The Chinese Intercultural Competence Scale and the External Factors of Spanish as a Foreign Language

Tzu-Yiu Chen
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Abstract: The current study aimed to assess the intercultural competence (IC) of Chinese students of Spanish as a foreign language (SFL) using Chen’s (2019) Chinese Intercultural Competence Scale (CICS), as well as to investigate which external factors influence the acquisition of IC in the field of SFL. The quantitative data from the study show that the participants’ IC level was neither high nor low. Their level of IC was affected by age, study abroad experience, frequency of using Spanish, and positive intercultural experiences, but not by gender, college year, or number of foreign languages spoken. The findings have implications for intercultural educators and teachers of foreign languages.

Keywords: Intercultural Learning, Intercultural Competence, Spanish as a Foreign Language, SFL Learners, Foreign Language Education.

1. Introduction

With a growing understanding of the complexities involved in learning a foreign language (FL), it has been recognised that intercultural competence (IC) is a category that must be addressed in the field of language education. A "complex of abilities required to interact effectively and appropriately with others who are linguistically and culturally different from oneself" is defined as IC (Fanti & Tirmizi, 2006). Intercultural experiences and personal characteristics are also linked to intercultural competence. Its level can be inferred from external factors and individual predictors such as years of FL acquisition, overseas experiences, staying abroad, language background, age, gender, educational institution, etc., but experts agree that IC can be measured (Deardorff, 2006).

There have been few studies on IC in the context of Spanish as a Foreign Language (SFL) education in a Chinese context. This could be due to the fact that English is still used as a lingua franca in intercultural communication; therefore, there is more research on English as a foreign language than SFL. However, an increasing number of Chinese students are choosing to study not only in English-speaking countries but also in Spain to improve their foreign language ability. According to the Ministry of Education and Vocational Training (MEVT, 2022) of Spain, 208,366 international students attended Spanish universities in 2019-2020, with Chinese students ranking fifth after Italian, French, Colombian and Ecuadorian students. The number of Chinese students studying at Spanish universities has steadily increased: 8,397 in 2015-2016, 9,416 in 2016-2017, 10,588 in 2017-2018, 11,810 in 2018-2019, and 12,571 in 2019-2020. Despite the growing number of students, studies among international Chinese students in Spain show that Chinese students have difficulty adapting to a new environment (Lin, 2016; Zhu, 2022).

Although international exchange programmes provide more opportunities for Chinese students to immerse themselves in foreign language cultures and develop their IC, some undergraduate students do not participate due to financial constraints or personal career goals. Some students may also want to study abroad after graduation. In foreign language classrooms, variables such as gender, education level, and overseas experiences must thus be considered in order to gain a better understanding of which factors may facilitate the development of learners’ IC (Jackson, 2011; Zimmermann, 1995). The current study aims to fill a research gap in the Chinese context by adding empirical information on the development of student IC to the existing intercultural literature. The objectives are as follows: (a)
investigating the level of IC of Chinese students studying SFL; and (b) investigating the relationships between the development of IC and the following variables: age, gender, college year, study abroad experience, frequency of using Spanish, number of foreign languages spoken, and positive intercultural experiences. Based on research objectives, a quantitative research design with self-report survey, comparison, and correlation analysis methods was used. The Intercultural Competence Scale, which has been validated by Chen (2019), was used. The findings can be used as a guide for SFL teachers and educators to adapt and improve the curriculum in both their home country and the host culture.

2. Literature Review

2.1 Intercultural Competence

Scholars have attempted to define and summarise the main components of IC. IC researchers generally believe that IC refers to adaptability in the cognitive, emotional, and behavioural aspects of intercultural interaction. We divided IC into three categories after a review of its conceptualisation.

Table 1: Conceptualisation of Intercultural Competence.

<table>
<thead>
<tr>
<th>Conceptualisation</th>
<th>Authors</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interculturally competent people can modify their original cultural habits according to the different intercultural environments and know how to adapt to diverse intercultural contexts.</td>
<td>Deardorff (2006: 184)</td>
<td>‘IC is defined as the ability to communicate effectively and appropriately in intercultural situations based on one’s knowledge, skills, and attitudes’ (IC).</td>
</tr>
<tr>
<td>Skills such as critical thinking and flexibility are part of the main component of IC.</td>
<td>Byram (1997: 53)</td>
<td>IC is ‘an ability to critically assess and based on explicit criteria perspectives, practises, and products in one’s own culture and other cultures and countries.</td>
</tr>
<tr>
<td>Interculturally competent people tend to apply knowledge and skills in a real communicative situation to achieve successful intercultural communications.</td>
<td>Meyer (1991: 137)</td>
<td>IC ‘is the ability of a person to behave adequately and flexibly when faced with actions, attitudes, and expectations of representatives of foreign cultures.</td>
</tr>
<tr>
<td></td>
<td>Zhang (2007: 70)</td>
<td>IC is ‘the ability to master certain cultural and communicative knowledge and apply this knowledge in real intercultural communication encounters.</td>
</tr>
<tr>
<td></td>
<td>Gao (2016: 71)</td>
<td>IC is ‘the ability shown through interactions with people of different cultural backgrounds.’</td>
</tr>
</tbody>
</table>

As seen in the previous table, there have been different definitions and conceptualisations of IC from different perspectives. Some put emphasis on the relationship between different contexts and behaviour in intercultural communication (Deardorff, 2006; Spitzberg & Cupach, 1984). Some scholars consider that critical thinking and flexibility form part of the main component of IC (Byram, 1997; Meyer, 1991), while others view IC from a more practical stance, tending to put more emphasis on how to use knowledge and skills in real communicative situations and achieve successful intercultural communication (Gao, 2016; Zhang, 2007).

