

## **Development and Validation of Intercultural Competence Scale for University Students in Kuwait**

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Over the last two decades, researchers developed different scientific tools that can assess intercultural competence in a variety of contexts and applications. However, these scales were developed for specific applications, such as health studies, business, and management, therefore, it was not appropriate to be used for university students. In addition, all measures of intercultural competence are - by definition - culture-dependent. The current study aimed to develop quantitative scales that possess good psychometric properties to measure the components of intercultural competence considering the Arab cultural context, as specified by Byram et al.'s model. The sample of the current study consisted of 679 students, psychology major in Kuwait University. Participants were mostly female (72.3%) with a mean age of 22.5 years ( $sd = 6.40$ ). Initially, an exploratory factor analysis (EFA) was performed. The maximum likelihood estimation (ML) method was used with the allowance of oblique rotation. Then, confirmatory factor analysis (CFA) was used to fit the model resulting from EFA analysis using the ML estimator. The present study has shown that it is possible to develop psychometrically sound quantitative measures for assessing intercultural competence. The scales have been found to work well with university students in Kuwait. Future research may examine whether they also work well with populations from different cultural backgrounds.

*Keywords:* Intercultural Competence, Validation, Confirmatory Factor Analysis, University Students

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contexts and applications. A list of available scales aimed to measure intercultural competence can be found on SIETAR Europa's (2009) Online Documentation Centre and Fantini (2006). However, these scales were developed for specific applications, such as health studies, business, and management, therefore, it was not appropriate for academic university students. In addition, all measures of intercultural competence are - by definition – culture-dependent. There is no measure of intercultural competence is specially designed for Arabic culture that takes into account the religion and national context for Arabic culture. Byram (1997, 2009) suggested a model of intercultural competence. This model identifies five different factors of intercultural competence: Knowledge, Attitudes, Skills of interpreting and relating, Skills of discovery and interaction, and Political education including critical cultural awareness. This study aims to develop quantitative scales that possess good psychometric properties to measure the components of intercultural competence considering the Arab culture context, as specified by Byram et al.'s (2009) model.

The theories that already exist in intercultural competence are reviewed by Spitzberg and Changnon (2009) they then divide them into five models. The first model is the compositional model which explains intercultural competence without identifying the relationship between them; it also lists the attitudes, skills, and knowledge (Matveev, 2017). The second model is the co-orientation model which is the interaction and understanding of intercultural, it also builds relationships between people by creating empathy and shared meaning (Tkalac, Verčič, & Laco, 2019). The third model is the developmental model it has the elements of the other models, the main aim of the model is the development of intercultural competence in a period of time and it also includes different stages (Bennett, 2017). The fourth model is the adaptation model which explains how people come across cultures and adapt to the other culture (Hanna, & Roy, 2001). The fifth model is the casual process model which describes the relationships between the elements of intercultural competence (Pinggera, et.al. 2010)

There are several points about these models. The first point is that the models are not mutually exclusive and some of the models can be used for more than one type. Second, that the classification of other models can

also be possible. Third, the intercultural competencies of the model have to be tested and a lot of them have not been measured in empirical research. Fourth, the new research will develop new measurements for the aspects that are about intercultural competence. Fifth, the models might have biases because the research was done in western societies.

Bennett's Development Model of Intercultural Societies (2011) explains the individual responses to cultures over a period of time. He argued that people that get the experience of various cultures become more intercultural sensitive because of the experience that had. He discusses that it happens in stages which are divided into six. The first three stages are the ethnocentric stage. The first steps are the denial stage it is when people do not accept and are unaware of the other cultures. They believe that there is only one culture and it is their own culture. The second stage is the defense stage is when an individual knows that there are different cultures but he believes that his culture is the best. The third stage is minimization is when a person knows that there are other cultures but only on a superficial level because they believe that all people are essentially the same. The second set that contains three stages is the ethno-relative stage. The first stage is the acceptance stage it is when a person's own culture is experienced just like the different cultures. The second stage is the adaptation stage is when a person experiences different cultures from their point of view. They behave in a way that is acceptable for the different cultures. The third stage is the integration stage is when people value different cultures and they can evaluate situations from different points of view (Bennett, 2017).

The IDI model has 50 elements and I give a general overview of the person's main level of intercultural sensitivity. Once this is identified you can then pick a specific training recommendation to develop the intercultural sensitivity to a higher level. There are several problems with this model. The first problem is levels of sensitivity can differ because of the different cultures that are targeted. The second problem is that people can be intervening so they can get to higher levels. The third problem is that Bennett and his collaborators did not report evidence based on people's case studies to support the model. Fourth, the model was developed in

North America, so it can be culturally insensitive. The problems discussed made the model not appropriate for this research.

The second model is Byram's (1997) model of intercultural communicative competence it discusses the five components that structure the intercultural competence that is needed to become an intercultural speaker. The first element is the person's attitude; an intercultural speaker must have curiosity about different cultures. Second, intercultural speakers must have knowledge that is specific and general about cultures. Specific knowledge must be available for a social group that exists in one's own culture and different cultures. Third, the intercultural speaker must-have skills to interpret events and relate those events to different cultures. Fourth, intercultural competence includes the skills of discovering and interacting, and it is the ability to learn new things about another culture and is about speaking to people from different cultures. The fifth element is critical cultural awareness it knows the perspective of different cultures and is about to evaluate the different perspectives from their own cultures and different cultures (Hoff, 2014).

