

The Development of a New Instrument of Intercultural Communication Competence

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Abstract

A review of past literature reveals that there is need for a measure of intercultural communication competence (ICC) that can be used in culturally diverse groups of participants. The present study describes the development and initial empirical testing of a new instrument of ICC. Student participants ($N = 302$) from multiple cultural backgrounds were used. Using regression, factor, and correlation analyses, the instrument was tested for reliability and construct validity. The preliminary results are very promising. Implications for future research are discussed.

Keywords: intercultural communication competence, instrument development

Introduction

The idea of competency in intercultural communication continues to attract interest from both academics as well as professionals in today's culturally diverse society. One of the most useful instruments in this climate of globalization and performance evaluations based on intercultural competency would be an instrument which not only evaluates one's intercultural communication competence but also performs well amongst participants from multiple cultural backgrounds. The purpose of this article is to outline the development and preliminary empirical validation of such an instrument.

Communication competence in general has been characterized as communication behaviour that is both effective and appropriate (Spitzberg & Cupach 1984). A competent communicator is effective in one's ability to achieve one's goals, and appropriate in one's ability to exhibit behaviour that is accepted as well as expected in a given situation. Needless to say, expected and accepted behaviour depends on cultural/relational context, and therefore these factors have to be taken into consideration when extending this definition of communication competence to intercultural contexts. In previous research, there is a general consensus that intercultural communication competence (ICC) can be characterized in terms of three dimensions, namely cognitive, affective, and behavioural (Cui & Van den Berg 1991; Sercu 2004; Spitzberg 1991). Attempts at measuring ICC have usually revolved around these dimensions, with a few other variations. Before outlining the development of the current instrument, it is necessary to survey some of the other measures of ICC in existence.

Measures of ICC

One of the earlier measures of ICC evident in literature is Ruben's (1976) Intercultural Behavioural Assessment indices. The instrument is designed to evaluate a participant on seven dimensions, namely tolerance of ambiguity, interaction management, display of respect, orientation to knowledge, relational role behaviour, interaction posture, and empathy. This instrument has been successfully used in past studies (Chen 1989; Ruben & Kealey 1979), but has not been extensively used in recent years. Further, the applicability of this instrument to participants from multiple cultural backgrounds is not clear.

Another instrument in use is the Intercultural Developmental Inventory (Bennett & Hammer 1998), constructed based on Bennett's (1986, 1993) theoretical framework of a developmental model of intercultural sensitivity. The instrument is primarily designed to measure intercultural sensitivity, defined, "the ability to discriminate and experience relevant cultural differences" (Hammer, Bennett, & Wiseman, 2003:422). The authors argue that one's intercultural sensitivity is indicative of one's potential for intercultural competence. The inventory has been used in empirical studies (Greenholtz 2000). There

needs to be, however, more research on establishing the extent to which intercultural sensitivity is a predictor of ICC. Additionally, though intercultural sensitivity may be a predictor of ICC, it is conceptually different from ICC.

The Multicultural Personality Questionnaire (van der Zee & van Oudenhoven 2000; van der Zee, Zaal, & Piekstra 2003) evaluates a person on five dimensions, namely, cultural empathy, emotional stability, open-mindedness, flexibility, and social initiative. Though the instrument has been successfully used in empirical studies (van Oudenhoven & van der Zee 2002); van Oudenhoven, Mol, & van der Zee 2003; van der Zee & Brinkmann 2004) and has proved to be stable across different cultures (Leone et.al. 2005), the measure is primarily a psychometric instrument designed to evaluate multicultural orientation and adaptability, and does not necessarily address the communication aspect of intercultural competence.

