Development of a Scale to Assess Communication Effectiveness of Managers Working in Multicultural Environments

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DEVELOPMENT OF A SCALE TO ASSESS COMMUNICATION EFFECTIVENESS OF MANAGERS WORKING IN MULTICULTURAL ENVIRONMENTS

Multicultural workplaces are increasingly prevalent in the business environment of the twenty-first century. Easier internet access and affordable travel have made us citizens of a boundaryless world where intercultural contact is necessary and unavoidable. Organizations now need managers who adapt to cultural diversity and communicate effectively to lead multicultural teams. Scholarly debate for defining culture has been extensive. Researchers have also given considerable thought for determining what constitutes intercultural communication competence (Brislin & Yoshida, 1994; Lustig & Koester, 2012; Martin & Nakayama, 2000). It is also worthwhile to consider the impact of two dimensions of anxiety and uncertainty management (Gudykunst, 2005), for assessing communication effectiveness of managers working in cultural diversity.

Communication between strangers is characterized by a) limited amount of information about each other, b) ignorance of the means to reach a goal, and c) ignorance of the probable outcomes (Duronto, Nishida, & Nakayama, 2005). This ‘not knowing’ could be about a situation, about people or any other state of affairs. Uncertainty is created by our own preconceptions, largely depending on what we wish and are able to predict, and what we might be able to do about it (Marris, 1996). Uncertainty reduction is a cognitive process whereby the individual attempts to proactively predict the other's attitudes, values, feelings, beliefs, and behaviors. The motivation to reduce uncertainty emerges when a) in anticipation of future interaction with the other, the person’s needs stand to be satisfied, b) there is possibility of reward or punishment being administered, c) there is deviant or expected manner of behaving by the other person (Berger, 1979).

‘Uncertainty’ leads to ‘anxiety’ - an unpleasant emotional state characterized by subjective feelings of tension, apprehension, and worry regarding a potentially negative outcome. Cognitively, anxiety may be said to be a state of heightened self-awareness, perceived helplessness, and expectation of negative outcomes. Affectively, it is the manifestation of subjective feelings of distress, fear, and discomfort. Behaviourally, a person’s anxiety is characterized by hesitant, inhibited, and disrupted actions. The management of uncertainty and anxiety is therefore central to our communication with strangers.
When global managers are confident about understanding the attitudes, feelings, values and behaviours of others, their communication becomes more effective (Ananthram, Pick, & Issa, 2012; Hannum, McFeeters & Booysen, 2010; Harris, Moran, & Moran, 2004). Global leaders need awareness of the customs, courtesies, and protocols of business associates from other countries, along with understanding of their management philosophies and mindsets. Companies having employees with cross-cultural communication skills have a competitive advantage as they can devote more time and resources to conducting business instead of focusing on internal and external communication issues (Hilton, 2007).

Gudykunst’s (2005) Anxiety/Uncertainty Management (AUM) theory puts it succinctly – effective communicators have to understand strangers and the meanings they attach to messages. Being mindful, which involves making conscious choices, helps communicators understand cultures, ethnicities and other group memberships of strangers, and how these influence their communication. Aspects such as knowledge, motivation, skills, flexibility, empathy, interaction sensitivity, interpersonal respect, willingness to communicate, and tolerance for ambiguity have been considered by scholars while developing instruments for measuring intercultural communication competence. A scale, focusing on interactions between cultural in-groups and strangers and the manner in which anxiety and uncertainty may be managed to arrive at communication effectiveness was not available.

This paper reports on the development and validation of a scale for measuring communication effectiveness of managers in multicultural environments, focusing on the important dimensions of anxiety and uncertainty management. The final instrument has been tested on 406 executives working in IT companies in India and other countries. Technical competence and job knowledge are often considered as appropriate measures when selecting global managers for multicultural assignments. This scale which considers cultural parameters will strengthen the selection process and also serve to identify gaps which may be overcome by providing suitable training interventions.

