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Developing an Intercultural Competence Instrument in Foreign Language Teaching Context: A Study of Chinese Students of Spanish as a Foreign Language

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Abstract: The present study aims to develop an intercultural competence (IC) instrument for Chinese students of Spanish as a Foreign Language (SFL). In order to do so, we took steps to modify the statements and confirm the validity of the IC instrument. The new instrument was validated by using exploratory factor analysis through a self-report methodology. The results showed that the instrument possessed adequate validity and reliability. The 28-item scale identified seven personal traits for the development of intercultural competence: attentiveness and willingness to interact; respect for cultural differences; interaction confidence; interaction enjoyment; non-verbal communication and behavior; cultural elements; and non-verbal aspects in verbal communication. The internal consistency of the scale was found to be adequate. Therefore, the newly constructed scale is valid and reliable for use in Chinese cultural settings.

<u>**Keywords:**</u> Intercultural Competence, Foreign Language Teaching, Cultural Teaching, Intercultural Education, Spanish as a Foreign Language.

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1. Introduction

Communication between people from different cultures is becoming increasingly frequent in a globalized world, and this has given rise to the analysis of cross-cultural interactions. Intercultural Competence (IC) is the ability to function effectively across cultures, to think and act appropriately, and to communicate and work with people from different cultural backgrounds – at home or abroad. An interculturally competent person knows how to achieve communicative purposes in different interpersonal situations effectively and to act appropriately. Developing IC is thus essential for people visiting countries that have a cultural background that differs from their homeland culture and for those who live in multicultural environments, such as cities with notable ethnic and racial diversity. In recent decades, the objective of Foreign Language Education (FLE) has expanded from language proficiency to communicative competence and also to the broader concept of IC.

Regarding students of Chinese origin, Huang (2017) stated that there is a consensus on promoting Chinese students' IC in the field of FLE. Thus, teachers play an extremely important role in training learners in IC, and classroom activities should promote intercultural knowledge, awareness, sensitivity, and skills.

Compared with other fields, Intercultural Communication Studies (ICS) are relatively new. The term intercultural communication competence was first used by Eduard T. Hall in his masterwork The Silent Language (1959), which is a solid foundation for further IC studies in Western countries, and IC has been conceptualized in a number of theoretical models (Arasaratnam and Doerfel, 2005; Bennett, 1986; Bennett and Hammer, 2002; Bhawuk and Brislin, 1992; Byram, 1997; Chen and Starosta, 1997; Deardorff, 2006; Gudykunst, 2005; Kim, 1991; Kassing, 1997; Ruben, 1976). In the early 1980s, ICS were introduced into China through FLE, with the study by Xu (1980) marking the birth of ICS in China. Little research was carried out between 1982 and 1994 (Gao, 2014), but since 1995, with the establishment of the China Association for Intercultural Communications (CAFIC), ICS has received increasing attention from Chinese scholars. Chinese researchers have developed numerous models to assess Chinese college students' IC in teaching English as a foreign language (Chen and Gao, 2015; Wu et al., 2013; Zhang and Yang, 2012; Zhong et al., 2013). Despite the evolution of IC assessment in teaching English as a foreign language, research still lacks models, measurements, and empirical studies related to teaching Spanish as a foreign language.

To fill this gap, the aim of the present study is to develop an evaluation scale to measure the IC of Chinese students, taking as a reference point Chinese students studying Spanish as a foreign language (SFL). The two steps in developing the IC instrument were to modify the

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statements and confirm their validity. A quantitative method was used to compile evidence in a more comprehensive way, and the data were then analyzed through exploratory factor analysis (EFA).

2. Literature Review

2.1 Conceptualization of intercultural competence

IC can be defined as "an individual's ability to execute effective and appropriate communication behaviors in order to achieve one's communication goals in an intercultural context" (Chen and Young, 2012, p. 176). The study of IC has received a great deal of attention from scholars of different disciplines, including anthropology, psychology, sociology, linguistics, and pedagogy. Some scholars define IC based on the cultural origin of the individuals, while others define it from a dynamic perspective, which also considers the final destination and the intermediate steps that lead to actual competence. Interculturally competent individuals have an active cultural identity and play an active role that allows them to adapt to the communication environment. Other authors state that IC is a complex ability that requires some features, such as critical thinking and flexibility, in order to become a successful intercultural communicator.

For instance:

1. Spitzberg and Chagnon (2009, p. 7) defined IC as "the appropriate and effective management of the interaction between people who, to some degree or another, represent different or divergent affective, cognitive, and behavioral orientations to the world."