Development of a New Instrument

As mentioned before, communication competence is seen as effective and appropriate communication. If effectiveness is one's ability to accomplish one's communication goal, then it can be reasonably evaluated through self-reported data. Whether one behaved in a manner that is socially expected and accepted (appropriateness) is arguably best evaluated from the perspective of both the communicator as well as the other person with whom the communication occurs. But this level of specificity has to do with evaluating someone's ICC in a specific interaction. Unless multiple scenarios are considered with relevant variations, not much can be discerned about the person's ability to consistently behave in a way that is perceived to be appropriate by evaluating effectiveness and appropriateness in one type of scenario. The reasoning which undergirds the development of this instrument is that a person who is competent in one intercultural exchange possesses something within himself/herself that enables him/her to engage a different intercultural exchange competently as well. This reasoning is based on Arasaratnam and Doerfel's (2005) finding that those who were identified as competent intercultural communicators (from the other's point of view) all indeed possessed five qualities in common, namely empathy, intercultural experience/training, motivation, global attitude, and ability to listen well in conversation. Arasaratnam and Doerfel arrived at these findings by interviewing participants from fifteen different countries, who were all asked to describe a competent intercultural communicator (among other questions). The motivation behind this approach was to explore whether there are identifiable variables in a competent intercultural communicator that transcend cultural context and cultural identity of the perceiver. Commonalities in the interview responses were then discovered by subjecting the data to semantic network analysis. The five variables mentioned earlier as the findings were the common themes which emerged from the analysis. Based on this finding, therefore, it is not unreasonable to develop an instrument of ICC which relies on self-reported data, given there is evidence to suggest that variables inherent in a person contribute to perceived ICC from the perspective of the other.

Building upon the idea of the cognitive, affective, and behavioural components, the present instrument was designed with five items to address each of these three dimensions. The items pertaining to the cognitive dimension were inspired by findings in previous research in cognitive complexity in relation to communication competence. It has been documented that those with higher levels of cognitive complexity exhibit persuasive and integrative communication skills that are associated with competence (Kline, Hennen-Floyd, & Farrell 1990; Leighty & Applegate 1991; O'Keefe & Shepard 1987). Further, Chen (1996) found limited evidence of high levels of cognitive complexity being associated with the ability to relate to the other, and to construct messages to meet the other's needs, in intercultural interactions. Given cognitive complexity is generally understood to be the extent to which an individual is able to differentiate personal constructs and use them in relating to others and interpreting behaviour (Adams-Webber 2001; Gudykunst & Kim 2003), the five items in the instrument pertained to one's ability to employ differentiated constructs in intercultural contexts.

There is evidence to suggest that the ability to emotionally relate to others and feel a sense of affiliation with people from other cultures is related to ICC (Arasaratnam & Doerfel 2005; Arasaratnam 2006). Redmond's (1985) study on affective empathy (the ability engage in emotional decentering) and communication competence further suggests that there is great overlap in the behavioural enactment of these two concepts. Given this, the items in the affective dimension of the instrument pertained to one's ability to emotionally connect with someone from a different culture.

The behavioural dimension of the instrument was designed to evaluate a person's ability to engage in behaviours that are associated with intercultural as well as interpersonal competence, such as intentionally seeking interaction with people from other cultures (Arasaratnam & Doerfel 2005), adapting behaviours or changing communication patterns according to the other (Rubin & Martin 1994), and engaging in friendships with people from other cultures (Arasaratnam 2005). The instrument with the original fifteen items is displayed in Table 1.

In addition to the new ICC instrument, other related variables were included in the study in order to test the validity of the new measure. These variables were selected based on Arasaratnam's (2006) model of ICC, which shows positive relationships between ICC and variables such as motivation to interact with people from other cultures, positive attitudes toward people from other cultures, and interaction involvement. The model was constructed based on Arasaratnam and Doerfel's (2005) findings, to conceptually depict the relationships between the five variables identified in Arasaratnam and Doerfel's study and ICC. The model was then tested to identify the strength and nature of the relationship between the individual variables. This model was chosen as a theoretical frame of reference as it is one of the few models of ICC in existence that has been constructed entirely based on data from participants who represented multiple cultural perspectives (Arasaratnam 2007; Arasaratnam & Doerfel 2005). In addition to the three variables mentioned, ethnocentrism was also included as a measure, with the reasoning that those who are high in ICC will be low in ethnocentrism (Lin, Rancer, & Trimbilas 2005; Wrench et al. 2006).

Method

Participants

Participants ($N = 302$) were graduate and undergraduate students from a large university in Sydney Australia (Males = 71, Females = 230, 1 unspecified). The participants ranged in age from 17 – 41 ($M = 20.82$, $SD = 3.71$). The participants voluntarily filled out a survey instrument consisting of Likert-type (7-point variation) measures of the variables. Out of the participants, 174 identified themselves as Australian, while 127 were international students (1 unspecified). The 127 non-Australian participants represented 32 countries, the largest group being from the United States ($n = 42$). All participants were recruited from classes in the mainstream offerings of the university (as opposed to language specific streams), and therefore a reasonable assumption was made that the participants had demonstrably working knowledge of English to be able to complete the surveys.

