

Cross-cultural Adaptability of International Students in China

Ruihan Zhou¹ and Xiaoyan Zeng^{1,*}

¹ School of Foreign Languages, China University of Petroleum-Beijing, Beijing 102249, China

* Corresponding author: E-mail: xiaoyanzeng0313@163.com

ABSTRACT

The continuous and in-depth implementation of the “Belt and Road” initiative has made educational exchanges and cooperation between China and the countries along this route more frequent. Meanwhile, the resulting cross-cultural adaptation problems of international students in China have been increasingly prominent. This paper adopts the research method of survey to investigate the cross-cultural adaptation of the international students at China University of Petroleum (Beijing), and attempts to analyze the cross-cultural adaptability of international students in China from two aspects: socio-cultural adaptability and psychological adaptability. The study finds out that Chinese language proficiency, length of residence, interpersonal skills and environmental changes are the main factors affecting the socio-cultural adaptability of international students; gender, length of time in China, and Chinese proficiency of international students are the factors that affect the psychological adaptability of international students. Finally, this article recommends that universities help international students build their own communities and social networks on campus, uniformly improve the professional capabilities of teaching and administrative staff, and provide online communication platforms to improve the cross-cultural adaptability of international students in China.

Keywords: International students; Socio-cultural adaptation; Psychological adaptation; Cross-cultural

1. INTRODUCTION

With the gradual implementation of the regional economic integration and the “Belt and Road” initiative, China’s international influence has been greatly enhanced, and the number of international students studying in China has continued to increase. The problems of cross-cultural adaptation, and the influencing factors of cross-cultural adaptation of international students in China have arisen wide scholars’ concern.

Cross-cultural adaptation is a phenomenon that two groups composed of individuals with cultural differences change and adjust the original cultural model in the process of long-term contact and contact[1]. However, regarding the classification of cross-cultural adaptation, scholars hold different views. For example, Ward divides cross-cultural adaptation into two types: socio-cultural adaptation and psychological adaptation[2]. Chen subdivided the socio-cultural adaptation of international students into seven dimensions: life adaptation, social ethics adaptation, communication adaptation, social support adaptation, service mode adaptation, social environment adaptation, and local living habits adaptation[3]. Zhu added academic adaptation based on social-cultural adaptation and psychological adaptation[4]. Wang subdivided social-cultural adaptation into the three dimensions of language, life, and culture, plus the four dimensions of psychological adaptation to study the cross-cultural adaptation of international students in China[5]. In short, psychological

adaptation and social-cultural adaptation are two basic dimensions.

Research on the influencing factors of cross-cultural adaptation mainly analyses from macro factors and micro factors, or external factors and internal factors. Ward first divided the influencing factors of cross-cultural adaptation into the individual level and social level, and then redivided the influencing factors into specific cultural factors and general cultural factors with in-depth research[6]. Some researchers divided cross-cultural adaptation factors into internal factors and external factors. External factors include life changes, time, social support, cultural distance, discrimination, and prejudice, while internal factors include cognitive evaluation, personality, knowledge, and skills.

The increasing number of international students and their higher education quality requirements have gradually developed the ability of petroleum universities in China to cultivate foreign students and brought higher challenges to these schools. Therefore, this article selects international students from China University of Petroleum (Beijing) as the research object and attempts to conduct an empirical analysis of the cross-cultural adaptability of international students in China from dimensions of socio-cultural adaptation and psychological adaptation. This study aims to explore the influence factors on the cross-cultural adaptability of international students and provide suggestions to improve the cross-cultural adaptability of international students in China.

2. RESEARCH SUBJECTS AND METHODS

2.1. Research Subjects

This article selects the international students studying at China University of Petroleum (Beijing) University as the research subject. Due to the impact of coronavirus pandemic, 80 questionnaires were distributed online through the anonymous method, and 65 valid questionnaires were recovered, with a recovery rate of 81%. The basic information of the research objects is shown in Table 1.