Byram also suggests that "knowledge, attitudes, skills of interpreting and relating, and skills of discovering and interaction- can in principle be acquired through experience a reflection without the innervation of teachers and educational institutions. On the other hand, he says that education affects the learning of intercultural competence this is because "appropriately structured experiences of and reflection on otherness can help to develop a level of understanding" (Coperías Aguilar, 2002). The model of Byram does not have any actual predictions on the different elements. The strength of the model is that it describes the different components very clearly and it also describes the components of intercultural competence. Later in time, additional components from the INCA project which added which Byram contributed to.

The INCA framework was international research done by Byram and his colleagues in Austria, the Czech Republic, and Germany. The basis of this was new theories and it breaks the intercultural competencies into six components. First, tolerance for ambiguity is accepting people who come from different cultures and have different beliefs. Second, behavioral flexibility, it is willing to adjust their behaviors based on a specific

situation. Third, intercultural competence requires communicative awareness this is because different cultures may have different communicative structures and styles. Fourth, intercultural competence includes the skills of knowledge discovery; it is the ability to acquire new knowledge before during, and after the intercultural encounter. Fifth the respect for otherness comes from Byram's (1997) framework. Sixth, empathy is when you imagine yourself in a situation of a different person. This framework is an alternative to the compositional model from Byram (1997) because it has different components that structure intercultural competencies. In addition, this model does not specify the components from a psychological point of view furthermore, this model has no claims about the components acquired by each person, and how they might be related psychologically.

The AIE model used by Byram, Barrett, Ipgrave, Jackson, and Mendez Garcia (2009) was used for a larger population it measures their attitude, skills, and knowledge that make up the intercultural competence. This model has ten components. The first component is attitudes: respect or otherness it includes the will of people to respect other cultures and that people in different cultures have different beliefs. The second component is attitudes: empathy is in the new framework of intercultural competence. The third component is attitude: acknowledgment of identities the will of people to understand that people contribute to themselves from their cultural perspective. The fourth component is attitudes: tolerance for ambiguity it is also in the new framework the fifth component is knowledge: specific and general knowledge it is from Byram's (1997) model which describes specific and general knowledge. The sixth component is skills of discovery and interaction it is available in Byram's (1997) model of framework. The seventh component is communicative awareness it is described in the INCA framework from the new model the eighth component is skills of interpreting and relating it is taken from Byram's (1997) model. The ninth component is critical cultural awareness it is also included in the model of Byram (1997). The tenth component is action orientation it is when a person is willing wither by himself or with a group to decrease discrimination and prejudice and increase the common

good between cultures. These components were a major part of this research.

Deardorff's pyramid model of intercultural competence discusses that the components can be put into four-level from lower level to higher level. The bottom level of the pyramid is the attitudes. The second level is knowledge and skills. The third level is the internal outcome. The highest level which is the fourth level is desired external outcomes. He says that the attitudes are at the point because they are considered most basic and the other elements build upon this. All these claims are too tested yet so they are empirically testable claims. There is no research yet conducted to test them. On the other hand, the components of intercultural competence that are included overlap with the components in the compositional model of Byram (2009).

Existing research into the development of intercultural competence. One study that was conducted by Klak and Martin (2003) looked at the intercultural sensitivity that was affected by the people in the events that celebrated the culture difference. They found that after the students took the course their level of ethnocentrism decreased and ethno-relativism has increased. The second study done by Straffon (2003) was conducted on high school students between the ages of 13-19 that are in international schools. It was found that attendance had a negative correlation with ethnocentrism and a positive correlation with ethno-relativism. The third study conducted by Endicott et al. (2003) used the IDI and a multicultural experiences questionnaire and test of moral judgment to 70 students that are undergraduates, so the average age was 20. It was found intercultural sensitivity, moral judgment, and depth of multicultural experiences had a positive correlation. The final study Altshuler et al. (2003) was tested on older participants. The group was physician trainees from the ages of 26 to 42. They were tested using the IDI model. It was found that some went into the intercultural training intervention. In addition, the pre-training showed that women had higher intercultural sensitivity. However, there weren't any big changes after the training, analysis of the post-test showed that before that had the training had a lower intervention level in ethnocentrism and a higher level of ethno-relativism.

Other studies that are from the development of intercultural competence have used different theories and measures. A large study was conducted in an American university that included 2,416 students with an average age of 18 years. Pascarella, Edison, Nora, Hagedorn, and Terenzini (1996) looked at how students are influenced to openness to diversity. In this study, it was found that openness to diversity was higher in females, nonwhites, and older individuals with a higher level of academic ability. In addition, it was also higher in individuals who attended institutions. All of these effects were similar in both males and females. On the other hand, the positive effects were for the people that live on campus and people that participate in a racial or cultural awareness workshop. The negative effect of joining a fraternity or sorority was stronger in whites. Zhai and Scheer (2004) looked at the attitudes of people toward cultural diversity and the global perspective level. The study was done with 226 students who are in a university and the mean average is 24. It was found that attitudes to diversity were significantly correlated with a global perspective. The last study was conducted by Olson and Kroeger (2001) which I based on the study on Bennett's DMIS which used its intercultural sensitivity to measure an individual's level of intercultural development. 52 individuals were involved from the administrative and professional staff at a US university. It was found that speaking different languages other than English with advanced proficiency was associated with higher levels of intercultural sensitivity.