In recent decades, there have been numerous IC models and approaches (Bhawuk & Brislin, 1992; Chen & Starosta, 2000; Bennett, 1986; Kim, 1991; Byram, 1997; Gudykunst, 2005; Chen, 1919; Chen, 2022; Chen & Gao, 2015; Deardorff, 2006; Spitzberg & Cupach, 1984; Ting-Toomey, 1993; Wu et al., 2013).

Some put emphasis on the importance of intercultural sensitivity in the process of IC development (Bhawuk & Brislin, 1992; Chen & Starosta, 2000); some models concentrate on processes of cultural adaptation and adjustment in new cultural environments (Bennett, 1986; Kim, 1991); and some focus on intercultural competence in foreign language teaching and learning (Chen & Gao, 2015; Wu et al., 2013). From our point of view, intercultural sensitivity is an aspect of the attitudinal dimension of IC, but it does not represent the whole picture of IC. Measuring IC in an evolutionary way is another type of evaluation, but this does not conform to the objectives that we set in this study. We also believe that it is essential to acquire knowledge about the host culture in language teaching and learning, but this alone is not sufficient for the development of IC.

We used Chen's IC measurement framework (2019) as the theoretical foundation for this study. This IC framework is based on the theoretical foundation of Byram (1997) and Deardorff (2006). Both models include all components of foreign language education (FLE) and see the foreign language learning process as an integral part of the development of IC.

2.2 Relationship between Culture and Interculturality

The study of intercultural communication began in the United States and was a relatively new field, starting about seven decades ago. Edward T. Hall’s The Silent Language (1959) is viewed as the starting point of the field of intercultural communication. Initially, intercultural communication was studied by exploring the relationship between culture and communication. Samovar & Porter (1972) discussed the definitions of culture, communication, and intercultural communication in depth, and later, in the 1980s, research on intercultural communication focused on its theoretical foundations, such as Hofstede’s Cultural dimension theory (1980), Gudykunst’s intercultural communication theory (1983) and Asante and Gudykunst’s Handbook of international and intercultural communication (1989). From the 1990s to the present, research on intercultural communication started to focus on international issues, and currently, some aspects related to interculturality, such as
intercultural contact, flexibility, cultural identity, intercultural conflict, and willingness to communicate, are widely investigated.

The evolution of conceptualisations about intercultural communication is changing. Intercultural communication has its origins in anthropology as a discipline dating back to the 1950s. Interest at the time was mainly in understanding the language and body language of certain cultural groups, that is, certain ethnic or indigenous groups. For example, in Hall’s (1959, 1966, 1968, 1976) communication theories, aspects such as context, space, time, low-context cultures, and high-context cultures were proposed to explain how different cultural groups engaged in interpersonal communication.

In the 1970s and 1980s, the scope of this study became very broad to include racial and interracial / interethnic communication (Blubaugh & Pennington, 1976; Rich, 1974; Scollon & Scollon, 1981). This change comes from a shift in research interest: from an initial focus on building relationships with other cultures to a focus on social contradictions and understanding communication and influence among different races, nationalities, genders, social classes, or groups in society.

However, by the 1980s and 1990s, IC research was dominated by cross-cultural psychology focusing on comparative and positivist paradigms, and culture became synonymous with the nation. For example, in Hofstede’s (1991) theory, Chinese culture is positioned as high collectivism, low uncertainty avoidance, high power distance, and long-term orientation. Since the early 2000s, the field of IC has shifted from the comparative culture and national culture paradigm to the study of interculturality. This breadth aims to explore how participants use language and other semiotic systems to construct their cultural identities (Higgins, 2007; Sercombe & Young, 2010; Zhu, 2019).

This last evolution brings to the field of foreign language teaching and learning three significant implications. First, culture is not fixed, static, or something individuals have, but something people do. Treating culture as a verb means not seeing participants as representatives of specific groups with cultural labels (e.g., Americans vs. Chinese) but instead focusing on the process of meaning-making. That is, intercultural communication is an interactive process in which people use words, symbols, and communication strategies to convey and interpret the meaning (Scollon et al., 2012). Second, intercultural communication is a dynamic, creative, and interactive process in which one’s cultural identity depends on the participants’ perception and orientation, as well as one’s self-directed identity versus others’ ascribed identity through intercultural interaction (Zhu, 2016). Third, intercultural competence is a kind of social interaction skill consisting of ideology, social structure, flexibility, self-identity, identity given by others, experience, cultural knowledge, and comprehension, among other aspects. This means that problems encountered in intercultural communication are no longer regarded as cultural misunderstandings. Solving these problems requires intercultural competence, that is, being able to put oneself in the shoes of others and understand them.

### 2.3 Byram (1997) and Deardorff (2006) IC Models

Both models have received considerable attention and have served as theoretical foundations for empirical FLE research. In addition to emphasising the importance of linguistic proficiency in intercultural communication, Byram’s (1997) model emphasises the reciprocal relationship between language and culture. An effective and knowledgeable intercultural learner, according to Byram (1997), should act as a bridge between his or her own culture and the cultures of other groups.