**Literature Review**

**Communication Effectiveness and Impact of Culture**

Communication is defined as “an evolutionary, culturally dependent process of sharing information and creating relationships in environments designed for manageable, cooperative, goal oriented behavior” (Wilson, Goodall, & Waagen, 1986, p.23). Researchers confirm that culture influences the manner in which people communicate and do business with each other (Beamer and Varner, 2008;
Goodman, 2013; Hall, 1959; Hofstede, 2001; Randolph & Sashkin, 2002, Schmidt, Conaway, Easton, & Wardrope, 2007; Victor, 1992; Verluyten, 2000). Hall (1959), one of the earliest proponents of culture’s impact on communication, stated that culture defines how people express themselves, how problems are solved, the way people think, and the way people interact with each other.

Cultural differences such as attitudes toward power distance, individualism or collectivism, uncertainty avoidance, and masculinity or femininity (Hofstede, 2001) influence people's perceptions about competent behavior. McSweeney (2002) counters Hofstede’s findings arguing that nations cannot be proper units of analysis as cultures are not necessarily bounded by borders. Jones (2007) however concludes that though there are arguments for and against, most of Hofstede’s findings will impact global practitioners. The GLOBE study (House, Hanges, Javidan, Dorfman, & Gupta, 2004) conceptualized the culture of 62 countries in terms of nine cultural attributes that are referred to as dimensions.

In multicultural organizations, teams composed of culturally diverse members are observed at all the levels from top management to small project groups. While it is important to maintain our own identity and self-concept when interacting with people from other cultural frameworks, it is also necessary to understand cultural cues and adapt communication patterns to avoid misunderstandings. Behaviours are habitual, built up over the years and difficult to change. Managers who are culturally effective are able to modify behaviour by understanding the message behind the words. Global society in the twenty first century is marked by multiplicity, interdependence, ambiguity and continuous change (Lane, Maznevski and Mendenhall, 2009). Managers with cultural awareness are able to avoid offensive situations and eliminate confusion thereby improving communication in the global workplace. This results in improving the quality of relationships between individuals within the organization and with the external environment (Kienzle & Husar, 2007).

Anxiety and Uncertainty Management (AUM)
Gudykunst’s AUM theory, developed over a period of nearly twenty years, began with a model of intergroup communication, integrating uncertainty reduction theory and social identity theory. Later, research on anxiety reduction was included to explain intercultural adaptation and find a way to achieve effective interpersonal and intergroup communication. AUM theory, focusing on cultural in-groups and strangers, identify uncertainty (a cognitive phenomenon) and anxiety (an affective phenomenon) as the twin threats which need to be managed for communication effectiveness. To predict other person’s behavior, individuals
use three kinds of data—psychological, sociological and cultural. Intergroup behavior takes place when predictions are based mainly on sociological and cultural data while interpersonal behavior is based on predictions based on the other person’s personal information. Human (views of ourselves shared with other humans), social (views of ourselves shared with members of specific groups) and personal (views differentiating us from other in-group members) identities guiding our behavior also impact our interpersonal and intergroup interactions. In initial interactions with strangers, the social identities predominate over personal identities because predictions of others’ behavior are based on cultural and/or sociological data (Miller & Steinberg, 1975). As relationships become more intimate, the influence of social identities decreases and the influence of personal identities increase because psychological data are used to predict others’ behavior.

Gudykunst assumed that at least one person in an intercultural encounter is a stranger. Through a series of initial crises, strangers experience both anxiety and uncertainty. They feel insecure as they are not sure how to behave. When the encounters take place between members of different cultures, the strangers are all the more aware of the cultural differences. Communication, according to Gudykunst, is effective when the person interpreting the message attaches a meaning to the message that is relatively similar to what was intended by the person transmitting it. The basic causes of anxiety and uncertainty which influence effective communication are, in turn, impacted by a number of superficial causes, namely self-concept, motivation, reactions to strangers, social categorization of strangers, situational processes, connections with strangers, and ethical interactions.

Yoshitake (2002)’s criticism of the AUM theory is that its focus on effectiveness is narrow. It overemphasizes consciousness and exhibits Western-cultural biases. Griffin (2006) however, though critical of the complexity of the AUM theory for its 47 axioms, admits that it is applicable in any situation where differences between people spawn doubts and fears. He also notes that one need not travel to a foreign land to either be a stranger or encounter a stranger and supports the statement with personal examples.