Cognitive development there in this theory children that are in the preoperational stage are egocentric and their attitudes are based on the national, ethnic, and racial group of people surrounding them, and this leads to ethnocentric bias. To support this theory a lot of evidence is available that people from age 4-6 and increase to the peak by the age of 7 and it reduces after that age. CDT cannot explain the development of the ethnic minority in children. In addition, it cannot explain why children's attitudes are related to environmental factors.

Social identity theory explains the feeling of prejudice toward individuals this happens when a person sees himself in a specific group with certain people to enrich their self-esteem they make comparisons with their group compared to other groups. Tajfel and Turner (1979) also say

that three factors lead to this. The first factor is the individual strength of identifying the in-group. The second factor is the extent to which the context has bias. The third factor is the relevance of the comparison between the out-group and in-group. In Sit third isn't any reason why people have different prejudice and they express it differently. It also doesn't explain why intergroup has related attitudes and cognitive ability.

In social identity theory, the first phase is undifferentiated. It is children at the age of under 2-3 years that get attracted to people and respond to them in the terms of who attracts them more. The second phase is ethnic awareness it is in children at the age of 3. They start noticing the different groups of people and start learning about the social groups that have social significance to the community. The third phase is ethnic preference starts in children at the age of 4. In this phase, the child prefers to stay with their in-group, but they do not dislike or show any negative feelings toward anyone.

The societal social cognitive motivational theory discusses that societal, social, cognitive, and motivation all affect the development of children in their in-group. Children also develop in a social setting that is structured of historical, social, economic, and political circumstances. The circumstances show the relationship between the children in the in-group and out-group, and their history of tension, conflict, or co-existence. In addition, the parents of the child have a different effect on them because they are the ones that decide where they live, where they go for a vacation, and which school they go to. This theory also discusses how the children are influenced by the school and the media they see it affects their cognitive process and motivational process. The reasons mentioned above show that there is a lot of variability in the development of a child in intergroup attitudes.

Intergroup contact theory discusses the contact hypothesis and a wide reach was done to have enough evidence that children when they are in the right conditions they will have positive changes in attitude. There are four conditions, the first condition is the people in are roughly equal status. The second condition is the people in contact have common objectives and goals. The third condition is that the people in contact engage in collaboration and cooperation and do not compete against each



other. The fourth condition is the contact has the support of institutional authorities. This theory was developed by Allport (1954).

### **Review of current Scales of intercultural competence**

**Interpersonal Reactivity Index (IRI; Davis, 1983).** A scale was developed to measure individual differences in empathy. It suggests that empathy has four distinct elements but somehow, they are related. The four elements are Perspective-taking (PT); the psychological point of view of another person and your ability to accept it, Empathic concern (EC); the ability to experience the feeling of sympathy and concern for other people, Personal distress (PD); having a feeling of anxiety in a situation that makes you tense in interpersonal settings. Fantasy (FS); someone transposes the feeling and actions of the fictional characters. The IRI has four subscales to measure those elements and every subscale has seven items. Each item has a response of a five-point scale which is from 1 (the object does not describe you) to 5 (the object describes you every well).

**Tolerance for Ambiguity Scale (TAS) (Herman et al., 2010).** It is created to measure the tolerance for ambiguity. According to Herman et al. (2010); tolerance for ambiguity is defined as the capability of a person to accept in an optimistic way the ambiguous condition and this makes the stimuli of uncertainty or unclearness and that will open up multiple clarifications. It has 12 statements and has to be answered using the five-point scale from 1 (I strongly disagree) to 5 (I strongly agree). The scale has four factors: value diverse others, enjoying change and difference, enjoying challenging perspectives, and liking unfamiliarity.

**Intercultural Development Inventory (IDI) (Hammer et al., 2003).** The IDI has 50 items and they measure a person who endorses the statement depending on each stage. The answers are given using a seven-point scale that starts with "strongly agree" till "strong disagree". There is some evidence that IDI does not work outside North America (GreenHoltz,2005).

**DMIS Scales (Olsen & Kroeger, 2001).** Olsen and Kroeger (2001) developed a scale so they can assess the level of development on the DMIS. The scale is used to be a self-report of the level of cultural knowledge, perception of cultural differences, intercultural communication ability, and intercultural contact. The responses are given using a five-point scale from does not describe me at all to describes me extremely well.

**INCA Scales (INCA, 2004).** It is a questionnaire that has 21 statements. Those statements are about intercultural behaviors in various circumstances. The answers are given using a three-point scale: not applicable, maybe, and fully applicable. This is used so it would help the participant and the assessor to evaluate the response of the participant to the intercultural experience. It also includes 5 statements that evaluate the feeling of the participant in an intercultural context and the responses to this are given on a five-point scale basis starts from this makes me feel very uncomfortable to this feels very good – I often seek out of this situation.