Byram (1997) investigated the phenomenon of intercultural communication from the point of view of teaching and studying foreign languages. He claims that an intercultural speaker should have "the ability to interact with people from another country and culture in a foreign language" (p.71) in addition to linguistic ability. He believes that the key to effective communicative interaction is not only the ability to exchange information effectively but also "the ability to deculture and take up the other's perspective on their own culture, anticipating and, where possible, resolving dysfunctions in communication and behaviour" (p.42). According to Byram (1997), five factors influence intercultural competence: knowledge, a positive attitude toward intercultural competence, interpretation skills, interaction skills, and critical cultural awareness. As a result, within the framework of FLE, his model takes into account the development of critical knowledge, attitudes, skills, and cultural awareness. To interact appropriately with people of other cultures, an individual must be able to interpret and process information from the perspective of others.

According to Deardorff’s model, IC is a dynamic process that is influenced by both internal and external factors (2006). As a result, it provides a method of instruction that initiates a cycle by instilling the attitudes necessary to cultivate the additional knowledge and skills required for successful intercultural communication.

Deardorff’s (2006) model is another one that is used in this investigation. Deardorff (2006) defines IC as a circular process that includes both individual and interaction movements. The former includes attitudes and knowledge, and skills, while the latter is primarily concerned with the exchange of internal and external outcomes. Deardorff’s (2006) model suggests that attitudes are the most important factor in the development of IC, followed by knowledge, comprehension, and skills. The interaction that occurs after the internal outcome is what ultimately determines the external outcome. This means that the internal result takes precedence over the interaction. The public manifestation of this result is effective and appropriate intercultural behaviour.

### 2.4 Chen’s Intercultural Competence Measurement Framework (2019)

A valid and reliable IC measurement framework was developed based on the theoretical frameworks of Byram (1997) and Deardorff (2006) to evaluate the IC of Chinese SFL students (Chen, 2022). This author defines IC as
"an individual’s ability to achieve one’s communicative purpose with appropriate and effective behaviour in various intercultural communications" (Chen, 2022: 47). Chen's IC framework (2019) includes the following components.

2.4.1 Attitudes:
Chen's framework (2019) identified three attitudinal elements: openness, attitude, and willingness to communicate. These characteristics suggest an active and positive attitude towards understanding cultural differences, a proclivity to act before it is necessary, respect for other cultures, confidence in interaction, and enjoyment of intercultural communication. These attitudes can have a direct impact on the development of the knowledge and skills required for IC.

2.4.2 Knowledge and Skill:
Knowledge aspects include intercultural awareness and cultural knowledge. The skill aspect includes elements such as observing, interpreting, evaluating, relating, and adapting (Chen, 2022). Integration of a set of skills and knowledge is an element agreed upon by various scholars (Chen & Gao, 2015; Deardorff, 2012; Gao, 2016; Zhang, 2007). The ongoing process of improving IC is based on this intrinsic relationship between knowledge and skills.

Figure 1: Chen’s Intercultural Competence Measurement Framework (2019).

Two observations should be made regarding the three dimensions of IC. First, these three dimensions are interrelated with each other and are active and underlying. The dimensions and components can be identified, but it is not known how they interact or what the type of interrelation there is since sometimes, depending on sensitivity, mood, or predisposition, the same person can act differently in the same situation. It is not known what weight each dimension exerts on the others or how they interrelate at one time or another. The second observation comes from the close relationship of the components due to the nature of diversity and dynamic of the IC. It cannot be asserted which components of the dimensions are the most essential for the development of IC.

2.5 Research on the Intercultural Competence of Chinese Learners of Foreign Language Education
Over the past 10 years, research on the degree to which variables influence the development of IC has become popular in Chinese contexts, particularly when English is the foreign language being studied. The emphasis has been on investigating the current level of intercultural competence (IC) among Chinese undergraduates (Duan, 2019; Gao, 2016; Kuang et al., 2022; Rui, 2016; Zhou, 2011); assessing this competence among FL learners and investigating the relationship between the development of intercultural competence and demographic variables (Duan, 2019; Kuang et al., 2022; Rui, 2016); and between individual variables (Feng, 2021; Huang et al., 2021; Wu et al., 2016; Weng et al., 2018).

In terms of the level of IC of the learners, the findings of these studies are inconclusive. For example, according to Gao (2016), Rui (2016) and Kuang et al. (2022), the IC level of Chinese students of foreign languages is high, whereas Duan (2019) finds it to be low and Zhou (2011) to be neither too high nor too low. Such disparities in results could be attributed to the different aspects of IC that each researcher focused on. However, these studies have something in common. The lowest of the three dimensions of the IC level of Chinese foreign language learners studied by the above researchers is the knowledge of IC, the highest is the attitude, and the middle is the skills. This could be due to the fact that Chinese learners have a positive attitude, openness, and high tolerance and acceptance of foreign cultures in intercultural communication (Duan, 2019; Rui, 2016), despite lack of cultural knowledge to communicate in intercultural encounters. As a result, Chinese learners find it difficult to respond and behave flexibly in the face of cultural differences.