Table 1. Basic Information of the Survey Sample

	Classification	Number	Percentage (%)
Gender	Male	44	67.7
	Female	21	32.3
Age	Under 18	1	1.7
	18-23	51	78.4
	24-30	10	15.3
	31-40	3	4.6
Educational background	Bachelor	53	81.5
	Master degree	10	15.3
	Doctor degree	2	3.2
Reason for coming to China	Further education	59	90.7
	Experience Chinese culture	2	3.0
	Learning Chinese	2	3.0
	Other reasons	2	3.0
Length of residence	Under 6 months	15	23.0
	6-12 months	6	9.2
	12-24 months	21	32.3
	More than 24 months	23	35.3
Chinese proficiency	HSK1	14	21.5
	HSK2	1	1.5
	HSK3	10	15.3
	HSK4	21	32.3
	HSK5	19	29.2

2.2. Research Methods

This article refers to and adopts the Ward's Sociocultural Adaptation Scale, which includes socio-cultural adaptation and environmental adaptation. According to the actual needs of this article, 15 items are selected from the whole 41 items on the scale to investigate the socio-cultural adaptability of international students. Besides, the questionnaire employs the five-level scale of Likert which

includes "no difficulty", "less difficult", "general", "more difficult", and "very difficult". The higher the score is, the more difficult socio-cultural adaptation is.

The section of psychological adaptation survey uses the Zung-style self-rating depression scale to test the psychological adaptation of these international students. The original scale has 20 questions, however, according to the characteristics of the research sample and the length of the questionnaire, 15 questions that are closely related to spirit and emotion are finally selected, such as "I feel emotionally depressed, depressed". The scoring method uses a four-level scoring method (1=never, 2=occasionally, 3=frequently, 4=always). The full score is 60, and the higher the score is, the more severe the depression is. The scope of the survey is their status in the last week.

2.3. Reliability and Validity of the Questionnaire

To ensure the reliability and validity of the questionnaire, a test is necessary. The first part of the questionnaire is the basic personal background information of the respondent, which does not need to be tested for reliability and validity, the second and third parts belong to the content of the questionnaire and need to be tested for reliability and validity.

In this paper, SPSS23 is used to test the reliability of the data collected by the questionnaire, and test-retest reliability and internal concordance coefficient (Cronbach α coefficient) were used to test reliability of the questionnaire. The reliability of this questionnaire is shown in Table 2. The α coefficients of psychological adaptation and socio-cultural adaptation are both higher than 0.7, indicating that the reliability of the questionnaire is good.

Table 2. Reliability Test of Questionnaire

Variable	Cronbach α coefficient	Number of items
Psychological adaptation	0.853	15
Sociocultural adaptation	0.909	15

The KMO and Bartlett sphere test is usually used to test the structure validity, and which is required to be above 0.7, indicating that the questionnaire is significant and has good structure validity. The specific results of the questionnaire validity used in this study are shown in Table 3. In the validity test of the questionnaire used in this study, the KMO values of psychological status and socio-cultural adaptation are all higher than 0.7, and the Bartlett sphericity test is both significant at the level of 0.001, that is, the validity of the questionnaire in this study is up to the standard, and the results obtained are valid. As explained above, the questionnaire is available.

Table 3. Validity Test of Questionnaire

Detection index		Psychological adaptability	Socio-cultural adaptability
KMO		0.799	0.819
Bartlett sphere test	Approximate Chi-Square	293.434	437.593
	Degree of freedom	105	105
	Significance	0.000	0.000

3. DISCUSSION

3.1. Analysis of Socio-cultural Adaptability

International students in China generally show different levels of socio-cultural adaptability, which are usually affected by Chinese proficiency, interpersonal skills, and environmental changes.

3.1.1. The influence of Chinese proficiency on socio-cultural adaptability

The Chinese proficiency of international students in China will affect their socio-cultural adaptability in their studying life in China. Languages is an important bridge for communication and dealings between different regions. A higher level of Chinese proficiency could help international students in China to get through the stage of “cultural shock”.

Most foreign students at China University of Petroleum (Beijing) said that they can understand and chat with others in Chinese language in their daily life. For example, in the question “Understanding Chinese”, 6.15% of international students choose “no difficulty”, 32.31% of international students choose “less difficult”, 33.85% of them believe it is “more difficult”, and only 8% of them said understanding Chinese is “very difficult”.