2. Competence achievements in communication have also been pointed out, for example, by Gudykunst (competent communication "consists of behaviors that are regarded as effective and appropriate" [Gudykunst, 2003, p. 193]); and by Bennett (2009), who defines IC as "a set of cognitive, affective, and behavioral skills and characteristics that facilitate intercultural interactions in various contexts that support effective and appropriate interaction in a variety of cultural contexts" (Bennett, 2009).

3. Authors have mainly focused on the different components of multicultural competence. Chen and Starosta (1996) argued that IC requires effective and appropriate interaction with people who have multiple cultural identities. Furthermore, intercultural sensitivity is a process of cultural learning and involves cognitive, affective, and behavioral learning processes (Bhawuk and Sakuda, 2009). Byram (1997) defined IC as "an ability to evaluate critically and on the basis of explicit criteria perspectives, practices, and products in one's own and other cultures and countries" (p. 53). Fantini and Tirmizi (2006) viewed IC as "a complex of abilities needed to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself" (p. 12). Chinese research on IC has already taken many steps toward conceptualizing IC. Chinese researchers tend to place more emphasis on how individuals may develop IC and on how to place knowledge and skills in a real communicative situation. Gao (1998) believes that IC refers to the competence or quality required for successful intercultural communication (p. 39). Zhang (2007) defines IC as the ability to master certain cultural and communication knowledge and put it into practice in practical intercultural environments (p. 70). Jiang (2015) proposes that IC is a combination of cultural awareness, attitude, knowledge, and skills (p.4, 1-42). Gao (2016) describes IC as the ability shown through interactions with people from different cultural backgrounds (p. 71). According to Xiao (2016), IC is "a kind of survival ability in special situations, which is mainly concentrated among people with different cultural consciousness and living habits, and it is necessary for them to eliminate the interference and differences among different cultures" (p. 142).

There have been various models proposed based both on the IC theoretical framework and on the background from different disciplines (Arasaratnam, 2006; Bennett, 1986; Bhawuk and Cupach, 1984; Byram, 1997; Chen and Starosta, 2000; Chen and Gao, 2015; Deardorff, 2006; Gudykunst, 2005; Kim, 1991; Sunendar, Darmawangsa, & Sukmayadi, 2021; Ting-Toomey, 1993; Wu et al., 2013; Wang, 2019). Among them, we found two IC models (Byram, 1987; Deardorff, 2006) that provide sufficient theoretical grounding and meet the requirements for our study. We chose the first model by Byram (1997) because it appeared most frequently in the field of FLE. Byram's model (1997) includes all components of IC found throughout the history of teaching and learning a foreign language. We take Deardorff's model as another theoretical foundation because this framework considers IC as a circular process, addressing the perspective of internal and external outcomes of IC. Both models served as the guidelines for content selection and design of a new instrument in our IC framework.

2.2. Byram's intercultural competence model (1997)

Byram (1997) divided IC into four aspects: knowledge, attitude, skills, and awareness.

2.2.1. Knowledge

Intercultural knowledge refers to "knowledge that communicators should possess and use in intercultural communications," including knowledge of one's own culture and people from other cultures.

2.2.2. Attitude

Intercultural attitude refers to curiosity and openness, not being eager to make negative judgments about other cultures but positive judgments about one's own culture.

2.2.3. Skills

Intercultural skills consist of skills of interpreting and relating as well as skills of discovery and interaction. Skills of interpreting and relating refer to the ability to interpret a document or event from another culture and to relate to it from one's own culture.

2.2.4. Awareness

Intercultural awareness refers to critical cultural awareness, which is the ability to interpret and evaluate events and things of different cultures from a multicultural perspective.

Byram's model (1997) has greatly broadened the conceptualization of IC, which is helpful for a comprehensive understanding of IC. However, Byram's model does not explain the relationship between various abilities or the process of acquiring IC.