**The Attitudinal and Behavioral Openness Scale (ABOS; Caligiuri et al., 2000).** The aim of this scale is to determine intercultural attitudes and behaviors. It has four characteristics and it is measured using a specific scale which is participation in cultural activities, past experiences, openness attitudes, and comfort with differences. A five-point scale is used to measure the responses. The responses change because it is based on the object.

**Openness to Diversity/Challenge Scale (Pascarella et al., 1996).** This scale aims to measure the openness to cognitive challenges and the openness toward other cultures. The responses are given using a five-point scale starting from 1 (strongly disagree) to 5 (strongly agree).

**Global Mindedness Scale (GMS; Hett, 1993).** It is used so it would measure global mindedness. It has 30 statements and they are answered using a six-point scale that starts from very strongly disagree till

very strongly agree. The items include the assessments of the political intercultural attitudes.

**Attitudes toward Cultural Diversity and Pluralism Scale (ACSPS; Stanley,1996).** It is used to determine the attitudes of cultural diversity and minority cultures. It has 19 statements that should be replied to based on the six-point scale from very strongly disagree to very strongly agree. The items in this scale are mostly based on politics and not intercultural attitudes.

**Cross-Cultural Sensitivity Scale (CCSS; Pruegger & Rogers, 1993).** It has 24 items that assess cross-cultural sensitivity and thoughts. The statements are answered using a six-point scale that ranges from strongly disagree to strongly agree. The items in this scale are developed specifically for the Canadian culture only. In addition, it evaluates the attitudes to political issues and policies, not the intercultural attitudes.

**Multicultural Awareness-Knowledge-Skills Survey (MAKSS; D'Andrea et al., 1991).** It was established for multicultural counseling training. It has 60 items that are supposed to assess three dimensions: the respondent's level of cultural issues, the respondent's knowledge of the cultural issue's rating, the respondent's own cultural and counseling skills rating. The measure uses a four-point scale.

### **The Current Measure of the Intercultural Competence**

After reviewing the current scales of intercultural competence, we developed a new measure for assessing intercultural competence that takes into account the Arab culture, following Byram et al.'s (2009) model. In addition, the main point for developing items for the measure is to be suitable for the university students. Therefore, all items are written given in mind the academic context and the educational setting. Most items are referring to the Kuwaiti context, where the study sample belongs. An item pool of 130 items is created, which is reduced to 79 items after content validation of the items with the help of three referees. The items are supposed to measure 12 dimensions/subscales. All items are measured on

a five-point scale that started from strongly disagree to strongly agree. There are two new more scales that are designed for this research specifically; entity belief and social desirability bias. Entity belief assesses the extent that people view the cultural groups as entities that have a fixed essential characteristic and that differentiate them from the other group of people. That point of view is difficult to alter or change (Hong et al., 2003). This scale was included so that it would measure the higher level of essentialist thinking about groups compared with the lower level of intercultural competence.

The social desirability bias scale is added because people often reply to a question in a way or manner that is likely to be approved. People are more likely to prejudice other people, so participants might not answer truthfully because they might be sensitive to social desirability and they would answer in a way that would get them greater social desirability. This test of social desirability bias was included to assess how much variability is related to social desirability. The measure used to assess social desirability is the Marlowe-Crowne Social Desirability scale (Crowne & Marlowe, 1960). This scale was long and has 33 items. Ray (1984) debated that the long instruments are not needed and then he provided two short forms of the Marlowe-Crowne scale that has eight and six items with yes/no replies. In the current measure, we used the six items form. Table 1 includes current measure items (in English), their supposed dimension, and their sources.

**Table 1**

*Current measure items, their supposed dimension, and their sources*

| Item # | Item Content   | Dimension                 |
|--------|--|---------------------------|
| Source |  |                           |
| 1      | I see no good reason to pay attention to what happens in other countries.  | Lack of IDI ethnocentrism |
| 2      | The Kuwaiti way of life should be a model for people from other countries. | Lack of IDI ethnocentrism |

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| 3  | The rest of the world should look to Kuwait for answers in solving their problems.                                     | Lack of ethnocentrism | of IDI                  |
| 4  | People from other countries are not open-minded as people from Kuwait.   | Lack of ethnocentrism | of IDI                  |
| 5  | Kuwaiti values are probably the best in the world.   | Lack of ethnocentrism | of GMS                  |
| 6  | The way things are done in Kuwait is the best in the world.  | Lack of ethnocentrism | of New                  |
| 7  | I like the differences that exist between myself and people from other countries, races, and ethnic groups.            | Attitudinal Openness  | IDI                     |
| 8  | I like to have contact with people from other countries to learn as much as possible about them and their way of life. | Attitudinal Openness  | INCA                    |
| 9  | If I lived overseas for a year, that would be a fantastic opportunity for me.  | Attitudinal Openness  | ABOS                    |
| 10 | Traveling the world is a priority in my future life.   | Attitudinal Openness  | ABOS                    |
| 11 | When I have a job, I hope the company that I will work for will send me to work abroad.                                | Attitudinal Openness  | ABOS                    |
| 12 | Other cultures fascinate me.   | Attitudinal Openness  | ABOS                    |
| 13 | Meeting and getting to know people from other countries, races, and ethnic groups is enjoyable.                        | Attitudinal Openness  | Nesdale and Tood (2000) |