The findings of studies on the relationship between IC development and demographic and academic variables are similarly mixed. Duan (2019) assesses the level of IC among university students and whether demographic and academic factors such as gender, degree and grade affect IC. She discovered a link between the development of IC and various genders, degrees, and grades. That is, according to Rui (2016) and Kuang et al. (2022), male participants have a higher IC level than female participants. However, according to Duan (2019),
female students have a higher IC level than male students. Furthermore, Duan (2019), Rui (2016), and Kuang et al. (2022) assert that students with higher grades have a higher IC level than those with a lower grade. Individual variables such as English proficiency and intercultural experiences have been studied in relation to the development of IC in Chinese settings. Chen and Hu (2023) discovered a significant correlation between Chinese undergraduates' intercultural sensitivity and language proficiency. Unlike the study by Wu (2016), Weng (2018), and Huang (2021) found no significant relationship between IC development and English proficiency. The contradictory findings could be attributed to the fact that cultural fluency is not always associated with foreign language fluency (Brislin & Yoshida, 1994). In terms of intercultural experiences, studying abroad helps to develop general intercultural sensitivity. However, simply being present in the host country does not guarantee IC development (Jackson, 2011). Weng (2018) discovered that studying abroad can boost IC, but having foreign friends is even more important.

As stated previously, several researchers examined the current level of IC in FLE and sought to identify factors that influence IC development. This demonstrates that the results have been mixed, laying the groundwork for further empirical research. However, no previous studies have been conducted to assess Chinese students' IC in the field of SFL. As Arasaratnam (2016) pointed out, a person's competency in one cultural context does not imply his competency in other cultural contexts (Nadeem et al., 2020: 30). To fill the literature gap in the Chinese context, this study addresses the following two research questions with respect to study participants.

- i. What is the current level of intercultural competence of SFL students?
- ii. What are the main factors that affect the intercultural competence of Chinese Spanish as foreign language students?

3. Methodology

3.1 Research Design

A self-assessment tool was used for the purposes of this study. The test was administered to various groups of SFL students who spoke Chinese Mandarin as their first language. The questionnaire was created by Chen (2019) to assess students' IC levels and to investigate the relationship between IC development and potential factors that influence it.

3.2 Research Instruments

To investigate the source of IC, a two-section questionnaire was created and distributed online. Below is an outline of this two-section questionnaire:

3.2.1 Personal Data Questionnaire:

In the first section of the survey, students were asked about their personal histories. This section included demographic and academic information questions, as well as whether the students had previously travelled outside of the country to study or work. The questions are divided into the following issues:

- a) Nationality, place of birth, age, and mother tongue.
- b) Use of languages during the trip: its objective is to learn about the use of foreign languages during their stay abroad.
- c) Stay in Spain: these are questions related to the duration of the stay of the respondents.
- d) Daily life: social activities of Spanish life are added as options.
- e) Languages: participants are asked about Spanish, English, and their third or fourth language.
- f) Intercultural experiences: Questions are included to gain a general idea of the intercultural encounters of the respondents.

3.2.2 Questionnaire About Intercultural Competence

We used Chen's (2019) Chinese Intercultural Competence Scale for the second part of the survey (CICS) (see Appendix 1). This scale (Cronbach’s alpha = 0.91) consists of 28 statements organised on a Likert scale, with 1 indicating strong disagreement and 6 indicating strong agreement. Based on a three-dimensional model, the 28 statements were divided into three categories (attitudes, knowledge, and skills) with two subscales. A subscale (Cronbach’s alpha = 0.92) evaluated attention and willingness to communicate (8 items), interaction (4 items), respect for cultural differences (3 items), and another subscale (Cronbach’s alpha = 0.82) evaluated non-verbal communication and behaviour (3 items), cultural elements (3 items), and non-verbal aspects of verbal communication (3 items). The questionnaire was translated into Chinese so that everyone who completed it could understand it. This was done to avoid misinterpretation of the questionnaire.

3.3 Participants

This study included 257 Chinese-speaking SFL students from universities in Spain, China, and Taiwan. All participants were asked to fill out the digital questionnaire in the Chinese version. Most of the participants were women, with ages ranging from 18 to 23 years old (81%). 78 of these students had never had the opportunity to participate in an international educational experience before. All who contributed to this study did so voluntarily. They were informed that any and all collected data would be used solely for the purposes of the study and that the study findings would be reported anonymously. One of the respondents had to be eliminated because his demographics did not match those of the study. 46% were 2nd- and 3rd-year students, 35% were fourth-year or higher students, 13% had already completed or were working toward a master’s or Ph.D. degree, and the
remaining participants had received education in a variety of other areas. 70% of the participants had stayed in Spain. 47% of them had learned two foreign languages, 43% had learned three, and 10% had learned more than three foreign languages. Only 26% of the 256 participants spoke Spanish very rarely, compared to 47% who spoke it occasionally and 27% who spoke it frequently. The vast majority of students, 87%, have reported positive intercultural experiences with native Spanish speakers. The above information is summarised in the following table:

### Table 2: Background information of the participants.

<table>
<thead>
<tr>
<th>Participants’ background information</th>
<th>Total subjects</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49</td>
<td>19%</td>
</tr>
<tr>
<td>Female</td>
<td>207</td>
<td>81%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-23 years of age</td>
<td>208</td>
<td>81%</td>
</tr>
<tr>
<td>More than 24 years old</td>
<td>48</td>
<td>19%</td>
</tr>
<tr>
<td>Year of study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd-3rd</td>
<td>119</td>
<td>46%</td>
</tr>
<tr>
<td>4th-5th</td>
<td>89</td>
<td>35%</td>
</tr>
<tr>
<td>Master or Ph.D.</td>
<td>32</td>
<td>13%</td>
</tr>
<tr>
<td>Other studies</td>
<td>16</td>
<td>6%</td>
</tr>
<tr>
<td>Staying in Spain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have stayed in Spain?</td>
<td>178</td>
<td>70%</td>
</tr>
<tr>
<td>Have not stayed in Spain?</td>
<td>78</td>
<td>30%</td>
</tr>
<tr>
<td>Frequency of Spanish Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rarely do</td>
<td>67</td>
<td>26%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>119</td>
<td>47%</td>
</tr>
<tr>
<td>Frequently</td>
<td>70</td>
<td>27%</td>
</tr>
<tr>
<td>Number of foreign languages spoken</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than two</td>
<td>121</td>
<td>47%</td>
</tr>
<tr>
<td>Three</td>
<td>109</td>
<td>43%</td>
</tr>
<tr>
<td>Four</td>
<td>26</td>
<td>10%</td>
</tr>
<tr>
<td>Positive intercultural experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-positive</td>
<td>33</td>
<td>13%</td>
</tr>
<tr>
<td>Positive</td>
<td>69</td>
<td>26%</td>
</tr>
<tr>
<td>Very positive</td>
<td>88</td>
<td>27%</td>
</tr>
<tr>
<td>Totally positive</td>
<td>66</td>
<td>34%</td>
</tr>
</tbody>
</table>

Source: Calculated by the Author

### 3.4 Demographic, Academic, and Individual Factors

The purpose of this study was to evaluate the level of IC of Chinese SFL students and to investigate potential factors that can influence the acquisition of IC to obtain a more complete picture of the current situation of IC of Chinese-speaking SFL students. To meet the needs of the current study, factors such as sex, age, study year, study abroad experiences (staying in Spain or not), frequency of use of Spanish, number of foreign languages spoken, and level of positive intercultural experiences are used. The cut-off point for groups of academic and individual factors is described below.

We divided the study years of the participants into four groups (2nd-3rd; 4th-5th; Master's-PhD; other studies), and we divided study abroad experiences into two groups: stayed in Spain and did not stay in Spain. We use a three-tier division for the frequency of Spanish use (rarely, occasionally, and frequently), which refers to having Spanish friends, using Spanish outside of class and in daily life, and participating in Spanish-related activities, all of which are related to direct and indirect contact. We divided the foreign languages spoken factor into three categories (less than two, three, and four) and positive intercultural experiences into four categories (non-positive, positive, very positive, totally positive), which means that ”my experiences in communication/interaction with people from other cultures have been positive.”

### 3.5 Analysis Strategy

To analyse the data collected, the statistical package for social sciences (SPSS), version 20, was used. This study included several stages of statistical analysis. First, descriptive statistics were used to report the distribution of data in terms of frequency, means, medians, and standard deviation (SD). Subsequently, several different types of analysis were performed, each of which was determined by the type of variable and sample. Gender, age, year of study, study abroad experience (whether or not staying in Spain was included), frequency of Spanish use, and number of foreign languages spoken were dependent variables in this study. Furthermore, before starting any statistical procedures, it is critical to determine whether the data have a normal distribution (Ghasemi & Zahediasl, 2012). Our team chose the Shapiro-Wilk normality test because it is more accurate and robust than other normality tests (Yap & Sim, 2011).

If the data had a normal distribution, we used the independent samples t-test and one-way analysis of variance (ANOVA) to answer our research questions; if the data did not have a normal distribution, we used the
Mann-Whitney U test and the Kruskal-Wallis H test (Pardo & Martín, 2010). To put it another way, when the variable being tested is ordinal or continuous and normally distributed, the independent-sample t-test is used to compare differences between two independent groups. When the data do not follow a normal distribution, the Mann-Whitney U test is used to compare the differences between two independent groups. When the data do not have a normal distribution, the Kruskal-Wallis H test is used to compare the differences between three or more independent (unrelated) groups. The one-way analysis of variance (ANOVA) test is used to determine whether there are statistically significant differences between the means of three or more independent groups that are not related to each other. The Kruskal-Wallis H test is used to determine whether there are statistically significant differences.

Post hoc pairwise comparisons were also used in the final stage of the analysis to determine whether there were statistically significant differences between the various categories and groups. Finally, the sample was divided into three distinct groups to determine the overall level of IC of the participants. Table 3 provides an overview of the statistical approaches used in this investigation.

Table 3: Methods of Data Analysis.

<table>
<thead>
<tr>
<th>Background Information</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Mann-Whitney U test</td>
</tr>
<tr>
<td>Age</td>
<td>T-test</td>
</tr>
<tr>
<td>Year of Study</td>
<td>Kruskal-Wallis H test</td>
</tr>
<tr>
<td>Study abroad experience</td>
<td>Mann-Whitney U test</td>
</tr>
<tr>
<td>Frequency of Spanish Use</td>
<td>One-way ANOVA</td>
</tr>
<tr>
<td>Number of foreign languages spoken</td>
<td>One-way ANOVA</td>
</tr>
<tr>
<td>Positive intercultural experiences</td>
<td>One-way ANOVA</td>
</tr>
</tbody>
</table>

Source: Calculated by the Author

4. Results

The results are divided into two parts. The first part presents the current general level of IC of Chinese students of SFL, and the second part focusses on the kinds of factors that affect their IC.