2.3.   Deardorff's model (2006)

Deardorff (2006) used the Delphi methodology to conduct a survey on American university administrators in the United States and well-known scholars in the field of Intercultural Communication and found that the most popular definition of IC is: "the ability to communicate effectively and appropriately in the practice of intercultural communication based on intercultural knowledge, skills, and attitudes" (Deardorff, 2004, p. 194). Based on this definition, Deardorff (2006) established a Pyramid Model of IC (PMIC) through empirical research (see Figure 1).
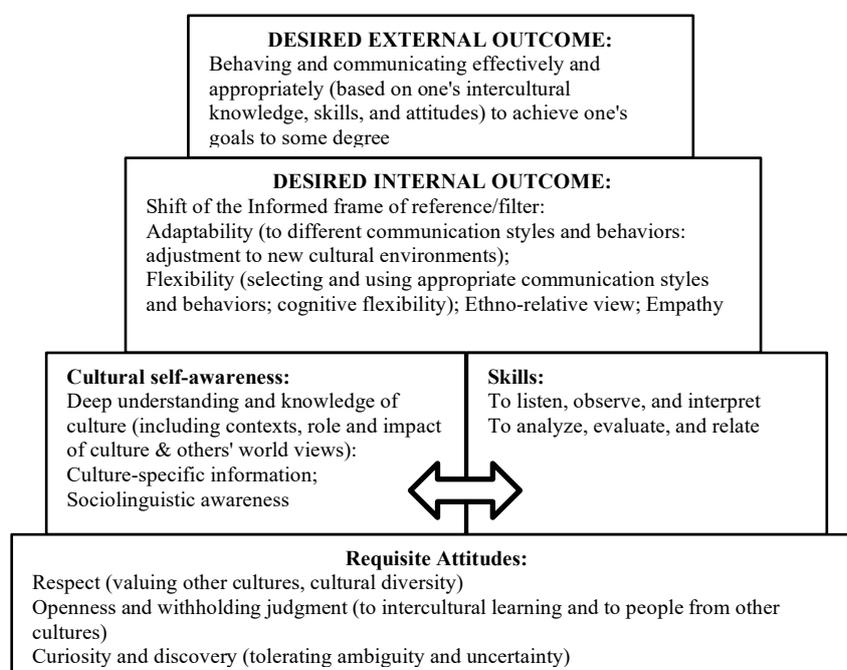
DESIRED EXTERNAL OUTCOME:
Behaving and communicating effectively and appropriately (based on one's intercultural knowledge, skills, and attitudes) to achieve one's goals to some degree

DESIRED INTERNAL OUTCOME:
Shift of the Informed frame of reference/filter:
Adaptability (to different communication styles and behaviors: adjustment to new cultural environments);
Flexibility (selecting and using appropriate communication styles and behaviors; cognitive flexibility); Ethno-relative view; Empathy

Cultural self-awareness:
Deep understanding and knowledge of culture (including contexts, role and impact of culture & others' world views):
Culture-specific information;
Sociolinguistic awareness

Skills:
To listen, observe, and interpret
To analyze, evaluate, and relate

Requisite Attitudes:
Respect (valuing other cultures, cultural diversity)
Openness and withholding judgment (to intercultural learning and to people from other cultures)
Curiosity and discovery (tolerating ambiguity and uncertainty)

Figure 1: Pyramid Model of Intercultural Competence according to Deardorff (2006).

The lower level of PMIC is the necessary attitudes: respect, openness, curiosity, and discovery. The second level is knowledge, comprehension, and skills, between which exists an interactive relationship: the deeper the cultural awareness, the understanding and knowledge of culture, culture-specific information, and sociolinguistic awareness, the faster the development of intercultural skills. The third level is the desired inner outcome: adaptability, flexibility, ethnorelative view, and empathy. The upper level of PMIC is the desired external outcome of effective and decent intercultural communication.

Another finding in Deardorff's (2006) empirical study is that both administrators and scholars of Intercultural Communication have reached three important points of consensus (Deardorff, 2006, p 257-258). First, IC can be measured. Second, the best way to assess IC is a combination of quantitative and qualitative methods, such as case studies, in-depth interviews, diary analysis, self-evaluation, assessment, triangulation, and so on. Third, the evaluation of IC must consider many factors, such as the object, purpose, method, content, specific situation of evaluation, even the evaluator, and so on.

The present study aims to provide an assessment tool for Chinese students and educators of SFL, aiming to clearly identify characteristics of IC for Chinese students of SFL. These characteristics can help educators to prioritize and translate into clear learning goals that can actually be measured or assessed through an assessment plan (Deardorff, 2011, p.68).

2.4. IC assessment instruments

There are many available self-report assessments designed with the purpose of measuring IC (Ang et al., 2007; Arasaratnam, 2006; Bennett and Hammer, 2002; Bhawuk and Brislin, 1992; Chen and Starosta, 2000; Goodman, 1994; Kassing, 1997; Kelly and Meyers, 2011; Zhang and Yang, 2012).