Measures

All instruments were in the form of Likert-type scales with 7-point variation, 1 = strongly disagree and 7 = strongly agree. Items that were phrased negatively (in relation to the concept measured) were reverse coded.

Attitude towards other cultures (ATOC). This item was measured using a modified 8-item version of Remmers, Gage and Rummel's (1960)'s scale (Cronbach's alpha = .70, $M = 5.78$, $SD = 1.09$). The scale consisted of items such as, "People of other cultures should be treated the same as people of my own culture."

Ethnocentrism. A 22-item ethnocentrism scale (Neuliep 2002; Neuliep, Chaudoir & McCroskey 2001) which consisted of items such as, "Most cultures are backward compared to my culture," was used to measure ethnocentrism (Cronbach's alpha = .86, $M = 2.43$, $SD = .73$).

Motivation. A 4-item version of Arasaratnam's (2006) motivation scale which consisted of items such as, "I enjoy initiating conversations with someone from a different culture" (Cronbach's alpha = .81, $M = 5.77$, $SD = 1.07$) was used.

Interaction involvement. This variable was measured using a modified 8-item version of Cegala's (1984) interaction involvement scale which consisted of items such as, "I am keenly aware of how someone from a different culture perceives me during my conversations" (Cronbach's alpha = .80, $M = 4.72$, $SD = .96$).

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Intercultural communication competence (ICC). The new 15-item ICC instrument was included in the survey. The items were subjected to factor analysis with varimax rotation. Using selection criteria of primary loading of .50 or higher and no secondary loading higher than .30, 10 items were selected from the four components which emerged. The final ICC scale, which was used in the rest of the analyses, consisted of these 10 items (Cronbach's alpha = .77, $M = 4.79$, $SD = .88$). The final ICC scale is displayed in Table 2.

Results

Multiple regression analysis was conducted, with ethnocentrism, motivation, ATOC, and interaction involvement as independent variables and ICC as the dependant variable, based on Arasaratnam's (2006) model of ICC. Further, correlation analyses were conducted amongst all the variables.

Results from the regression analysis revealed positive relationships between the dependent variable (ICC) and all three independent variables, namely ATOC ($\beta = .27$, $p < .001$), motivation ($\beta = .27$, $p < .001$), and interaction involvement ($\beta = .37$, $p < .001$). The results from the regression analysis are displayed in Table 3. Correlation analysis revealed positive relationships between ICC and ATOC ($r(302) = .51$, $p = .01$), ICC and motivation ($r(302) = .50$, $p = .01$), and ICC and interaction involvement ($r(302) = .54$, $p = .01$), and a negative correlation between ICC and ethnocentrism ($r(302) = -.62$, $p = .01$). Due to the low reliability of some of the instruments, disattenuated correlations were also calculated and are reported in parentheses in Table 4 where the correlations are displayed.

Discussion

The purpose of this study was to test the reliability and construct validity of a new measure of ICC. Overall, the measure performed very well. The results from the regression indicate that ATOC, motivation, and interaction involvement are all predictors of ICC, as claimed in the Arasaratnam (2006) ICC model. This, in addition to the strong negative correlation between ICC and ethnocentrism, indicates that the ICC instrument is conceptually sound. It is, however, unfortunate that all of the original 15 items did not perform well in factor analysis, resulting in the 10-item instrument which was used in the final analyses. As the original instrument contained five items to represent each one of the cognitive, affective, and behavioural components, it is necessary to have a closer look at the new instrument to explore whether it adequately addresses all three components. The final 10-item instrument has three items from the cognitive dimension, four items from the affective dimension, and three items from the behavioural dimension. It is important to re-test the original 15-item instrument to explore whether the results of the factor analysis were due to particularities of the selected group of participants. Though the reliability of the instrument is acceptable, it must be noted that it is lower than desirable.