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| 14 | I think it is important that people have friends from other countries, races, and ethnic groups.                          | Attitudinal<br>Openness | Zagefka and<br>Brown<br>(2002) |
| 15 | I think it is important that children spend time with friends from other countries, races and ethnic groups after school. | Attitudinal<br>Openness | Zagefka and<br>Brown<br>(2002) |
| 16 | I watch foreign films.  | Behavioral<br>Openness  | ABOS                           |
| 17 | I travel to other countries.  | Behavioral<br>Openness  | ABOS                           |
| 18 | I eat at lots of different ethnic restaurants.  | Behavioral<br>Openness  | ABOS                           |
| 19 | I participate in the festivals of other ethnic groups.  | Behavioral<br>Openness  | ABOS                           |
| 20 | I read newspapers and magazines which cover world events.   | Behavioral<br>Openness  | ABOS                           |
| 21 | I watch the world news on TV.   | Behavioral<br>Openness  | ABOS                           |
| 22 | I follow the world news on the Internet.  | Behavioral<br>Openness  | New                            |
| 23 | I do not mind if people from other countries who bear living in Kuwait maintain their own Culture.                        | Tolerance               | Zagefka and<br>Brown<br>(2002) |
| 24 | I do not mind if people from other countries who are living in Kuwait maintain their religion, language, and clothing.    | Tolerance               | Zagefka and<br>Brown<br>(2002) |

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| 25 | The right of a family from another country, race, or ethnic group to move into a particular neighborhood should be the same as that of any other family. | Tolerance  | McClosky and Zaller (1984)      |
| 26 | People from other countries who dislike our government and criticize it should not be allowed to visit or study in Kuwait.                               | Tolerance  | McClosky and Brill (1983)       |
| 27 | No matter what a person's country of origin, race, or ethnic group is, they are entitled to the same legal rights and protections as anyone else.        | Tolerance  | Gibson, Duch, and Teddin (1992) |
| 28 | When I come to contact with people from another culture, I find I change my behavior to adapt to theirs.   | Intercultural Adaptation and Communicative Awareness | IDI                             |
| 29 | When I watch people in other countries, I often try to guess how they are feeling.   | Intercultural Adaptation and Communicative Awareness | INCA                            |
| 30 | When someone from another culture uses gestures and expressions that are unknown to me, I ignore them.   | Intercultural Adaptation and Communicative Awareness | INCA                            |
| 31 | When talking to people from other countries, I pay attention to their gestures and body language.  | Intercultural Adaptation and Communicative Awareness | INCA                            |

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| 32 | I conversations with speakers of other languages, I avoid unclear or ambiguous words.   | Intercultural<br>Adaptation<br>and<br>Communicative<br>Awareness | INCA |
| 33 | When a speaker of another language doesn't understand what I am saying, I notice it.  | Intercultural<br>Adaptation<br>and<br>Communicative<br>Awareness | INCA |
| 34 | When I talk to someone from another country, I find I change the way I speak to help them understand me.  | Intercultural<br>Adaptation<br>and<br>Communicative<br>Awareness | New  |
| 35 | I often compare things in other cultures with similar things in my own culture.   | Interpreting<br>and<br>Relating                                  | New  |
| 36 | I often think about the way things are done in Kuwait, and how they differ from the way things are done in other countries.                             | Interpreting<br>and<br>Relating                                  | New  |
| 37 | When I see someone from another cultural background, it makes me think about my cultural background.  | Interpreting<br>and<br>Relating                                  | New  |
| 38 | When I meet someone from another country, it makes me think about the differences between the way of life in their country and the Kuwaiti way of life. | Interpreting<br>and<br>Relating                                  | New  |
| 39 | I often compare things in other cultures with similar things in my own culture.   | Interpreting<br>and<br>Relating                                  | New  |
| 40 | Sometimes I evaluate situations in my own country   | Critical<br>Cultural<br>Awareness                                | IDI  |

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|    | based on my experiences and knowledge of other countries.  |                    |          |     |
| 41 | I often think about what lies behind my reactions to other people's way of life.   | Critical Awareness | Cultural | New |
| 42 | I often notice the prejudices and stereotypes which are held by Kuwaiti people.  | Critical Awareness | Cultural | New |
| 43 | I often evaluate the prejudices and stereotypes which are held by people living in other countries.                                  | Critical Awareness | Cultural | New |
| 44 | I often make judgments about both the good things and the bad things about Kuwaiti culture by comparing Kuwait with other countries. | Critical Awareness | Cultural | New |
| 45 | I often try to think about my prejudices and stereotypes and what lies behind them.  | Critical Awareness | Cultural | New |
| 46 | I sometimes find it difficult to see things from the "other person's" point of view.   | Perspective-Taking |          | IRI |
| 47 | I try to look at everybody's side of the disagreement before I make a decision.  | Perspective-Taking |          | IRI |
| 48 | I sometimes try to understand my friends better by imagining how things look from their perspective.                                 | Perspective-Taking |          | IRI |
| 49 | If I'm sure I'm right about something, I don't waste   | Perspective-Taking |          | IRI |