The Intercultural Sensitivity Inventory of Bhawuk and Brislin (1992) aims to examine people's understanding of their effective behaviors when interacting with other people from individualistic and collectivist contexts, their level of open-mindedness and flexibility; the Intercultural Development Inventory of Bennett and Hammer (2002) aims to measure the development of a person's attitude towards another culture based on six stages (denial, defense, minimization, acceptance, adaptation and integration); the Integrated model of Intercultural Communication Competence of Arasaratnam (2006) is a culture-general model which investigates the relationship between five variables (motivation, empathy, positive attitude toward other cultures, interaction involvement and intercultural experience) and IC; the Cultural Intelligence Scale of Ang et al. (2007) evaluates an individual's ability to understand, act and manage effectively in different cultural settings; the Cross- Cultural Adaptability Inventory of Kelly and Meyers (2011) measures one's ability to adapt to another culture and one's willingness to interact with people from another culture; the Intercultural Competence Scale by Zhang and Yang (2012) measures IC through cultural awareness, cultural knowledge and communicative practice.

In spite of the sufficient number of IC assessments, we have sought to develop a new instrument because the above-mentioned measurements were not designed for the purpose of the present study. Apart from the fact that our focus is on Spanish as a foreign language, some of the existing instruments focus on only one of the factors of a certain aspect (Bhawuk and Brislin,1992), and some are suitable for the study of a person's cultural adaptation and the psychological process involved (Bennett and Hammer, 2002; Kelly and Meyers, 2011), some measure people with frequent intercultural experiences (Ang et al., 2007; Arasaratnam, 2006) and some consider research questions that are not in line with this research (Zhang and Yang, 2012). Since the main aim of this study is to develop a self-report instrument that can be used to measure Chinese students' IC of SFL in general, we have been inspired by the Intercultural Sensitivity Scale (ISS) (Chen and Starosta,2000), the Intercultural Willingness to Communicate Scale (IWCS) (Kassing's IWTC, 1997), and the Cross-Cultural Awareness Scale (CCAS) (Goodman, 1994).

3. The study

3.1. Proposal of an adapted Chinese IC measurement framework

The present IC framework starts from the theoretical foundation of Byram (1997) and Deardorff (2006). As Deardorff (2009) stated, once a definition has been proposed, the next step is to develop "a process that generates very specific measurable outcomes and indicators within the context to be assessed" (p.479) since IC manifests differently in various contexts. As indicated by Nadeem, Mohammed, & Dalib (2020), researchers probably propose their conceptualization of IC in line with their own cultural context and perspectives, but their study focuses on IC in general. We agree with the definition from the most acceptable one by IC scholars (Byram, 1997; Chen and Starosta, 1996; Deardorff, 2004; Spitzberg, 2000; Wiseman, 2001), as well as the IC definition proposed by Chen and Yong (2012) from the perspective of FLE. As a result, the IC definition proposed in our study is the ability to achieve one's communicative purpose with appropriate and effective behavior in different intercultural communications. However, in accordance with Deardorff (2006), *effectiveness* can be determined by the individual, whereas *appropriateness* can only be determined by the other person. Being an interculturally competent individual requires some personal attributes to be able to interact effectively and appropriately with people in different intercultural settings. The present IC framework consists of the following aspects:

Attitude:

Chen (1997) defined it as "a positive emotion towards understanding and appreciating cultural differences that promote appropriate and effective behavior in intercultural communication" (p. 5). Three attitudinal attributes are intercultural attitude, openness, and willingness to communicate. This ability requires a positive attitude toward understanding cultural differences, an open-minded, positive attitude, as well as a positive willingness to communicate. In line with Gao (2014), such an attitude refers to the way to guide our behavior and interpret people and events according to certain cultural values in intercultural communication.

Willingness to communicate refers to the predisposition of the communicator to carry out successful communication, bearing in mind that this attitude occurs before the interaction. It requires an active attitude instead of a passive one. That is, willingness to communicate refers to a person's predisposition, and so it is an attitude or willingness to do something before it is time to act (Chen, 2019).

Knowledge:

Knowledge comprises (inter)cultural awareness and cultural knowledge in order to encode and decode information. Cultural awareness means being conscious of the fact that one's own culture shapes one's identity and understanding of the similarities and differences between different cultures. There are many definitions of the word "culture." In our study, culture is defined as behaviors, beliefs, symbols, norms, and values accepted by a specific group of people. Cultural values give us different perspectives for transmitting and interpreting

information in interpersonal communication. Cultural knowledge consists of knowledge of one's own culture and that of others, and knowledge of intercultural communication (i.e., verbal communication, non-verbal communication types, cultural values, and different types of cultural contexts).