According to the standards of the international Chinese proficiency test (HSK), HSK1 and HSK2 are primary level, HSK3 and HSK4 are intermediate level. The statistics of “Chinese proficiency” in the questionnaire shows that the number of international students at these two Chinese proficiency levels is 46 (approximately 70% of the total number). Because of the high-context characteristic of Chinese culture, international students who are at the primary and intermediate levels of Chinese proficiency have difficulties in understanding some idioms and implications. Their answer to questions like “recognizes the difference between true meaning and polite words” and “understanding Chinese humor” all mentioned that it is easy to be confused between the true meaning and the polite words, and it is hard to understand the daily use of Chinese humor. Moreover, these students expressed that

they always have a feeling of “mismatch” in daily communication.

This is mainly because Chinese belongs to the Sino-Tibetan language, and modern Chinese writing is morphemic with many homophones. However, the mother tongues of most foreign students belong to Indo-European language and Altaic language, there are some big differences among Sino-Tibetan language, Indo-European language, and Altaic language in addition, Chinese culture is sort of a high-context culture, with mostly illocutionary expressions, and it is easy to miss these points for foreign students. So, for international students at the primary and intermediate levels of Chinese proficiency, continuous supplementation of their Chinese cultural knowledge and practical Chinese skills can help them better integrate into society and improve their cross-cultural understanding.

Investigation revealed that international students at the intermediate level of Chinese proficiency indicated they have been struggling with academic pressure, which means that Chinese ability is likely to become a factor restricting their efficiency in learning. There are many differences in vocabulary systems between daily Chinese and academic Chinese, indicating that there is room for intermediate Chinese-level international students to continue to improve their academic writing ability in Chinese. In brief, Chinese proficiency does affect the speed and depth of the study and life adaptation of international students in China to a certain extent.

3.1.2. The impact of interpersonal skills on socio-cultural adaptability

Intercultural communication is essentially a kind of interpersonal communication. International students show a diversified trend in establishing friendships. 63.08% of international students are willing to make friends with different types of people, and they will often participate in various cultural exchange activities organized by the school, such as dumpling-making activities during the Spring Festival and Beijing Opera singing activities. These actions show that most international students have a positive desire for interpersonal communication, but after chatting with a few foreign students, it is found that there is a lack of sufficient cross-cultural awareness in their minds, and the exchanges between international students from different countries and regions are in a short and superficial stage. Some international students said that their interactions with classmates from different countries and regions will generally be concentrated in the classroom and group activities. When the course or activity is over, the interaction will also enter a “quiet period” until the next “accidental gathering” to “renew friendship”. In private, international students still choose peers from the same country or region with the same or similar cultural backgrounds as their frequent contacts and to meet their daily communication needs.

The country distribution of the survey subjects mainly includes some countries in Africa and five countries in

Central Asia. The cultures in Africa and Central Asia are mostly collectivist, and collectivist cultures strictly distinguish between inside and outside circles, adopting different communication methods and attitudes towards insiders and outsiders. At the same time, there are nearly 70% of international students from these areas expressed that they have retained their original tendency of cultural attachment, which means that this part of international students can hardly share the cross-cultural communication circle with open and inclusive characteristics, and the diversity of their own circle of friends and the possibility of contact with "kind cultural conflict" is accordingly reduced.

Most international students believe that they often encounter some "unimaginably" things in their interpersonal communication. In fact, this may be due to their lack of cross-cultural awareness and the excessive alienate of cross-cultural social distance, and related to the political, economic, and religious culture difference of students from different countries and regions. The lack of understanding and contact with different cultures leads to frustration and avoidance in cross-cultural communication.

3.1.3. The impact of environmental changes on socio-cultural adaptability

In a cross-cultural context, changes in the living environment are one of the biggest changes faced by international students, including changes in climate, transportation and diet.

International students from China University of Petroleum (Beijing) are partly uncomfortable with Beijing's climate and dietary habits. In terms of climate, 63.08% of international students cannot fully adapt to Beijing's semi-humid and semi-arid climate. This is mainly because most of the international students surveyed come from northern and central African countries, which are geographically close to the equator, and the climate is hot and humid throughout the year. Compared with semi-humid and semi-arid Beijing, the temperature and humidity are much higher than in Beijing.

