

Cross-cultural Media Contact and Chinese Image Perception of Overseas Students in China

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Abstract: Under the background of China's "Belt and Road" initiative, an increasing number of overseas students in China have become cross-cultural emissaries of China's national image. This program focuses on the cross-cultural media contact and Chinese image perception of overseas students in China. Through semi-structured in-depth interviews, it makes an in-depth investigation of their cross-cultural media contact behavior patterns, as well as their ways of understanding China and their deep motivation. This is what the study found. Cross-cultural media contact of overseas students in China is closely related to their interpersonal communication and cross-cultural adaptation, and presents three-dimensional circle feature. International relations, economic development, education and interpersonal communication are the four dimensions of their perception of China's image. Cross-cultural media contact and direct experience are the main factors that affect their perception of China's image. Therefore, it is necessary to optimize the construction path of Chinese image based on cross-cultural communication according to the characteristics of cross-cultural media contact and direct experience of overseas students in China.

Key words: overseas students; cross-cultural media contact; Chinese image perception

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Introduction

By virtue of their dual direct experience in their home country and host country, as well as their sufficient language and other intercultural communication skills, the international students has become an important practitioner and intercultural emissary in international communication activities such as the external communication of national image, public diplomacy and so on. The perception of Chinese image of overseas students in China is influenced by their media contact habits and direct experience in China. At present, there is relatively little research on the perception of China's national image of overseas students in China, and most of them are based on "snapshot" analysis that directly presents "Chinese national image in the eyes of foreigners", and lack of in-depth multi-dimensional analysis. Based on this, it is

of high research value to discuss the construction and effective dissemination of Chinese national image from the perspective of overseas students in China.

The research will first understand the channels through which overseas students obtain China's information before and after coming to China, the degree of communication with the Chinese people, and the perception of the relationship between their home countries and China, etc., and then reveal the factors that affect overseas students' perception of Chinese national image.

1. Research objects

The program chose the overseas students in Shandong Youth University of Political Science as research objects. They all come from the "Belt and Road" countries including Uzbekistan, Nepal, South Africa, Equatorial Guinea, Nigeria, Tanzania, Cameroon, Zambia, Morocco,

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Liberia, Somalia, Sudan, Uganda, Zimbabwe, Garner, Congo, Guinea Bissau, Djibouti, Burundi and Congo gold. In order to communicate and cooperate smoothly in the process of questionnaire and interviewing, with the help of our teacher, we tried our best to understand each other and adapt each other to carry out our project with respect to the intercultural communication.

2. Research Methods

In order to establish a trust relationship with the interviewee, during the specific implementation process, the interviewer contacted the interviewee in advance to inform him/her of the interviewer's personal information, interview purpose, interview structure sequence, interview duration and main interview contents so as to obtain the informed consent of the interviewee. Adhering to the principle of voluntariness and fully respecting the wishes of the interviewees make an appointment for a formal interview. After the interview, keep in touch with the interviewees through social media.

This program makes a deep analysis of the media contact and use behavior patterns of the overseas students in China and their perception of the image of China. Besides, combined with the content analysis method, it explores in depth the exposed or hidden concepts that are closely related to the research issues in the interview texts, as well as attempts to deeply investigate the media contact and use behavior patterns and deep-seated motivation of overseas students in China in the Chinese context and restore the current situation of overseas students' perception of China's image and analyze the reasons, so as to provide strategic suggestions for promoting China's image.

Interview method is not only a method of qualitative research, but also a basic means of investigation and research. The core of in-depth interviews is to learn about other people's "fresh" experiences and what they mean by them. Through direct and in-depth communication with the interviewees, first-hand information about the interviewees can be obtained, and the interviewee's evaluation of something can be truly restored. Therefore, through in-depth interviews with international students in China, we can intuitively understand the media contact and use behavior pattern and its motivation for overseas students in China, and intuitively obtain their perception of China's image.

In the specific implementation process, the interview mainly include the main questions closely related to the research topic, tracking questions and probing questions; the acquisition of interviewees is mainly based on

the principle of convenient sampling; the number of interviewees is determined by the representativeness and sufficiency of the samples and the saturation of the interview information; the interview was completely based on informed consent and voluntary basis, and the use of the interview materials strictly adhered to the research ethics. In addition, the text of the interview data is analyzed with the method of content analysis, aiming to identify and refine the key points, important concepts and themes related to the research questions in the interview text.