Skills:

The present study does not specifically/explicitly create an item pool for intercultural skills. In the PMIC of Deardorff, the author argues that skills are the "acquisition and processing of knowledge" (2012, p. 6). This concurs with a statement of Chinese IC scholars, who view IC as an integration of knowledge and skills in a real communicative situation (Zhang, 2007; Gao, 2014; Chen and Gao, 2015). There is an indispensable relationship between knowledge and skills, whereby the greater the cultural knowledge, the faster the acquisition of skills. Several skills, such as observing, interpreting, evaluating, relating, and adapting, are included in our study.

3.2. Research design

In this study, a survey model was used to develop a valid and reliable IC instrument. According to Hinkin (1995), some basic steps should be considered in order to construct a new assessment tool: creating an item pool, getting experts' opinions, conducting a pilot study (modifying statements), and validating a reliable scale (confirming the validity of the instrument).

3.3. Participants

The participants of the study consisted of a total of 286 Chinese students from Mainland China, Taiwan, Macao, Hong Kong, and Malaysia whose maternal tongue was Chinese. They were all students of SFL from different universities. Since the main purpose of the study was to test the validity of our assessment, thirty participants were involved in the pilot study, and two hundred and fifty-six were involved in the factor analysis phase. All participants filled out the Chinese version of the digital questionnaire, which took the participants 20-25 minutes to complete all three sections. All participants were informed about the purpose of the study while completing the digital questionnaire.

3.4. Questionnaire design

The design of the assessment tool in this study is mainly based on Byram's (1997) and Deardorff's (2006) models as a theoretical basis. Three scales were selected in preparing an item pool for our questionnaire (ISS, Chen, and Starosta, 2000; IWTC, Kassing, 1997; CCAS, Goodman, 1994).

In order to increase reliability and reduce misunderstanding, it is recommended to use the participants' native language in the survey (Penbeck et al., 2012). Therefore, we chose Peng's (2006) simplified Chinese version and Wu's (2008) traditional version to evaluate one part of the attitudinal aspect because their versions have high Cronbach's alpha (0.799 and 0.860, respectively). For the other part of the attitudinal aspect, we selected Kassing's (1997) original English version, which was applied by various groups in the United States and in other countries such as China, Korea, Iraq, and Iran (Butcher and Haggard, 2009; Lin and Rancer, 2003a, Alwaely & Al-Jasari, 2022; Lin et al. 2003; Massengill and Nash, 2009; Mu & Yu, 2022; Roach and Olaniran, 2001) with Cronbach's alphas between .88 and .90.

As for the knowledge aspect, CCAS (Goodman, 1994) originally had 20 items. For the requirements of this study, we selected 10 items, modified them, and then translated them into Chinese. An initial item pool of 40 items with a Likert-type scale was generated. We applied a 6-point Likert-type scale with responses ranging from 1 (strongly disagree) to 6 (strongly agree) because this tends to provide further discrimination than a 5-point Likert scale (Chomeya, 2010), in part because the 6-point scale prevents the possibility of selecting a fully centered position. For the next step, we asked several experts to evaluate the validity of the content.

3.5. Content validity

Content validity refers to "the extent to which the items on a measure assess the same content or how well the content material was sampled in the measure" (Rubio et al., 2003, p. 94). Two types of content validity can be distinguished: face validity and logical validity. Face validity indicates that the measure appears to be valid "on face value," while logical validity indicates a more rigorous process, such as the use of expert panels to assess the measure's content validity (Rubio et al., 2003).

In order to evaluate the 40-item pool regarding relevancy, clarity, and conciseness, we asked three experts to review the draft: Dr. Chen from the Department of Communication Studies at the University of Rhode Island, Dr. Lee from the Department of Spanish at Tamkang University, and Dr. Ho from the Department of Chinese at Tamkang University. After this procedure, 40 items were generated for our assessment (see Appendix 1). The questionnaire involved three sections, starting with questions regarding demographic information, followed by 30 items related to the attitudinal aspect, and then 10 items related to the knowledge aspect.

3.6. Pilot study

Thirty Chinese students who were studying at different Spanish universities were involved in the pilot study. After completing the questionnaire, all participants responded that the questionnaire was clear and understandable. As a result, no items were modified in the pilot study. However, we divided the section on demographic information

into those who had studied in Spain and those who had not in order to enlarge the sample size to validate our assessment tool.