In terms of dietary habits, about 40% of international students said that foods in Beijing are too strong in taste, too spicy, and too oily. According to the national situation of foreign students who are not suitable for diet, they are mainly students from Central Asian countries. Due to the influence of the geographical environment, Central Asians like the lifestyle and eating habits of nomads, and they mainly believe in Islam. The religious teachings stipulate all aspects of Muslim life, which has led to "Halal culture" becoming the main feature of Central Asian cuisine. Currently, the diet of Central Asians is mainly based on cold meals, with a limited range of ingredients. At the same time, it is advisable to retain the original flavor of the ingredients. On the contrary, Chinese food tends to be hot, with variety choices of ingredients, emphasizing the importance of seasonings. Therefore, it is indeed difficult

for students in Central Asia to adapt to Beijing's eating habits.

International students adapt well to the transportation and public services of their city. 67.69% of international students showed that they have no difficulty in using public transportation. Most of the international students said that Beijing has a well-developed transportation network, and they can choose a variety of transportation methods, more importantly, the grassroots service personnel of the public transportation department are enthusiastic about the help they seek when traveling and always provide responsive and accurate guidance; the versatility of online media also greatly facilitates the lives of international students. 60% of international students expressed that they could use local social media for social networking and information acquisition, and some cashless payment tools like WeChat, Alipay, and other software also solves most of the payment problems of international students during their stay in China; 55.38% of international students also indicated that even when facing disputes between the two sides of public services, service personnel can still solve the problems through effective communication.

In short, most of the international students in this survey can travel alone in China, which means they have good independence. However, at the same time, they hope the university can provide more guidance on their life in China.

3.2. Analysis of Psychological Adaptability

In the aspect of psychological adaptation, T-test and analysis of variance are used to analyze the gender of international students, the length of time in China, and Chinese proficiency. Different levels of the same aspect are compared to explore the factors that affect the psychological adaptation of international students in China University of Petroleum (Beijing).

3.2.1. The impact of gender on psychological adaptability

The gender of international students has no obvious influence on psychological adaptability. The P-value of male and female psychological adaptability is 0.91, which is more than 0.05 (see Table 4 for details). It can be inferred that gender of international students has no significant effect on psychological adaptability. In terms of the mean value, the mean value of males (27.57) is slightly higher than the mean value of females (27.31). From the perspective of standard deviation, the standard deviation of males is 9.88 and the standard deviation of females is 9.10. This shows that females' mentality state is good and stable, and the psychological adaptability of female international students is better than that of males.

Table 4. The Influence of Gender

Gender	Mean value	Standard Deviation	Sig.
Male	27.57	9.88	0.91
Female	27.31	9.10	

3.2.2. The impact of length of stay in China on psychological adaptability

The length of time in China has a significant impact on psychological adaptability ($P = 0.00 < 0.05$). As shown in Table 5, the average value of the psychological adaptability of the international students who have been in China for less than 6 months is 35.11, and the average value of the students who have been in China for 6-12 months is 35.17, indicating that the overseas students in China have been in the honeymoon period for a long time and maintain a strong interest in the foreign culture. The average value of psychological adaptability of international students who have been in China for 12-24 months is lower than that of 6 months and 6-12 months, and the specific average value is 23.56. These students may be in a period of cultural shock, and the corresponding psychological adaptation is in a negative stage. In most cases, psychological adaptability can be gradually improved with the increase of time, meanwhile, the psychological state also tends to be stable. However, the average value of the psychological adaptability of the international students who have been in China for more than 24 months is 20.73, and the standard deviation is 12.31. Compared with other three stages, the mean value of students who have been in China for more than 24 months is the lowest and the standard deviation is the highest, in other words, the psychological adaptability of international students in China has not been improved accordingly, and the mental state is not stable. According to the analysis of the time background, in 2020, affected by the global pandemic of coronavirus, most countries and regions affected by the pandemic are under intense anti-epidemic. The instability of the current situation may result in large fluctuations in the psychological state of international students in China, and their psychological adaptability will also be affected.