4.1 Current IC Level of Chinese SFL Students

According to the findings, the IC level of the SFL students was neither high nor low, and the low level had a slightly higher percentage than the other two levels (high and intermediate) (Figure 2). Table 4 summarises the minimum and maximum scores obtained, as well as the mean, median, and standard deviation (SD) for each component of this scale. In the affective dimension, the component Attentiveness and Willingness to Interact has the highest mean score (38.5), while the confidence in interaction has the lowest (15). Furthermore, in the cognitive dimension, the component Non-verbal Communication and Behaviour has the highest mean score (13.53), and Cultural Elements has the lowest score (10.70). The mean score on the CICS scale was 124.49, and the ICS scores ranged from 81 to 168 in this study. The group that stayed in Spain (M= 127.0506) had a higher level of IC than the group that did not (M= 118.6538).

Figure 2: The Distribution of IC Level of SFL Students.

Table 4: Descriptive statistics of CICS.

<table>
<thead>
<tr>
<th></th>
<th>Attentiveness and Willingness to Interact</th>
<th>Respect for Cultural Differences</th>
<th>Confidence in the Interaction</th>
<th>Interaction enjoyment</th>
<th>Non-Verbal Communication and Behaviour</th>
<th>Cultural Elements</th>
<th>Non-Verbal Aspects in Verbal Communication</th>
<th>IC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini obtained</td>
<td>20.00</td>
<td>9.00</td>
<td>7.00</td>
<td>8.00</td>
<td>5.00</td>
<td>3.00</td>
<td>5.00</td>
<td>81.00</td>
</tr>
<tr>
<td>Maxi obtained</td>
<td>48.00</td>
<td>18.00</td>
<td>24.00</td>
<td>24.00</td>
<td>18.00</td>
<td>18.00</td>
<td>18.00</td>
<td>168.00</td>
</tr>
<tr>
<td>Mean</td>
<td>37.93</td>
<td>16.14</td>
<td>15.37</td>
<td>19.56</td>
<td>13.53</td>
<td>10.70</td>
<td>11.26</td>
<td>124.49</td>
</tr>
<tr>
<td>Median</td>
<td>38.50</td>
<td>17.00</td>
<td>15.00</td>
<td>20.00</td>
<td>14.00</td>
<td>11.00</td>
<td>11.00</td>
<td>123.00</td>
</tr>
<tr>
<td>SD</td>
<td>6.72</td>
<td>1.98</td>
<td>3.52</td>
<td>3.16</td>
<td>2.67</td>
<td>3.51</td>
<td>3.12</td>
<td>17.14</td>
</tr>
</tbody>
</table>

Source: Calculated by the Author
### 4.2 Factors Influencing the IC of Chinese SFL Students

#### 4.2.1 Gender

The results of the Mann-Whitney U test (Table 5) show that there is no significant relationship between IC and gender (Males: \(M = 126.081, \text{SD} = 17.189\); Females: \(M = 124.115, \text{SD} = 17.146\)). The results of the test support this conclusion. That is, both had the same amount of IC. (\(U = 4721.5, \ p = .45\)).

**Table 5: Gender.**

<table>
<thead>
<tr>
<th></th>
<th>Male (n=49)</th>
<th>Female (n=207)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>126.081(17.189)</td>
<td>124.115(17.146)</td>
<td>.45</td>
</tr>
</tbody>
</table>

Note: \(*p < .05\)

#### 4.2.2 Age

The results of the T test (Table 6) show that age (18-23 years old: \(M= 123.182, \text{SD}= 16.998\); older than 24 years: \(M= 130.166, \text{SD}= 16.748\)) has a statistically significant main effect on the IC score. Therefore, age had a significant effect on its IC level (\(t (254) = -2.573; \ p = .011\)).

**Table 6: Age.**

<table>
<thead>
<tr>
<th></th>
<th>18-23 years of age (n = 208)</th>
<th>More than 24 years old (n=48)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>123.182(16.998)</td>
<td>130.166(16.748)</td>
<td>.011</td>
</tr>
</tbody>
</table>

Note: \(*p < .05\)

#### 4.2.3 Year of Study

Table 7 shows that there are no overall significant differences between the groups of different grade levels (2nd-3rd: \(M= 122.941, \text{SD}= 17.358\); 4th-5th: \(M= 124.393, \text{SD}= 16.522\); Master's Ph.D.: \(M= 128.343, \text{SD}= 20.219\); Other studies: \(M= 128.875, \text{SD}= 10.255\)). That is, the IC of these 2nd-year, 3rd-year, fourth-year, 4th-year, Master, and PhD students, as well as students from other disciplines, were not significantly different (\(\chi^2(2) = 3.737, \ p= .291\)).

**Table 7: Year of study.**

<table>
<thead>
<tr>
<th></th>
<th>2nd-3rd (n=119)</th>
<th>4th-5th (n=89)</th>
<th>Master's &amp; Ph.D. (n = 32)</th>
<th>Other studies (n=16)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>122.941(17.358)</td>
<td>124.393(16.522)</td>
<td>128.343(20.219)</td>
<td>128.875(10.255)</td>
<td>.291</td>
</tr>
</tbody>
</table>

Note: \(*p < .05\).

#### 4.2.4 Study Abroad Experience

Table 8 shows the level of IC of the participants in relation to the experience of staying or not in Spain. One hundred and seventy-eight students stayed in Spain, while the remaining 78 did not. The overall IC shows a significant difference (\(U = 4968, \ p < .001\)). The mean score of the students who had spent time in Spain (\(M= 127.050, \text{SD}= 16.025\)) was higher than that of those who did not (\(M= 118.653, \text{SD}= 18.239\)).