3.7. Data analysis procedures

The software SPSS 20 was used to conduct the reliability and validity analysis, which included descriptive statistics analysis, item analysis, item-total correlations, internal consistency reliability, and EFA.

The demographic information section provided descriptive information about the participants. Item analysis was performed to determine whether there were ineffective items in the assessments of this study. Item-total correlations were also computed to assess the correlation between each item and the total score using Pearson's correlation (Tabachnick and Fidell, 2007). An internal consistency reliability analysis was applied to measure the reliability of the proposed IC framework, using Cronbach's alpha as an index of reliability (George and Mallery, 2003, p. 231).

To confirm the instrument's validation, Pearson and Mundfrom (2010) state that factor analysis is the most frequent tool for studying the structure of scores obtained by psychometric measures (p. 359). There are two forms of factor analysis: EFA and CFA (confirmatory factor analysis). "EFA is normally the first step in building scales or new metrics" since EFA is used when a researcher wants to determine the number of factors that influence variables and to analyze which variables go together (Yong and Pearce, 2013, p.79-80). Moreover, EFA is used during the development of an instrument to cluster items into common factors according to their item loadings (Brayman and Cramer, 2005).

Thus, since the primary purpose of this study was to develop an IC instrument for Chinese students of SFL, Barlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) test were used to measure sampling adequacy and appropriateness for factor analysis before EFA was carried out.

4. Instrument validation

4.2. Analysis of reliability

Firstly, an item analysis was carried out. The results show that each item of the scale was homogeneous and discriminant. Item-total correlations analysis was performed in the next phase of the data analysis to assess whether the items were measuring the same conception by correlating with the total score of the survey. All items correlate positively and significantly with the total score, with a 5% significance level ($p < .05$). According to the recommendation of Kline (1993), only the items that show a correlation greater than at least 0.3 correlation should be kept. As a consequence, we decided to eliminate some items related to the attitudinal aspect (A2, A7, A18, and A20). A high (larger than 0.3) and significant correlation ($p < .05$) was obtained for the knowledge aspect, and thus no items were eliminated in this statistical operation. There was a total number of 36 items in the proposed IC instrument after this analytical step.

4.3. Analysis of validity

In this phase of the analysis, an EFA was conducted to determine an appropriate number of factors for the proposed IC assessment. Before conducting the factor analysis, a KMO statistic was carried out to test whether our assessment was suitable for the factor analysis. The Kaiser-Meyer-Olkin (KMO) value of the assessment was 0.927, which means this instrument is eligible for factor analysis.

In this study, factors with loadings of 0.5 or greater on only one factor were extracted. Thus, factor analysis was performed eight times with the instruments of the attitudinal aspect and once with the knowledge aspect, omitting loadings <.5 and items with loads on two factors with one loading > .32 (Costello and Osborne, 2005). Seven items (A9, A11, A14, A17, A19, A21, A23) of the attitudinal aspect and one item (C6) of the knowledge aspect were deleted due to poor loadings (< .5).

The results revealed that four factors, formed by 19 items of the attitudinal aspect, were extracted, explaining a total of 56.1% of the variance. Three factors formed by 9 items of the knowledge aspect were extracted with a total of 53.07% of the variance. This value is higher than the threshold value of 0.5 (George and Mallery, 2001; Kline, 1994; Tabachnick and Fidell, 2007).

Moreover, a valid and reliable assessment tool with 29 items that were classified into seven blocks was developed. The first four are related to attitude, and the last three to knowledge and skills. Although the skill aspect was not measured explicitly, we consider that skills were measured to some extent.

As for the attitudinal aspect, the first factor includes 8 items associated with the attention given during intercultural communication and willingness to interact. The second factor contains 4 items related to enjoyment and positive attitude towards cultural differences. The third factor includes 4 items concerning a person's confidence and satisfaction during interactions. The fourth factor consists of 3 items related to acceptance of and respect for different cultures in communicative interaction.

With respect to the knowledge and skill component, the first factor comprises 3 items associated with knowledge about non-verbal communication and how to act appropriately. The second factor contains 3 items related to cultural elements that affect interactive communication, such as collectivist or individualistic cultural

values. The third factor includes 3 items associated with how to put cultural knowledge into practice. Table 1 shows all items grouped by factors with their loading, Average Variance Extracted (AVE), and Cronbach's alpha.