Table 5. The Influence of Length of Time in China

Length of residence	Mean value	Standard Deviation	Sig.
Under 6 months	35.11	8.55	0.00
6-12 months	35.17	11.95	
12-24 months	23.56	12.26	
More than 24 months	20.73	12.31	

In general, the psychological adaptability of international students in China is positively correlated to the length of their stay in China. The longer the time is, the better the psychological adaptability they have. The length of time

for international students to stay in China is divided into four stages: less than 6 months, 6-12 months, 12-24 months, and more than 24 months.

According to statistics (see Table 6 for details), there is a significant difference between the psychological adaptability of international students staying in China for less than 6 months and the students of the other three periods (6-12 months, 12-24 months, and more than 24 months). The international students who stayed in China for 6-12 months also showed the same characteristics when compared with students in the other three stages (less than 6 months, 12-24 months, and more than 24 months), both of which have p-values less than 0.05. The comparison between 12-24 months and more than 24 months showed no significant difference: both p-values are 0.929, which is more than 0.05. These data indicate that international students in China generally need a year of adaptation and adjustment period, and then gradually move towards a stable stage.

Table 6. Multiple Comparisons of the Influence of Length of Time in China

The length of residence		Sig.
Under 6 months	6-12 months	0.015
	12-24 months	0.000
	More than 24 months	0.000
6-12 months	Under 6 months	0.015
	12-24 months	0.015
	More than 24 months	0.016
12-24 months	Under 6 months	0.000
	6-12 months	0.015
	More than 24 months	0.929
More than 24 months	Under 6 months	0.000
	6-12 months	0.016
	12-24 months	0.929

3.2.3. The influence of Chinese proficiency on psychological adaptability

The influence of Chinese proficiency on psychological adaptability is significant, with a P-value of 0.00, less than 0.05 ($P < 0.05$). International Chinese Proficiency Test (HSK) is adopted as the evaluation standard for the Chinese proficiency of international students in this research, which can accurately evaluate the Chinese proficiency of international students. HSK is divided into 6 levels, and the ascending level indicates the higher the level of Chinese proficiency. As shown in Table 7, the psychological status of students with elementary Chinese proficiency (HSK1, HSK2) is better than those of other levels, and the highest average value indicating that their

psychological status is relatively positive. The psychological state of intermediate Chinese level (HSK3, HSK4) students is at an intermediate level compared with the other two language level students. The average value of international students with advanced Chinese proficiency (HSK5, HSK6) is the lowest, indicating that their mental state is not stable. With the improvement of Chinese proficiency, the cultural adaptation of foreign students in China is showing a fluctuating upward trend. To be specific, with the improvement of language skills, foreign students' expectations of the destination country's culture may be expressed as a more positive desire for understanding. But, on the other hand, unprecedented difficulties will be presented during the deep digging of knowledge, therefore, the psychological situation will experience fluctuations.

Table 7. Influence of Chinese Proficiency

Chinese Proficiency	Mean value	Standard Deviation	Sig.
Primary level	27.04	8.90	0.00
Mid-level	20.73	12.17	
Advanced level	16.45	12.28	

There is a significant difference between the students of elementary Chinese proficiency and the students of intermediate and advanced Chinese proficiency, with p-value less than 0.05 (see Table 8 for details); the psychological adaptation of international students with intermediate Chinese proficiency and advanced Chinese proficiency shows no significant difference, with p-values more than 0.05. The above shows that there are significant differences between foreign students at the elementary level of Chinese and those at intermediate and advanced levels, which indicates that the psychological adaptation ability of foreign students is significantly related to their Chinese proficiency.

Table 8. Multiple Comparisons of the Influence of Chinese Proficiency

Chinese Proficiency		Sig.
HSK1	HSK3	0.001
	HSK4	0.000
	HSK5	0.000
HSK3	HSK1	0.001
	HSK4	0.539
	HSK5	0.080
HSK4	HSK1	0.000
	HSK3	0.539
	HSK5	0.152
HSK5	HSK1	0.000
	HSK3	0.080
	HSK4	0.152

4. CONCLUSION AND IMPLICATIONS

From the perspective of socio-cultural adaptability, the main factors adaptability include their Chinese proficiency, length of stay in China, interpersonal skills, and other environmental changes. From the perspective of international students' psychological adaptability, gender, length of stay in China, and Chinese proficiency are the main factors that affect their psychological adaptability. Giving the findings reported above, this study has implications for cross-cultural adaptability of international students in China.