Due to the continuous development of data and information technology, knowledge storage and acquisition has become one of the most significant means to improve work efficiency. With the endless improvement and update of intelligent data retrieval technology, the demand of knowledge retrieval has become more accurate, efficient and rapid. Under this circumstance of increasing degree of network, knowledge retrieval in the network has become an important way for people to acquire target knowledge. In the process of knowledge retrieval, in addition to the retrieval of text information, the retrieval of speech-type data is more intelligent, which can meet the needs of users to retrieve effective value of knowledge in the shortest time, and delete redundant knowledge in the data.

Obtaining the required information in voice and audio information has become a difficult problem. Speech content retrieval is to give a natural language for a certain audio signal, which can retrieve the speech fragments corresponding to the content described by natural language. The significance of speech fragment retrieval is to retrieve the audio paragraphs about a certain keyword in a rather longer audio file, and to retrieve the corresponding audio fragment by matching keywords and natural language.

Speech content retrieval combines two aspects of speech recognition and keyword retrieval. Among them, speech recognition mainly refers to high-tech technology that allows machines to convert speech signals into corresponding texts or commands through recognition and understanding, has been widely applied to home appliances, communications, automotive electronics and other fields. Speech recognition mainly includes three aspects: feature extraction technology, pattern matching criteria and model training technology. Speech recognition technology requires different implementations according to different perspectives, application ranges and performance, and there will be different classifications. The angle of general speech recognition methods includes the following

methods, including isolated word recognition, connection word recognition, continuous speech recognition and understanding, conversational speech recognition, etc. according to different speaking methods; according to the size of the vocabulary, it can be divided into small words, There are three types of speech recognition methods: medium vocabulary and large vocabulary; and depending on the degree of dependence on the speaker, it can be divided into specific and non-specific speech recognition methods.

3. Research Process and Conclusions

3.1. Cross-cultural Media Contact and Use Behavior Patterns of Overseas Students in China

The study found that the cross-cultural media contact and use behavior of the interviewed overseas students in China is closely related to their interpersonal communication and cross-cultural adaptation, and presents obvious circle features: ① when acquiring relevant information about China or communicating with Chinese, they tend to use Chinese media; ② when acquiring international information and information of the home country, they tend to use international media and mainstream news media of home country, and use mainstream social media of the home country when communicating with their compatriots in the home country, such as family and friends; ③ when communicating with other overseas students in China, mainstream international social media is used as a medium for communication and interaction.

No matter what kind of media patterns, it combines the use of mainstream media in China and international media as well as the mainstream media in the home country of overseas students. Therefore, for overseas students in China, we should actively enhance the influence of Chinese mainstream media on them, help them integrate into Chinese culture, spread Chinese voice through Chinese narration, and construct a good image of China through media.

At present, various network information retrieval tools and network database retrieval rules and methods are different. Most users of network information retrieval cannot adapt to different complex retrieval methods in a short time. Among them, natural language is the type of language used naturally in people's communication, and it is an artificial language designed for computers and other programming languages. Natural language generally includes spoken and written languages that do

not need to be standardized. Technically speaking, natural language retrieval is to process natural language and apply mathematical results to information indexing, querying and matching in information retrieval. Although the specified information in the target voice and audio can be retrieved, intelligent search cannot be realized, that is, the specified information in the target file is the same as the keyword, and the same semantic paragraph cannot be retrieved. In addition to this, the traditional speech content model needs a lot of time in the retrieval process, which reduces the retrieval efficiency of file information.

3.2. The perception of Chinese national image by overseas students in China

The cognitive style of overseas students in China on China's national image mainly includes the following four dimensions: the perception of international relations in the perception of China's government image, the perception of economic development and education in the perception of China's national conditions, and the perception of interpersonal communication in the perception of Chinese culture and national quality.

3.2.1. The Perception of International Relations

The perception of overseas students in China on China's international relations is influenced by their trusted international media narration. In the context of the "Belt and Road" initiative, most international students in China believe that China's foreign policy of peace and development can effectively promote the sound development of international relations by virtue of positive people-to-people exchanges, political mutual trust and favorable economic conditions. Foreign Students who choose to study in China show a positive attitude towards China's international relations on the whole. International students in China understand multilateral and bilateral international relations from the perspective of their home country's national interests and personal preference.