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|    | much time listening to other people's arguments.  |                         |     |
| 50 | I believe that there are two sides to every question and try to look at both of them.       | Perspective-Taking      | IRI |
| 51 | When I'm upset at someone, I usually try to "put myself in their shoes" for a while.        | Perspective-Taking      | IRI |
| 52 | Before criticizing somebody, I try to imagine how I would feel if I were in their place.    | Perspective-Taking      | IRI |
| 53 | I often have tender, concerned feelings for people less fortunate than me.                  | Empathic Concern        | IRI |
| 54 | Sometimes I don't feel very sorry for other people when they are having problems.           | Empathic Concern        | IRI |
| 55 | When I see someone being taken advantage of, I feel kind of protective towards them.        | Empathic Concern        | IRI |
| 56 | Other people's misfortunes do not usually disturb me a great deal.                          | Empathic Concern        | IRI |
| 57 | When I see someone being treated unfairly, is sometimes don't feel very much pity for them. | Empathic Concern        | IRI |
| 58 | I am often quite touched by things that I see happen.                                       | Empathic Concern        | IRI |
| 59 | I would describe myself as a pretty soft-hearted person.                                    | Empathic Concern        | IRI |
| 60 | I avoid setting where people don't share my values.   | Tolerance for ambiguity | TAS |

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| 61 | I can enjoy being with people whose values are different from mine.  | Tolerance<br>Ambiguity | for | TAS |
| 62 | I like to surround myself with things that are familiar to me.   | Tolerance<br>Ambiguity | for | TAS |
| 63 | The sooner we all acquire similar values and ideals are better.  | Tolerance<br>Ambiguity | for | TAS |
| 64 | I can be comfortable with nearly all kinds of people.  | Tolerance<br>Ambiguity | for | TAS |
| 65 | A good teacher makes you wonder about your way of looking at things.   | Tolerance<br>Ambiguity | for | TAS |
| 66 | A good job is one where what is to be done and how it is done are always clear.  | Tolerance<br>Ambiguity | for | TAS |
| 67 | A person who leads an even, regular life in which surprises or unexpected happenings arise has a lot to be grateful for. | Tolerance<br>Ambiguity | for | TAS |
| 68 | What we are used to is always preferable to what is unfamiliar.  | Tolerance<br>Ambiguity | for | TAS |
| 69 | I like parties where I know most of the people more than ones where all or most of the people are strangers.             | Tolerance<br>Ambiguity | for | TAS |
| 70 | The differences between people from other countries and people from Kuwait are pretty basic and can't be changed much.   | Entity Belief          |     | New |

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|    |   |               |              |            |
|----|---|---------------|--------------|------------|
| 71 | People from other countries are just too different to learn to be more like people from Kuwait.   | Entity Belief |              | New        |
| 72 | People from other countries can learn to be more like people in Kuwait, and people in Kuwait can learn to be more like people from other countries. | Entity Belief |              | New        |
| 73 | People from other countries are born with very different personalities and reactions that can't be changed much.                                    | Entity Belief |              | New        |
| 74 | Have there been occasions when you took advantage of someone?   | Social Bias   | Desirability | Ray (1984) |
| 75 | Are you always willing to admit it when you make a mistake?   | Social Bias   | Desirability | Ray (1984) |
| 76 | Do you sometimes try to get even rather than forgive and forget?  | Social Bias   | Desirability | Ray (1984) |
| 77 | Do you sometimes feel resentful when you don't get your way?  | Social Bias   | Desirability | Ray (1984) |
| 78 | Are you always courteous, even to people who are disagreeable?  | Social Bias   | Desirability | Ray (1984) |
| 79 | No matter whom you are talking to, are you always a good listener?  | Social Bias   | Desirability | Ray (1984) |

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## Method

### Sample

The sample of the current study consisted of 679 students, with psychology major from Kuwait University. Participants were mostly female (72.3%) with a mean age of 22.5 years ( $sd = 6.40$ ).

### Measure of Intercultural Competence

The current measure of intercultural competence consisted of 79 items (5-points Likert scale) supposed to assess 12 dimensions (see Table 1).

### Data Analysis

The data was screened for univariate outliers. No out-of-range values were identified. Initially, an exploratory factor analysis (EFA) was performed. The maximum likelihood estimation (ML) method was used with the allowance of oblique rotation (varimax). Then, confirmatory factor analysis (CFA) was used to fit the model resulting from EFA analysis using the ML estimator. Model fit was assessed using an absolute index of fit (chi-square/df) in which values of 3 or less indicated a good fit, incremental indices of fit (the Tucker-Lewis Fit Index, TLI, and Comparative Fit Index, CFI) in which values of 0.95 and greater indicated a good fit, and values of 0.90 but less than 0.95 indicated acceptable fit, and a residual fit index (the root mean square error of approximation, RMSEA) in which values less than 0.07 indicated an acceptable fit, while values of 0.05 or less indicate good fit (Hu & Bentler, 1999). Data analyses were performed using Mplus 7.0 (Muthén & Muthén, 2012).

## Results

Initially, the factorability of the items was examined. It was observed that most items are correlated at least .3 with at least one other item, suggesting reasonable factorability. The Kaiser-Meyer-Olkin measure of sampling adequacy was .92, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant. The diagonals of the anti-image correlation matrix were also all over .5.

Given these overall indicators, factor analysis was deemed suitable with all items. Principal axis factoring was used with the oblique rotation quart max method of the factor loading matrix and resulted in seven factors accounted for 64.8% of the variance.