**Tools for Assessing Communication Effectiveness**

Scholars (Hammer, Gudykunst, & Wiseman, 1978; Ruben 1976; Wiseman 2002) rightly comment that intercultural effectiveness and intercultural communication competence (ICC) are often used interchangeably, leading to conceptual ambiguity. Arasaratnam and Doerfel (2005) argue that a satisfactory model of ICC and a scale that translates well into different cultures are not easily identified. According to Chen and Starosta (1996), intercultural effectiveness should only
refer to the behavioral aspect including both verbal and nonverbal behaviors, which enable individuals to attain their communication goals in intercultural interactions. Four personal attributes of intercultural sensitivity are identified by them. The first is “self-concept” - an optimistic outlook that inspires confidence in intercultural interactions. The second attribute is “open-mindedness” or one’s willingness to express oneself openly when it is appropriate and to accept others’ explanations. Next is the attribute of being “nonjudgmental” - absence of prejudices which prevent one from listening sincerely to others during intercultural interactions. The final attribute is “social relaxation” or the ability to overcome uncertain emotions during intercultural communication.

Survival in the globalized society of the 21st century has made intercultural competence (i.e. the ability to change one’s knowledge, attitudes, and behaviors and be open and flexible to other cultures) a critical issue (Alred & Byram, 2002). A person, competent inter-culturally, is able to establish relational competence with people from different cultures, can solve complicated conflicts by considering alternatives emerging from cultural differences and improve business relations with counterparts from different cultures (Huang, Rayner, & Zhuang, 2003). The ability to deal effectively in diverse cultural environments requires cultural awareness and communicative competence along with self-awareness and personal attitudes like empathy and flexibility for understanding values, norms and beliefs carried by others (Penbek, Yurdakul, & Cerit, 2009).

Communication competence is having the capacity to effectively and appropriately execute communication behavior to elicit a desired response in a specific environment (Chen, 1990). A competent communicator is one who is both effective and appropriate. Being effective implies successfully achieving one’s goals, and being appropriate is demonstrating behaviour that is accepted as well as expected in a given situation (Arasaratnam, 2009). An useful instrument for assessing communication effectiveness, besides evaluating one’s intercultural communication competence would also perform well amongst participants from multiple cultural backgrounds. Table 1 lists the available instruments for assessing communication effectiveness in the context of cultural diversity.

<table>
<thead>
<tr>
<th>Author</th>
<th>Instrument</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portalla and Chen, 2010</td>
<td>Intercultural Effectiveness Scale</td>
<td>20 item scale with six factors - behavioral flexibility, interaction relaxation, respect of interactants, message skills, identity</td>
</tr>
<tr>
<td>Author</td>
<td>Instrument</td>
<td>Coverage</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Fritz, Mollenberg and Chen, 2002</td>
<td>Intercultural Sensitivity Scale</td>
<td>maintenance, and interaction management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24-items covering five dimensions: interaction engagement, respect of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cultural differences, intercultural confidence, interaction enjoyment,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and intercultural attentiveness</td>
</tr>
<tr>
<td>Arasaratnam, 2009</td>
<td>Intercultural Communication Competence Scale</td>
<td>5 items each measuring one’s ability to employ differentiated constructs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>in intercultural contexts so that one may emotionally connect with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>someone from a different culture and also engage in behaviours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>associated with intercultural as well as interpersonal competence</td>
</tr>
<tr>
<td>Van der Zee and van Oudenhoven, 2000</td>
<td>The Multicultural Personality Questionnaire</td>
<td>Evaluation on five dimensions - cultural empathy, emotional stability,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>open-mindedness, flexibility, and social initiative</td>
</tr>
<tr>
<td>Bennett and Hammer, 1998</td>
<td>The Intercultural Developmental Inventory</td>
<td>Measures intercultural sensitivity</td>
</tr>
<tr>
<td>Neuliep and McCroskey, 1997</td>
<td>Intercultural Communication Apprehension scales</td>
<td>Personal Report of Intercultural Communication Apprehension(PRICA)</td>
</tr>
<tr>
<td>Olebe and Koester, 1989</td>
<td>The Behavioral Assessment Scale for Intercultural Communication</td>
<td>Composite of eight scales, validated with 263 university students</td>
</tr>
<tr>
<td>Ruben, 1976</td>
<td>Intercultural Behavioural</td>
<td>Evaluation on 7 dimensions - tolerance of ambiguity, interaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>management,</td>
</tr>
</tbody>
</table>

http://commons.emich.edu/gabc/vol4/iss1/2
Author Instrument Coverage

<table>
<thead>
<tr>
<th>Author</th>
<th>Instrument</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assessment indices</td>
<td>display of respect, orientation to knowledge, relational role behaviour, interaction posture, and empathy</td>
</tr>
</tbody>
</table>