In order to solve the problem of low retrieval accuracy in the traditional model, an integrated neural network is proposed. Integrated neural network abstracts the human neuron network from the perspective of information processing, establishes a simple model, and forms different networks according to different connection methods. The working process of the integrated neural network can be divided into two phases: training, learning and testing. During the learning phase, the learning samples are sequentially added to the network with randomly set initial weights in the form of sample pairs

to ensure that the actual output of the network is exactly the same as the expected output or close enough. After the learning phase, the neural network calculates the corresponding output mode according to the input mode. This process is the working phase. The voice content retrieval model is designed to retrieve the same or similar content in the target audio file based on the input natural language. Based on the traditional speech content retrieval model, the integrated neural network is introduced to realize the optimal design of the retrieval model. The purpose of the model optimization design is to improve the speed of voice content retrieval, save retrieval time, and thus improve the retrieval efficiency of the retrieval model.

3. 2. 2. The Perception of Economic Development

The perception of China's economic and social development by overseas students in China is an important dimension of their cognition of China's image. Compared with soft power resources such as culture, foreign policy and values, China's Internet economy is attracting overseas students in China with its strong penetration and high frequency usage, and has become a significant source for overseas students in China to form favorable impression and identification with China. Economic development is still a key topic of concern to overseas students in China. The rise of China's Internet economy and its increasing and expanding global influence have gradually become new hard and soft power resources to attract overseas students in China, as well as China's competitive advantage in attracting multinational talents.

3. 2. 3. The Perception of Educational Condition

International students in China tend to compare their education in their home country with the current educational experience in China, and the cross-cultural horizontal comparison constructs their educational experience in China. In addition, the positive perception of Chinese government scholarship and other incentive policies enables overseas students to form a positive experience of Chinese education perception. Generally speaking, there are barriers such as language, information media and cultural differences for international students in China to adapt to Chinese education.

Sample: What is your attitude towards the practical activities in the education now? (Multiple)

Choices	Number	Percentage
Very interested and actively participate	19	45.24%
Participate activities but know little	25	59.52%
Not interested	5	11.9%

From the percentages in the chart above, we could notice apparently that most overseas students show their passion to participate into the practical activities in their current education but still know little about the practical courses. From this point of view, we think it is necessary to enhance more practical acclivities in our education.

The success of academic adaptation will affect their perception and experience of Chinese education. It is worth noting that university reputation and student trust are also important predictors of international students' identification with Chinese educational institutions and Chinese education. International students' identification with the universities they study in, based on their direct experience, largely affects their perception of Chinese education. Therefore, the international student relationship management strategy should focus on strengthening the reputation of the university and improving the trust and identity of international students to the university.

3. 2. 4. The Perception of Interpersonal Communication

A common keyword used by overseas students in China to perceive the image of Chinese is "shyness". Online and offline interpersonal communication with Chinese students in China is the direct source of their perception of Chinese image. The communication between overseas students in China and the Chinese and the discussion on the image of the Chinese among the overseas students in China have shaped their cognition of the image of the Chinese.

Sample: What are the inconveniences you encounter in your life? (Single)

Choices	Number	Percentage
Communication with local people	23	54.76%
Cultural customs	13	30.95%
Dietary differences	19	45.24%
Accommodation habits	12	28.57%
Whether the climate is suitable	12	28.57%

From the percentages in the chart above, it is clearly seen that the main inconvenience as for the overseas students is the communication barrier, together with the dietary differences. As for these inconveniences, we suggest some effective countermeasures such as Chinese Corner and some communication activities to create useful and harmonious atmospheres for the overseas students to practice more about their Chinese level. In addition, we universities should also try to improve the catering and prepare diverse foods to cater for their needs.

On the whole, the perception of China's Internet

economy by overseas students in China is the most frequently mentioned component of China's image perception. Overseas students in China generally show their preference for China's Internet economy, and express their strong willingness to learn from China's Internet economy model and their willingness to work in these multinational Internet companies. China's hard power resources, represented by the Internet economy, have become a key element in the spread of China's image. In addition, China also needs to grasp the right to speak in the construction of international relations, enhance the influence of China's international communication, and use the international narrative of Chinese media to self-construct China's international imagination. What is noteworthy is that, in addition to the macro level of international relations and economic development, Chinese universities should also enhance the trust and recognition of overseas students and enhance their positive perception of China's image through university education in direct contact with overseas students in China. In addition, colleges and universities should also actively organize interpersonal communication activities between overseas students in China and Chinese, and actively communicate and exchange with overseas students in China through all effective contacts to build a coordinated cross-cultural communication system between the government and the people.

