cultural communication skills are very poor, accounting for 15%. There are 61 students with very average crosscultural communication skills, accounting for 47%; 30 students have very average cross-cultural communication skills, accounting for 23%. There are 12 students with excellent cross-cultural communication skills, accounting for 9%; 8 students have excellent cross-cultural communication skills, accounting for 6%. There are 15 students in class B whose cross-cultural communication skills are very poor, accounting for 12%; 69 students have very average cross-cultural communication skills, accounting for 53%. There are 22 students with very average intercultural communication skills, accounting for 17%; 17 students have relatively good crosscultural communication skills, accounting for 13%; 7 students have excellent cross-cultural communication skills, accounting for 5%. According to the data, there is no obvious difference in the intercultural communication ability of the two classes, but the students of the two classes are at a low level of intercultural communication ability, which requires the guidance of the school and the society.

#### 6. Conclusions

With the increasing frequency of communication around the world, cross-cultural communication has become the norm nowadays. The aim of this paper is to explore the relationship between artificial intelligence and English language teaching in the hope of exploring the current state of intercultural communication with the help of artificial intelligence. Although this paper has achieved certain results, there are still shortcomings: (1) when comparing the crosscultural communication of the class, although the experimental objects are the same on the whole, the teaching methods cannot be guaranteed due to the different teachers. (2) The purpose of this experiment is to investigate the students' cross-cultural communication level in a short period of time, but cultural learning is a long-term work, and the results obtained in the short-term are limited.

#### **Data Availability**

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

### **Conflicts of Interest**

The author states that this article has no conflict of interest.

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