It is, however, encouraging to have the overall positive results from this preliminary study from which further efforts can be launched to refine the instrument. One of the strengths of the current study is the cultural diversity in the participants. If we are to develop an instrument of ICC which performs well amongst different cultural groups, it must be tested in groups that are representative of such diversity. One of the limitations of the study, on the other hand, is that many of the participants were not native English speakers and it is hard to determine whether all the items translated well for each participant. Given the participants were university students in an English-speaking academic system, it was reasonable to assume that they would have sufficient language skills to understand the survey. However, as van de Vijver and Leung (1997) note, there can be method bias due to language/communication barriers and it is necessary to repeatedly test an instrument with different groups, using translation and back-translation as necessary. It is hoped that this shortcoming will be addressed in future research. Another reason why this instrument should be tested on different culturally homogenous groups is because such procedure will enable the researcher to test for item bias. To construct an instrument that truly translates well into different cultures, it is necessary to consider the conceptual translation of each item (Van de Vijver & Leung) by, for example, performing an ANOVA between data from different cultural groups. As there were not sufficient numbers of participants in each national group in the present study, this analysis was not performed. It is clear that the present study is only the first step in developing this new instrument of ICC, and follow-up studies are needed to explore its capabilities further.

Conclusion

A new instrument of ICC was introduced in this study. The instrument was built based on the idea of cognitive, affective and behavioural dimensions encompassing communication competence, as established in past research. The items were specifically constructed to address communication competence in intercultural contexts. Preliminary analyses reveal promising results and suggest that this instrument has potential for providing valuable information in future studies. As discussion of past literature reveals, we are in need of an instrument of ICC that performs well in cultural diverse participant groups. The present study is a first attempt at building such an instrument. Based on the results of this study, more studies are being planned to address the limitations of the current one and to test the instrument further.

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Table 1

Original Items in ICC Instrument

1. I often find it difficult to differentiate between similar cultures (Ex: Asians, Europeans, Africans, etc.)
 2. I feel a sense of belonging to a group of people based on relationship (family, friends) instead of cultural identity (people from my culture, people from other cultures).
 3. I find it easier to categorize people based on their cultural identity than their personality.
 4. I often notice similarities in personality between people who belong to completely different cultures.
 5. If I were to put people in groups, I will group them by their culture than their personality.
 6. I feel that people from other cultures have many valuable things to teach me.
 7. I feel more comfortable with people from my own culture than with people from other cultures.
 8. I feel closer to people with whom I have a good relationship, regardless of whether they belong to my culture or not.
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9. I usually feel closer to people who are from my own culture because I can relate to them better.
 10. I feel more comfortable with people who are open to people from other cultures than people who are not.
 11. Most of my close friends are from other cultures.
 12. I usually change the way I communicate depending on whom I am communicating with.
 13. When I interact with someone from a different culture I usually try to adapt some of his/her ways.
 14. Most of my friends are from my own culture.
 15. I usually look for opportunities to interact with people from other cultures.

Table 2

The Final ICC Instrument

1. I often find it difficult to differentiate between similar cultures (Ex: Asians, Europeans, Africans, etc.)
 2. I feel that people from other cultures have many valuable things to teach me.
 3. Most of my friends are from my own culture.
 4. I feel more comfortable with people from my own culture than with people from other cultures.
 5. I find it easier to categorize people based on their cultural identity than their personality.
 6. I often notice similarities in personality between people who belong to completely different cultures.
-
7. I usually feel closer to people who are from my own culture because I can relate to them better.
 8. Most of my friends are from my own culture.

9. I usually look for opportunities to interact with people from other cultures.
10. I feel more comfortable with people who are open to people from other cultures than people who are not.

Table 3

Results from Regression Analysis

Variable *B SE B β*

ATOC .22 .04 .27***

Motivation .23 .04 .27***

Interaction involvement .34 .04 .37***

Note. $F = 88.40, R^2 = .47$. *** $p < .001$

Table 4

Correlations

Variable 1 2 3 4 5

1. ATOC _ -.55** (.71) .42**(.56) .34**(.45) .51**(.70)

2. Ethnocentrism _ -.48**(.58) -.44**(.53) -.62**(.77)

3. Motivation _ .30**(.38) .50**(.63)

4. Interaction

Involvement _ .54**(.69)

5. ICC _

Note. ** $p < .01$. Raw correlations are followed by disattenuated correlations in the parenthesis.

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