Though the above noted instruments addressed some of the intercultural communication issues, all aspects of intercultural complexities in the post globalization period were not addressed by one single instrument. Being interested in communication effectiveness of global managers working in multicultural environments, we felt, development of a scale focusing on the dimensions of anxiety and uncertainty would add to the understanding and be useful for both selection and training of such managers.

**Method**

**Item Construction**

Open ended discussions were held with six experts (two from academia and five from industry) on the basis of the following questions:

1. What is your understanding of intercultural communication?
2. How important is it to be flexible and open minded when placed in a multicultural environment?
3. Is it necessary to change one’s behaviour when interacting with persons from other cultures?
4. Is it necessary to prepare in advance when one is away from the host country?
5. How important is non-verbal communication in multicultural settings?
6. What precautions must be kept in mind when interacting with people from other cultures?
7. Is it important to learn the language when operating in other cultures?
8. How does one overcome anxiety and uncertainty when placed in unknown situations?
9. How does one manage communication diversity in multicultural groups?
10. Does mindfulness play an important role when communicating with people from other cultures?
11. Do you think cultural diversity in teams is a major cause of anxiety and uncertainty?
12. Does self-concept impact anxiety?
13. Can you identify some qualities of people who in your view are effective intercultural communicators?
14. What are aspects of effective communication in multicultural situations?
15. What are aspects of ineffective communication in multicultural situations?

Analyses of the interview data revealed the importance of certain other dimensions along with the ones mentioned by Gudykunst. An initial pool of 96 items was initially written for the Communication Effectiveness Scale (CES) on the basis of the interviews with the experts. Eight questions each were drawn up for the seven dimensions of Gudykunst’s AUM theory. There were eight questions each for the additional dimensions of mindfulness, social interactions, group behaviour, empathy and openness. We followed the recommendations of Frey, Botan, and Kreps (2000) and DeVellis (2003) for the formulation and arrangement of items to ensure a logical flow of relevant, straightforward, and nonthreatening closed statements.

**Rating by Experts**
The 96 items were then subjected to rating by a panel of two experts who were holding leadership positions within the IT industry. They were asked to rate each item on conceptual clarity and relevance on a five-point Likert scale. One represented the worst score, and five represented the best score. Any item given a score of less than three by both experts was not retained. Feedback and recommendations from this review were discussed between the experts and the researcher and modifications and revisions of the items were made accordingly. Finally, a total of 84 items were retained for the CES. This list was given to 120 participants for pilot testing to finalize the scale items.

**Item Analysis**
Participants in this phase of scale development, for finalizing the list of items, were 120 managers (96 men and 24 women) from IT companies in the National Capital Region of Delhi (geographically comprising Delhi and 22 districts in the surrounding states of Haryana, Rajasthan and Uttar Pradesh). The sample enabled the researchers to study managers with English as the common workplace language. Participants ranged in age from 24 to 44 years, with a mean age of 26 years. There were 65 managers who had the experience of working in multicultural environments. Of these, 32 had travelled to overseas destinations for short durations (6 months to 1.5 years) and 33 had been in project teams and

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1 Availability of skilled resources, low labor cost, and good international linkage have encouraged leading global organizations such as, Dell, SAP, Accenture, Microsoft, CapGemini, Motorola, Oracle, IBM, Intel, HP, Amdocs and Siemens to set up offices in Delhi and NCR. Well known Indian IT companies like Wipro, Infosys and TCS also have a presence in the region.
interacted with colleagues from other cultures. The other 55 managers did not have any multicultural exposure.

The 84 items were listed in random order, each followed by a 5-point Likert-type scale (1=strongly disagree to 5=strongly agree) with which the respondents rated how much they agreed or disagreed with the item.