Most items succeeded in meeting the minimum criteria of having a primary factor loading of .3 or above, and no cross-loading of .3 or above. The factor loading matrix for this final solution is presented in Table 2.

**Table 2**

*Factor loadings based on a Principal axis factoring analysis with quartimax rotation for the items (n = 679)*

| <b>Ite</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| 1          |          |          |          | .6       |          |          |          |          |          |           |           |           |
| 2          |          |          |          | .5       |          |          |          |          |          |           |           |           |
| 3          |          |          |          | .7       |          |          |          |          |          |           |           |           |
| 4          |          |          |          | .4       |          |          |          |          |          |           |           |           |
| 5          |          |          |          | .7       |          |          |          |          |          |           |           |           |
| 6          |          |          |          | .3       |          |          |          |          |          |           |           |           |
| 7          |          |          |          |          |          |          |          | .6       |          |           |           |           |
| 8          |          |          |          |          |          |          |          | .5       |          |           |           |           |
| 9          |          |          |          |          |          |          |          | .4       |          |           |           |           |
| 10         |          |          |          |          |          |          |          | .5       |          |           |           |           |
| 11         |          |          |          |          |          |          |          | .5       |          |           |           |           |
| 12         |          |          |          |          |          |          |          | .6       |          |           |           |           |
| 13         |          |          |          |          |          |          |          | .4       |          |           |           |           |
| 14         |          |          |          |          |          |          |          | .5       |          |           |           |           |
| 15         |          |          |          |          |          |          |          | .4       |          |           |           |           |
| 16         |          |          |          |          |          |          |          |          |          |           | .5        |           |
| 17         |          |          |          |          |          |          |          |          |          |           | .3        |           |
| 18         |          |          |          |          |          |          |          |          |          |           | .6        |           |
| 19         |          |          |          |          |          |          |          |          |          |           | .9        |           |
| 20         |          |          |          |          |          |          |          |          |          |           | .9        |           |
| 21         |          |          |          |          |          |          |          |          |          |           | .3        |           |
| 22         |          |          |          |          |          |          |          |          |          |           | .3        |           |
| 23         |          |          |          |          |          |          | .5       |          |          |           |           |           |
| 24         |          |          |          |          |          |          | .4       |          |          |           |           |           |
| 25         |          |          |          |          |          |          | .5       |          |          |           |           |           |

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|    |    |    |    |    |     |
|----|----|----|----|----|-----|
| 26 |    |    |    | .5 |     |
| 27 |    |    |    | .4 |     |
| 28 |    |    |    |    | .7  |
| 29 |    |    |    |    | .7  |
| 30 |    |    |    |    | .3  |
| 31 |    |    |    |    | .3  |
| 32 |    |    |    |    | .3  |
| 33 |    |    |    |    | .3  |
| 34 |    |    |    |    | .31 |
| 35 | .4 |    |    |    |     |
| 36 | .4 |    |    |    |     |
| 37 | .3 |    |    |    |     |
| 38 | .3 |    |    |    |     |
| 39 | .3 |    |    |    |     |
| 40 |    | .3 |    |    |     |
| 41 |    | .6 |    |    |     |
| 42 |    | .5 |    |    |     |
| 43 |    | .5 |    |    |     |
| 44 |    | .5 |    |    |     |
| 45 |    | >  |    |    |     |
| 46 |    |    |    |    | .4  |
| 47 |    |    |    |    | .3  |
| 48 |    |    |    |    | .5  |
| 49 |    |    |    |    | .6  |
| 50 |    |    |    |    | .5  |
| 51 |    |    |    |    | .5  |
| 52 |    |    |    |    | .3  |
| 53 |    |    | .4 |    |     |
| 54 |    |    | .4 |    |     |
| 55 |    |    | .3 |    |     |
| 56 |    |    | .5 |    |     |
| 57 |    |    | .6 |    |     |
| 58 |    |    | .5 |    |     |
| 59 |    |    | .5 |    |     |
| 60 | .3 |    |    |    |     |
| 61 | >  |    |    |    |     |
| 62 | .5 |    |    |    |     |
| 63 | .5 |    |    |    |     |
| 64 | >  |    |    |    |     |

---

|     |     |     |     |     |     |    |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|
| 65  | .5  |     |     |     |     |    |     |     |     |     |     |     |
| 66  | .6  |     |     |     |     |    |     |     |     |     |     |     |
| 67  | .5  |     |     |     |     |    |     |     |     |     |     |     |
| 68  | .6  |     |     |     |     |    |     |     |     |     |     |     |
| 69  | .4  |     |     |     |     |    |     |     |     |     |     |     |
| 70  |     |     |     |     |     |    |     |     | .4  |     |     |     |
| 71  |     |     |     |     |     |    |     |     | .3  |     |     |     |
| 72  |     |     |     |     |     |    |     |     | .5  |     |     |     |
| 73  |     |     |     |     |     |    |     |     | .4  |     |     |     |
| 74  |     |     |     |     | .3  |    |     |     |     |     |     |     |
| 75  |     |     |     |     | .3  |    |     |     |     |     |     |     |
| 76  |     |     |     |     | .5  |    |     |     |     |     |     |     |
| 77  |     |     |     |     | .4  |    |     |     |     |     |     |     |
| 78  |     |     |     |     | .5  |    |     |     |     |     |     |     |
| 79  |     |     |     |     | .4  |    |     |     |     |     |     |     |
| Alp | .81 | .85 | .86 | .89 | .91 | .7 | .82 | .83 | .88 | .92 | .86 | .84 |

*Note:* 1= Tolerance for Ambiguity, 2= Interpreting and Relating, 3= Critical Cultural Awareness, 4= Lack of Ethnocentrism, 5= Empathic Concern, 6= Social Desirability Bias, 7= Tolerance, 8= Attitudinal Openness, 9= Entity Belief, 10= Perspective-Taking, 11= Behavioral Openness, 12= Intercultural Adaptation and Communicative Awareness.