**Table 8: Study abroad experience.**

<table>
<thead>
<tr>
<th></th>
<th>Have stayed in Spain (n=178)</th>
<th>Have not stayed in Spain (n=78)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>127.050(16.025)</td>
<td>118.653(18.239)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: \(*p < .05\).

#### 4.2.5 Frequency of Spanish Use

According to the results of the one-way ANOVA (Table 9), there is a significant difference in overall IC in terms of the frequency of Spanish use (rarely: \(M= 116.626, \text{SD}= 15.713\); occasionally: \(M= 123.731, \text{SD}= 16.616\)). These findings indicate that students who use Spanish more frequently have higher IC than those who use it less frequently (\(F (2, 253) = 18.735; \ p < .001\)).

**Table 9: Frequency of Spanish Use.**

<table>
<thead>
<tr>
<th></th>
<th>Rarely (n=67)</th>
<th>Occasionally (n=119)</th>
<th>Frequently (n=70)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>116.626(15.713)</td>
<td>123.731(16.616)</td>
<td>133.314(15.397)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: \(*p < .05\).

#### 4.2.6 Number of Foreign Languages Spoken

Table 10 shows that there is no overall significant evidence of a difference between groups with different numbers of foreign languages spoken (less than two: \(Mean = 122.396, \text{SD} = 16.868\); three: \(Mean = 122.926, \text{SD} = 17.559\); four: \(Mean = 128.230, \text{SD} = 15.918\)). In other words, the number of foreign languages spoken by the students appears to have no effect on their IC (\(F (2, 253) = 1.919; \ p = .149\)).

**Table 10: Number of foreign languages spoken.**

<table>
<thead>
<tr>
<th></th>
<th>Less than two (n=121)</th>
<th>Three (n=109)</th>
<th>Four (n=26)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>116.626(15.713)</td>
<td>123.731(16.616)</td>
<td>133.314(15.397)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
4.2.7 Positive intercultural experiences

There is a significant difference in overall IC in terms of positive intercultural experiences, according to the results of one-way ANOVA (F(3, 252) = 22.645; p < .001). To better examine each group, post hoc comparisons (Scheffe Test) were calculated between different levels of positive intercultural experiences. The results are shown in Table 11:

Table 11: Post hoc comparisons; Positive intercultural experiences.

<table>
<thead>
<tr>
<th>Level of IC</th>
<th>Nonpositive (n = 33)</th>
<th>Positive (n=69)</th>
<th>Very positive (n=88)</th>
<th>Totally positive (n=66)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>122.396(16.868)</td>
<td>122.926(17.559)</td>
<td>128.230(15.918)</td>
<td>.149</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p < .05.

Group A with very positive intercultural experiences (M = 124.011, SD = 14.736), has a significantly higher IC score than the group with negative intercultural experiences (M = 115.030, SD = 20.915, p < 0.043). Group B, with totally positive intercultural experiences (M = 136.757, SD = 14.970), has a significantly higher IC score than the group with negative intercultural experiences (M= 115.030, SD= 20.915, p <.001). Similarly, group C with completely positive intercultural experiences (M= 136.757, SD= 14.970) has a significantly higher IC score than the positive group (M= 117.898, SD= 13.023, p < 0.001); Group D has a significantly higher IC score than the very positive group (M= 124.011, SD= 14.736, p < 0.001).

5. Discussions and Conclusions

The purpose of the study was to provide evidence on the development of intercultural competence (IC) among Chinese students of Spanish as a foreign language (SFL) and to discover other factors that influence the development of IC using a self-assessment instrument. The study achieved both objectives: 1) to determine the current level of IC among Chinese students of Spanish as a foreign language, and 2) to provide information on the extent to which external factors can influence the development of IC. Two research questions on the current IC level of Chinese SFL students and the relationship between IC development and seven different factors were developed to be answered in this investigation.

5.1 The IC Level of Chinese SFL Students

In response to the first research question, which was "What is the current IC level of Chinese SFL students?" The results of the questionnaire show that the IC levels of the students are evenly distributed. In general, the IC level of the SFL students was neither exceptionally high nor exceptionally low. This finding is consistent with Zhou (2011) and Rui (2016) findings that EFL learners have a medium level of IC. Interestingly, this finding is also consistent with other empirical studies of students with non-English majors (Fu, 2017). From our perspective, one of the reasons is that an individual’s IC does not absolutely depend on his linguistic ability, which means that the duration of learning a foreign language does not guarantee the development of IC. These findings echo one of the findings by Chen (2015).