In the first analysis, ratings for each of the 84 items were subjected to an independent-samples $t$-test with the alpha level set at .05 to identify those items that distinguished between ‘managers with multicultural exposure’ (n=65) and ‘managers without any multicultural exposure’ (n = 55). The results from the $t$-tests indicated a total of 40 items for which the managers with multicultural exposure scored significantly higher than the managers without any multicultural exposure and these 40 items were identified as the Communication Effectiveness Scale (CES).

**Data Analysis**
The data was analyzed with the help of statistical software. SPSS ver.18 was used to check the reliabilities of the measures through Cronbach’s alpha and perform Exploratory Factor Analysis. AMOS ver. 20 was used to conduct a Confirmatory Factor Analysis and establish convergent and discriminant validity of the instrument.

**Exploratory Factor Analysis**
Using data collected from the 120 participants, the factor structure of the CES was examined by subjecting the 40 items to an exploratory factor analysis. Adopting the maximum likelihood estimation method with varimax rotation and the criterion of eigenvalue greater than 1.00, the exploratory factor analysis results loaded on 4 factors explaining 90.34% of the total variance. As the purpose of the exploratory factor analysis was to establish meaningful factors underlying Communication Effectiveness, the following two criteria were used to identify the preliminary factor structure:
(a) Retain items with a factor loading of .65 or above
(b) Retain factors that have a minimum of 3 items loaded on it

The means, standard deviations, and standardized factor loadings for the 30 items composing the four factors are presented in Table 2.
<table>
<thead>
<tr>
<th>Items / Factors</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>Mean(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travelling overseas on business, I worry about making a good impression</td>
<td>0.728</td>
<td></td>
<td></td>
<td></td>
<td>3.50(0.70)</td>
</tr>
<tr>
<td>Travelling overseas on business, I learn some words and phrases to communicate better</td>
<td>0.762</td>
<td></td>
<td></td>
<td></td>
<td>3.42(0.69)</td>
</tr>
<tr>
<td>Travelling overseas on business, I am anxious about not knowing the language</td>
<td>0.744</td>
<td></td>
<td></td>
<td></td>
<td>3.62(0.67)</td>
</tr>
<tr>
<td>I organize training for team members to prepare for a visit by an overseas business head</td>
<td>0.757</td>
<td></td>
<td></td>
<td></td>
<td>3.55(0.70)</td>
</tr>
<tr>
<td>While going overseas for training, I am not worried about being in an unknown environment</td>
<td>0.757</td>
<td></td>
<td></td>
<td></td>
<td>3.55(0.70)</td>
</tr>
<tr>
<td>I am not nervous about facing questions from foreign buyers</td>
<td>0.744</td>
<td></td>
<td></td>
<td></td>
<td>3.62(0.66)</td>
</tr>
<tr>
<td>I try to understand their gestures when interacting with people from other cultures</td>
<td>0.757</td>
<td></td>
<td></td>
<td></td>
<td>3.55(0.70)</td>
</tr>
<tr>
<td>Before going overseas on a project, I seek information from colleagues who are based there</td>
<td>0.762</td>
<td></td>
<td></td>
<td></td>
<td>3.42(0.69)</td>
</tr>
<tr>
<td>I feel threatened in a new situation when interacting with strangers</td>
<td>0.648</td>
<td></td>
<td></td>
<td></td>
<td>3.47(0.98)</td>
</tr>
<tr>
<td>If a foreign colleague does not understand me, I explain things differently</td>
<td>0.815</td>
<td></td>
<td></td>
<td></td>
<td>3.90(0.90)</td>
</tr>
<tr>
<td>While preparing a training module for employees from different countries, I try to know about their background</td>
<td>0.810</td>
<td></td>
<td></td>
<td></td>
<td>3.91(0.69)</td>
</tr>
<tr>
<td>During an overseas posting, I prefer to live amongst people of my own culture</td>
<td>0.805</td>
<td></td>
<td></td>
<td></td>
<td>3.97(0.69)</td>
</tr>
<tr>
<td>I do not judge them on the basis of my own values when interacting with people from other cultures</td>
<td>0.821</td>
<td></td>
<td></td>
<td></td>
<td>3.97(0.73)</td>
</tr>
<tr>
<td>When working abroad, I like to socialize with Indians after office hours</td>
<td>0.708</td>
<td></td>
<td></td>
<td></td>
<td>3.12(0.69)</td>
</tr>
<tr>
<td>While negotiating with overseas clients, I pay attention to their expressions, gestures and postures</td>
<td>0.757</td>
<td></td>
<td></td>
<td></td>
<td>3.77(0.59)</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>Factor Loadings</td>
<td>Reliability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>---------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>When I interact with multicultural groups I assert my authority to control outcomes</td>
<td>0.817</td>
<td>3.95(0.67)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>When I speak with foreigners, I sometimes change my accent</td>
<td>0.805</td>
<td>3.97(0.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>If I invite foreign colleagues for dinner, I try to find out their food preferences</td>
<td>0.708</td>
<td>3.13(0.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I feel sure of myself when interacting with people from other cultures</td>
<td>0.674</td>
<td>3.47(0.79)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>If I spot any discomfort while explaining a job responsibility to an employee from a different culture, I explain things differently</td>
<td>0.660</td>
<td>3.61(0.74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>During meetings in a multicultural team, I welcome suggestions</td>
<td>0.714</td>
<td>3.50(0.74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>If my multicultural team has to meet a project deadline, I explain the process very thoroughly</td>
<td>0.640</td>
<td>3.13(0.90)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>If my multicultural team members do not agree with my decision about a process, I am willing to accept changes</td>
<td>0.785</td>
<td>3.39(0.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>When sent to an overseas plant acquired by my Company, I do my best to convince the employees there to accept our methods</td>
<td>0.773</td>
<td>3.33(0.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>If members in my multicultural project group do not participate during review meetings, I patiently encourage them to give their views</td>
<td>0.640</td>
<td>3.13(0.90)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>In a multicultural group, I find it easier to trust the judgment of people from my own culture.</td>
<td>0.785</td>
<td>3.39(0.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>When I interact with multicultural groups I change my ideas in order to resolve conflicts</td>
<td>0.773</td>
<td>3.33(0.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>While working with foreigners, I ask questions to get their perspective</td>
<td>0.835</td>
<td>3.97(0.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>In my multicultural team, if someone does not respond as expected, I talk to the person to understand the reason</td>
<td>0.967</td>
<td>3.77(0.74)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When I work with people from other cultures, I am cautious about my nonverbal expressions.