Firstly, helping international students in China build cultural consensus through cooperation and practice activities to accelerate their cultural adaptation; enhancing their emotional connection and mutual understanding by encouraging students to interact with others frequently. University can utilize some traditional Chinese festivals to organize activities and invite international students to celebrate festivals together. They can introduce the connotation of these traditional festivals, and help them understand Chinese culture; also, cultural exchange activities can be organized between foreign students from different countries, in the form of lectures or other performances, students can experience and learn the customs and taboos of different cultures in the fun. In this way, international students can have deep interactions with each other, broaden their social scope, close the distance between their minds, weaken the boundaries between races, countries, and regions, and truly experience the charm of cross-cultural communication.

Secondly, improving teachers' professional ability. Language is the medium of communication between teachers and students. There may be deviations in language thinking between the professional expressions of Chinese teachers and the understanding of foreign students. Therefore, the training of teachers requires a certain standard for teachers' bilingual teaching ability and full English teaching ability. Because of the similar teaching classroom culture (the teacher-centered classroom), the international students from Asian countries are more likely to adapt to the teaching methods that Chinese universities are accustomed to. But for students from European, American, and African countries who are more accustomed to student-centered classroom, it would be difficult to adapt to Chinese teaching methods. Therefore, teachers need to improve the existing teaching methods and learn from other teaching experiences for foreign students.

Thirdly, building a network communication platform to provide one-stop service. With the rapid development of internet technology, the internet has penetrated all areas of life. The internet provides comprehensive and multi-level assistance to international students in their study and life in China. The school can build a one-stop service platform for online communities, including information consultation, curriculum library, and life assistance to improve their study and life quality in China. In classroom learning, due to language and basic knowledge restrictions, international students sometimes find it difficult to keep up with the teacher. The one-stop online platform provided by the

university can be a good method for them to solve this problem: they can review the point they missed by watching videos recorded after class; the platform can also set up a community discussion area to avoid the unconnected channels in real life and embarrassing communication caused by introversion. Both native and international students can freely post and discuss issues in this field; the platform can provide psychological counseling services so that students can conduct psychological relief in a relatively private environment; the platform can also set up a cultural resource exchange and sharing area, provide some Chinese traditional and modern cultural works for international students to appreciate, and cultivate their Chinese language logic imperceptibly.

ACKNOWLEDGMENT

This work was supported by the National Social Science Fund of China (No.18CYY027), the Science Foundation of China University of Petroleum-Beijing (No.2462020YJRC002), and the Science Foundation of China University of Petroleum-Beijing (No.2462020YXZZ010).

REFERENCES

- [1] Robert Redfield, Ralph Linton & Melville J.Herskovits, Memorandum for the study of acculturation. *American Anthropologist*. 38(1) : 149-152, 1936
- [2] Ward C, Kennedy A, The measurement of sociocultural adaptation. *International Journal of Intercultural Relations*, 23(4):659-677, 1999. DOI: [https://doi.org/10.1016/S0147-1767\(99\)00014-0](https://doi.org/10.1016/S0147-1767(99)00014-0)
- [3] Hui Chen, Hongsheng Che & Min Chen, A review of the research on the influencing factors of cross-cultural adaptation. *Advances in Psychological Science*, No.11, 2003. DOI: CNKI: SUN: XLXD.0.2003-06-016
- [4] Guohui Zhu, Research on the Cross-cultural Adaptation of International Students from Universities and Colleges. Ph. D. Dissertation. Doctoral Dissertation of East China Normal University, China, 2011. DOI: <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CDFD0911&filename=1011129211.nh>
- [5] Zulei Wang, An Empirical Study on the Cross-cultural Adaptation of International Students in Beijing Universities. *China Higher Education Research*, No.1, 2016. DOI: 10.16298/j.cnki.1004-3667.2016.01.24
- [6] Ward, C, Thinking outside the Berry boxes: New perspectives on identity, acculturation and intercultural relations. *International Journal of Intercultural Relations*, 2008. DOI:<https://doi.org/10.1016/j.ijintrel.2007.11.002>