3.3. Factors influencing the perception of Chinese image by overseas students in China

There are two main sources for international students in China to perceive the image of China: one is the use of cross-cultural media, and the other is their own direct experience. The direct experience of overseas students in China can form a cross-complementary and mutually verified effect with the media's shaping of China's image. Direct experience is often able to subvert the influence of media on cognition. The unification of media and direct experience will lead to the solidification of image perception. However, when these two cognitive sources come into conflict; direct experience can often correct the bias of media on cognition.

Natural language processing and analysis can be divided into seven levels, including phonetic level, part-of-speech level, lexical level, syntactic level, semantic level, pragmatic level, and context level. Among them, the processing of the speech level is the interpretation of the words and sentences in the natural speech signal. The analysis of the processing of the morphological

level is mainly the attributive content to be retrieved, including the processing and analysis of the prefix, suffix and root. The lexical level and the syntactic level respectively represent the analysis of lexical meaning and the analysis and processing of grammatical structure of lexical phrases in sentences. In addition, the context level is the understanding of the purpose of the language, which mainly depends on the analysis and understanding of the documents or the knowledge outside the original retrieval language. In accordance with the above analysis sequence of natural speech signals, the level of analysis from low-level to high-level language processing analysis units gradually increases. And we combine the processing of multiple natural speech signals to get the final signal analysis result.

Sample: How does local life affect you? (Multiple)

Choices	Number	Percentage
Online shopping	22	52.38%
Express delivery system	25	59.52%
Mobile payment	26	61.9%

From the percentages in the chart above, it is obvious that most overseas students deem that online shopping and express delivery system have greater influence on their daily life. Hence, when they come to the university for the first time, the counselor should teach them how to use the advanced tools to shop online and how to deliver their goods properly so that the overseas students could adapt to the daily life more smoothly in China.

According to the input method of natural language, the keywords to be retrieved are embedded in the fused convolutional neural network model, and the keywords are determined and processed. Given the probability of occurrence of any keyword, the joint probability of the obtained probability sequence is converted into the product of a series of conditional probabilities. With this calculation method, as the length of sentences in the knowledge base increases, the parameter space is huge. In order to simplify the calculation, a unique heat vector is used to represent a keyword. A scalar code is assigned to the keyword according to its position in the knowledge base, and a one-dimensional vector is assigned to each keyword based on the scalar code. The length of this one-dimensional vector is the same as the size of the knowledge base.

As a whole, the motivation of overseas students studying in China, their perception of China's international relations, their cognition of China's social and economic development, their deep participatory experience of

Chinese education and their interpersonal communication in China are all important sources for overseas students in China to perceive China's image.

According to the research, overseas students in China are highly sensitive and most interested in China's Internet economy, which indicates that China's social and economic development level is a key component of China's image and has a positive effect on the construction of a good international image of China. The direct experience of educational exchange and interpersonal communication also affects the impression of overseas students in China on Chinese education and Chinese people. The competitive narration of Chinese media and international media affects the cognition and understanding of Chinese information by overseas students in China. The source of national image perception based on media and direct experience constitutes a complete picture of the perception of Chinese image by overseas students in China.

Conclusion

To sum up, in order to improve the overseas students' perception of China's image, a complete image construction and communication system should be formed from the perspectives of media and direct experience.

With the development of deep learning technology, speech keyword retrieval technology has made great progress in recent years, and has been widely used in Internet audio and video supervision and information security. For natural language description-based keyword retrieval, related research work is performed on a series of problems faced by continuous speech recognition keyword retrieval, and the model's language content retrieval function is realized by building an integrated neural network. However, through experimental analysis, it can be found that the retrieval accuracy of the model has not yet reached a higher level, which also needs to continue to research in the future.

At the media level, it is necessary to have an in-depth understanding of the media contact and use behavior pattern of overseas students in China, find out the problem of their cross-cultural media adaptation, help them to better understand China's rich media resources, enhance the popularity and credibility of Chinese media among overseas students, and substitute Chinese narrative for other narrative of international media.

In terms of direct experience, attention should be paid to improving the educational management system for international students in colleges and universities.

College education is a direct way for international students in China to learn about China, and also covers the social experience of international students in China. Therefore, through teaching resources and campus activities, we should enhance the trust and recognition of overseas students in China to colleges and universities, so as to help students in China to achieve better interpersonal communication with Chinese people. Understanding the mental health of overseas students in China in real time, learning about the issues concerned by students in China, guiding them to actively integrate into Chinese life, and getting rid of the stereotypical impression of China are the keys to effectively improving the intuitive perception of the image of China among overseas students in China.

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