5.2 IC Development in Relation to Seven Selected Factors

For the second research question, "What are the most important factors influencing the IC of Chinese SFL students?" According to the study findings, there were significant differences in age, study abroad experience, frequency of Spanish use, and level of positive intercultural experiences. In terms of age differences, a significantly higher IC in older students than in younger students could be attributed to older students’ ability to better care for themselves due to their relatively mature personal experience and psychology. According to the study, students who stayed in Spain had a higher IC score than those who did not. This finding is consistent with previous research in the field of EFL (e.g., Huang, 2021; Rui, 2016; Weng, 2018; Wu, 2016) that found that international experiences can improve the development of IC. Furthermore, it appears that if SFL students have the opportunity to interact with people from other cultures, such as staying abroad or conversing with foreign friends, they are more likely to actively engage in more conversations with foreigners. This clearly explains another relative finding of this study between students who stayed in Spain and those who did not, with the former being more predisposed to communicate with people from different cultures, enjoying interpersonal communication more, and having more confidence in intercultural encounters than the latter. There is no significant difference between them regarding respect for cultural differences, which might be because most SFL students view different cultures from a multicultural and flexible perspective. Regarding knowledge and skill dimensions, students who stayed in Spain had higher intercultural awareness and communication skills than those who did not, especially with regard to cultural elements and non-verbal aspects of verbal communication. Immersion in the host culture could help learners increase their understanding of the different cultures, become aware of the different ways of communicating, and, as a result, acquire intercultural skills to communicate effectively in a variety of contexts.
However, there were no statistically significant differences in IC based on sex, study year, or number of foreign languages spoken. Regarding the gender variable, while some studies show a link between gender and the IC level (Gao, 2016), Rui (2016) and Kuang (2021) studies do not. Gender, like personality and character, is an individual factor in our opinion but may not be a determinant in and of itself. Other types of measurement should be used to investigate how gender influences IC. The findings regarding the year of study and the number of foreign language spoken variables are similar to those of Yuan (2009), who measured the intercultural sensitivity of English degree students and investigated what variables might affect their IC. Following the author's lead, we believe that because SFL students have a strong interest in Spanish and its culture and may have been motivated to approach the Spanish culture prior to beginning their SFL training, they may already have a certain IC baseline level. Our findings show that gender, study year, and number of foreign languages spoken have no effect on the IC level of Chinese SFL students.

This study not only identifies the factors that promote the development of IC and those that do not, but also explains why the impact of IC is greater for some students than for others of different cultural backgrounds. In addition, the findings may be useful to foreign language teachers when designing intercultural courses. For example, foreign language teachers could design intercultural activities such as roleplays, simulations, debates, and so forth, which permit students to observe cultural differences, be aware of cultural diversity, and promote their critical thinking. Moreover, intercultural training courses could be provided for SFL students, both for those preparing for their stay and for those who are not. On the one hand, such training courses can provide students with opportunities to develop their intercultural attitude, awareness, and skills before going abroad so that they will not feel uncomfortable or lack confidence when communicating with foreigners, and they can also reduce cultural shock. Students who are not going to study abroad must have the opportunity to communicate with foreigners or people with different cultural backgrounds in their home country. Through these courses, learners can know how to interact in real intercultural communication and can also give them a broader perspective.

5.3. Limitations
Some of the issues in this study would be better illustrated with additional research. To begin, the relationship between the development of IC and the factors that influence it could be investigated by dividing the samples into a control group and an experimental group in order to provide more evidence and additional qualitative elements. Second, Deardorff (2006) believes that a combination of quantitative and qualitative methods is the best way to assess IC. The benefit of a self-assessment instrument is the ability to assess one's own level of intercultural competence. However, it must be noted that self-assessments may be inaccurate or biased because subjects may be unable to recognise their own competency due to a lack of knowledge and experience in a particular field (Dunning et al., 1989). Third, while the current study looks at IC development as a whole, future research can look at this competence through subdivisions to see what aspects of IC are unique to SFL.

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Author contribution statements: The author made all the contribution of the article.

Funding: No Founding

Ethical Consideration statement: In this study, a questionnaire of the Likert scale was used to collect the responses of the subjects. The questionnaire collection was based on a web link (google form). The purpose of the survey had been informed from the beginning of the questionnaire homepage (https://docs.google.com/forms/d/1xyDVdZy7xolbOAWeTG_mFanwZieEpf3XYI_8tZkefY/edit). The questionnaire was anonymous, and the subjects are asked to fill in the basic information (grade, gender, university, etc.) and the content of the questionnaire (see the appendix of the manuscript).

Data Availability Statement: The data is not publicly available.

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References


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Appendix 1

Chinese Intercultural Competence Scale (CICS) by Chen (2019).

1. I enjoy interacting with people from different cultures.
2. I am pretty sure of myself when interacting with people of different cultures.
3. It is very hard to talk to people from different cultures.
4. I always know what to say when interacting with people of different cultures.
5. I can be as sociable as I want to be when interacting with people from different cultures.
6. I respect the values of people of different cultures.
7. I feel confident in interacting with people from different cultures.
8. I often get discouraged when I am with people from different cultures.
9. I am open-minded to people of different cultures.
10. I often feel useless when I am interacting with people from different cultures.
11. I respect the way people of different cultures behave.
12. I avoid those situations where I will have to deal with culturally distinct persons.
13. I have a feeling of enjoyment of the differences between my culturally distinct counterpart and me.
14. Talk to someone who I perceive to be different from me.
15. Talk to someone from another country.
16. Talk to someone from a culture that I know very little about.
17. Talk to someone of a different race than mine.
18. Talk to someone of a different culture.
19. Talk to someone who speaks Spanish as a second language.
20. I can accurately list three countries that are considered collectivistic.
21. I can accurately identify three countries that have a high-power distance.
22. I can behave appropriately when I am invited to someone’s home.
23. I know the appropriate distance to stand when interacting with people in at least two other countries.
24. I know the appropriate touch rules in at least two other countries.
25. I understand and can practise appropriate gift-giving in three other countries.
26. I can identify some gestures that are appropriate in Spain, but that are considered obscene in other countries.
27. I can name three countries that are considered polychromic.
28. When I want to say something, I know how to raise the subject directly or indirectly in two countries.