Table 1: Items, Loadings, AVE, and Cronbach's alpha of IC scale

Factors	Loadings	AVE	Cronbach's alpha
Attitudinal component		56.1%	.92
Factor 1			.91
A1. I enjoy interacting with people from different cultures.	.533		
A.24 I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.	.651		
B1. Talk with someone I perceive to be different from me.	.641		
B2. Talk with someone from another country.	.789		
B3. Talk with someone from a culture I know very little about.	.72		
B4. Talk with someone from a different race than mine.	.799		
B5. Talk with someone from a different culture.	.818		
B6. Talk with someone who speaks Spanish as a second language.	.575		
Factor 2			.73
A4. I find it very hard to talk in front of people from different cultures.	.584		
A12. I often get discouraged when I am with people from different cultures.	.676		
A15. I often feel useless when interacting with people from different cultures.	.613		
A22. I avoid those situations where I will have to deal with culturally-distinct people.	.53		
Factor 3			.82
A3. I am pretty sure of myself when interacting with people from different cultures.	.577		
A5. I always know what to say when interacting with people from different cultures.	.547		
A6. I can be as sociable as I want to be when interacting with people from different cultures.	.781		
A10. I feel confident when interacting with people from different cultures.	.518		
Factor 4			.73
A8. I respect the values of people from different cultures.	.655		
A13. I am open-minded to people from different cultures.	.506		
A16. I respect the ways people from different cultures behave.	.75		
Knowledge and skills component		53.07%	.82
Factor 1			.75
C3. I can behave appropriately when I am invited to someone´s home.	.513		
C4. I know the appropriate distance at which to stand when interacting with people in at least two other countries.	.685		
C5. I know the appropriate rules regarding touching in at least two other countries.	.822		
Factor 2			.71
C1. I can accurately list three countries that are considered collectivistic.	.67		
C2. I can accurately identify three countries that have high power distance.	.746		
C9. I can name three countries that are considered polychromic.	.519		
Factor 3			.75
C7. I understand and can practice appropriate gift-giving in three other countries.	.603		
C8. I can identify some gestures that are appropriate in Spain but which are considered obscene in other countries.	.701		
C10. I know how to bring up a subject directly or indirectly in two countries when I want to say something.	.522		

After the factor analysis procedures, the final IC instrument was grouped under two headings:

The "IC attitudinal component" subscale included 19 items with four factors labeled *Attentiveness and willingness to communicate* (eight items), *Interaction enjoyment* (four items), *Interaction confidence* (four items), and *Respect for cultural differences* (three items).

The "IC knowledge and skill component" subscale contains 9 items, with three factors labelled *Non-verbal communication and behavior* (three items), *Cultural elements* (three items), and *Non-verbal aspects in verbal communication* (three items). The concurrent validity of the 28 items of the new IC instrument was then established. Table 2 shows the components, variables, and the number of items for the proposed IC assessment tool.

Table 2: Summary of the proposed IC assessment tool

Present IC assessment tool		
Aspects	Variables	Number of items
Attitudes	Attentiveness and willingness to communicate	8
	Respect for cultural differences	3
	Interaction confidence	4
	Interaction enjoyment	4
Knowledge and skill	Non-verbal communication and behavior	3
	Cultural elements	3
	Non-verbal aspects in verbal communication	3
Total items		28

5.   Limitation

The current study has used statistical procedures to validate our IC self-report assessment tool, but some limitations could motivate further studies in the future. The main limitation is the way the IC is obtained. According to Deardorff (2006), the best way to assess IC is a combination of quantitative and qualitative methods. The advantage of a self-assessment instrument is to assess the level of intercultural competence oneself. For some researchers, it is useful to collect additional data to identify the IC's essential characteristics. However, IC is complex, and external inputs may distort the conclusions and are beyond the scope of this study.

6.   Discussion and conclusion

The aim of this study was to develop a self-assessment tool that measures the IC of Chinese students of SFL. After reviewing existing relevant IC literature, Byram's model (1997) and Deardorff's model (2006) were chosen as the theoretical foundation, and the ISS (Chen and Starosta, 2000), IWCS (Kassing, 1997), and CCAS (Goodman, 1994) were adapted to create an item pool for our assessment. To establish its validity, three experts were asked to revise the instrument in terms of the clarity and relevance of the items. A pilot study was conducted to ensure the understanding of the statements of the items. Before conducting a statistical procedure, the demographic information section of the questionnaire was modified to collect more data to validate the assessment. EFA was used to determine the number of factors of the assessment. As a result of EFA, 11 items were eliminated from the scale, and seven factors were obtained. The factor loading values of the items varied between .513 and .818 and explained 56.1% of the total variance. The final IC instrument was grouped under seven factors, which were grouped into two components (see Table 2).