As shown in Table 2, three items have less than .3 loadings in their supposed factors; therefore, they have been deleted from the questionnaire. The current version of the instrument consists of 76 items loaded on 12 factors. A confirmatory factor analysis model is specified using these results and fitted to the data. After consulting the resulted goodness of fit indices, the model shows acceptable fit to the data with (CFI = 0.91, TLI= 0.90 and RMSEA = 0.075 (90% C.I. = 0.072 – 0.079)). However, chi-squares goodness of fit index was significant ( $\chi^2 = 3876 (2708), p < .01$ ). Because of the well-known sensitivity of Chi-square values to sample size and model complexity (CF. see Bollen, 1989), it was not unexpected to get a nonsignificant Chi-square value in our case.

Correlations between components of intercultural competence are illustrated in Table 3. Table 3 shows that intercultural competence components are positively related to each other. All correlations are significant at the .01 level. The highest correlation was between critical



cultural awareness and lack of ethnocentrism ( $r = .31, p < .01$ ), while the lowest correlation was between tolerance for ambiguity and intercultural adaptation and communicative awareness ( $r = .13, p < .01$ ).

**Table 3**

*Correlations between the measures of intercultural competence*

|    | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         | 9         | 10        | 11        |
|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2  | .27<br>** |           |           |           |           |           |           |           |           |           |           |
|    | .23       | .14       |           |           |           |           |           |           |           |           |           |
| 3  | **        | **        |           |           |           |           |           |           |           |           |           |
| 4  | .18<br>** | .16<br>** | .31<br>** |           |           |           |           |           |           |           |           |
| 5  | .22<br>** | .27<br>** | .24<br>** | .16<br>** |           |           |           |           |           |           |           |
| 6  | .14<br>** | .16<br>** | .18<br>** | .17<br>** | .27<br>** |           |           |           |           |           |           |
| 7  | .17<br>** | .20<br>** | .19<br>** | .19<br>** | .24<br>** | .15<br>** |           |           |           |           |           |
| 8  | .27<br>** | .29<br>** | .22<br>** | .22<br>** | .23<br>** | .17<br>** | .23<br>** |           |           |           |           |
| 9  | .20<br>** | .27<br>** | .28<br>** | .25<br>** | .18<br>** | .16<br>** | .14<br>** | .13<br>** |           |           |           |
| 10 | .27<br>** | .15<br>** | .19<br>** | .28<br>** | .16<br>** | .23<br>** | .17<br>** | .16<br>** | .18<br>** |           |           |
| 11 | .18<br>** | .17<br>** | .27<br>** | .26<br>** | .24<br>** | .26<br>** | .27<br>** | .27<br>** | .22<br>** | .24<br>** |           |
| 12 | .13<br>** | .24<br>** | .15<br>** | .14<br>** | .26<br>** | .30<br>** | .23<br>** | .27<br>** | .28<br>** | .21<br>** | .16<br>** |

*Note:* 1= Tolerance for Ambiguity, 2= Interpreting and Relating, 3= Critical Cultural Awareness, 4= Lack of Ethnocentrism, 5= Empathic Concern, 6= Social Desirability Bias, 7= Tolerance, 8= Attitudinal Openness, 9= Entity Belief, 10= Perspective-Taking, 11= Behavioral Openness, 12= Intercultural Adaptation and Communicative Awareness.

### **Discussion**

The present study was based on Byram et al.'s (2009) model of intercultural competence because this model gives a clear description of the various components of intercultural competence and makes no assumptions about how these components are related or about how they develop. However, many of the components which are specified by this model have not been measured before. Therefore, the present research attempted to develop new quantitative methods for assessing these components. Results of the present study showed that the current measure of intercultural competence was psychometrically sound. Therefore, the present study has shown that it is possible to develop psychometrically sound quantitative methods for assessing intercultural competence when it is conceptualized using Byram et al. (2009) model. The current study has contributed a new set of assessment tools to this field of research, adding to the range of existing assessment instruments that were reviewed previously.

The scales have been found to work well with university students in Kuwait. Future research may examine whether they also work well in other cultural contexts with other populations. Reviewing the correlations between intercultural competence components reveals that attitudinal openness might be considered as a central component to the structure of intercultural competence since it correlated highly with all other components. The other components showed a lower number of correlations. Deardorff (2006) suggested the same in a research project aimed at the identification and assessment of intercultural competence as a student outcome of internationalization. This result may indicate that an individual who is high in one component is more likely to be high in other components as well. This is an issue which future research may need to examine in greater detail.

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