Apart from the validity of our assessment, there were other findings. Firstly, as far as the adaptation of the ISS (Chen and Starosta, 2000) is concerned, the result of the present research is very similar to the study of Wu (2015), who examined intercultural sensitivity in the Taiwanese cultural context. Both studies have eliminated items related to a) negative emotion towards understanding, appreciating, and accepting cultural differences (this corresponds to items such as "I think people from other cultures are narrow-minded" or "I don't like to be with people from different cultures," or "I get upset easily when interacting with people from different cultures" or "I would not accept the opinions of people from different cultures"); b) non-judgemental attitude (i.e., items such as "I tend to wait before forming an impression of culturally-distinct counterparts"); c) ethnocentric attitudes and perceptions towards other cultures (i.e., an item stating "I think my culture is better than other cultures"), and d) emotional expression (i.e., statements such as "I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction" or "I often give positive responses to my culturally-different counterpart during our interaction"). This makes sense because "respect, harmony, tolerance, non-confrontation, modesty, intuition, politeness, and face-saving are primary cultural values" in collectivistic countries (Taman, 2010; Wu, 2015).

Secondly, the factor labelled "Attentiveness and Willingness to Communicate" combines items from two domains: Interaction Attentiveness of the ISS and Willingness to Communicate of the IWCS. The rationale for this combination may be that there are conceptual overlaps when utilized in different cultures. According to our definition of the attitudinal component of IC, willingness to communicate refers to the predisposition to do something before it is time to act, whereas attentiveness refers to the duration of the interaction. However, according to our findings, for a Chinese cultural context, these two concepts may be recognized as equivalent and inseparable elements while participating in intercultural communication.

Thirdly, regarding the knowledge and skill component, although the present study does not evaluate the skill aspect of IC specifically, our findings show that these two concepts are related to each other. If we consider an

item such as "I understand and can practice appropriate gift-having in three other countries," for instance, one should already know the rules of gift-giving in different countries before giving and receiving gifts from people of different cultures. Our approach echoes Deardorff's (2006) affirmation regarding the close relationship between knowledge, comprehension, and skill.

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Appendix 1 Original IC scale

1. I enjoy interacting with people from different cultures.
2. I think people from other cultures are narrow-minded.
3. I am pretty sure of myself in interacting with people from different cultures.
4. I find it very hard to talk in front of people from different cultures.
5. I always know what to say when interacting with people from different cultures.
6. I can be as sociable as I want to be when interacting with people from different cultures.
7. I don't like to be with people from different cultures.
8. I respect the values of people from different cultures.
9. I get upset easily when interacting with people from different cultures.
10. I feel confident when interacting with people from different cultures.
11. I tend to wait before forming an impression of culturally distinct counterparts.
12. I often get discouraged when I am with people from different cultures.
13. I am open-minded to people from different cultures.
14. I am very observant when interacting with people from different cultures.
15. I often feel useless when interacting with people from different cultures.
16. I respect the ways people from different cultures behave.
17. I try to obtain as much information as I can when interacting with people from different cultures.
18. I would not accept the opinions of people from different cultures.
19. I am sensitive to my culturally distinct counterpart's subtle meanings during our interaction.
20. I think my culture is better than other cultures.
21. I often give positive responses to my culturally different counterpart during our interaction.
22. I avoid those situations where I will have to deal with culturally distinct persons.
23. I often show my culturally distinct counterpart my understanding through verbal or nonverbal cues.
24. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me.
25. Talk with someone I perceive to be different from me.
26. Talk with someone from another country.
27. Talk with someone from a culture I know very little about.
28. Talk with someone from a different race than mine.
29. Talk with someone from a different culture.
30. Talk with someone who speaks Spanish as a second language.
31. I can accurately list three countries that are considered collectivistic.
32. I can accurately identify three countries that have high power distance.
33. I can conduct appropriately when I am invited to one´s home.
34. I know the appropriate distance at which to stand when interacting with people in at least two other countries.
    35. I know the appropriate touch rules in at least two other countries.
35. I can name two countries that the turn to speak is different to mine.
36. I understand and can practice appropriate gift-having in three other countries.
37. I can identify some gestures appropriate in Spain that are considered obscene in other countries.
38. I can name three countries that are considered polychromic.
39. I know how to initiate directly or indirectly the theme in two countries when I want to say something.