<table>
<thead>
<tr>
<th>Eigen Values</th>
<th>30.38</th>
<th>3.13</th>
<th>1.59</th>
<th>1.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Variance</td>
<td>28.6%</td>
<td>28.1%</td>
<td>26.56%</td>
<td>7.08%</td>
</tr>
<tr>
<td>No. of Items</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

The results indicated 30 items with a factor loading equal to or greater than 0.65, corresponding to four factors, each with 3 or more items. Four factors with an eigenvalue of 1.00 or higher were extracted from the 40 items of communication effectiveness. These factors accounted for 90% of the variance. Thirty items having loadings of at least .65 were included in the scale.

The first factor accounted for 28.6% of the common variance and had an eigenvalue of 30.38. Eight items (10, 13, 18, 21, 28, 35, 38 and 39), were clustered in this factor. These items refer to the manner in which we see ourselves and view our personal and social identity (Weiten, Dunn, & Hammer, 2012). Our self-esteem is the positive or negative feelings we have about ourselves. Personal identities are the major generative mechanisms for interpersonal behaviour, while social identities are the major generative mechanisms for intergroup behaviour. When we perceive strangers to be atypical members of their groups, we do not treat them based on their group memberships and our communication is guided by our personal identities. Strangers are no longer stereotyped, and we interact with them as individuals. A secure self-esteem helps in avoiding biases and decreases our anxiety. This factor was labeled ‘Self-Concept’.

The second factor accounted for 28.1% of the common variance and had an eigenvalue of 3.13. Items 8, 9, 12, 14, 15, 20, 22, 23, 30 and 37 were included in this factor. These items refer to the way we group people into categories that make sense to us. To decrease uncertainty and anxiety in intercultural communication, one needs to cultivate the ability to process complex information about strangers, flexibility of attitude, tolerance of ambiguity, and empathy. Social categorization refers to the way we group people into categories that make sense to us. The more familiar we are with out-groups, the greater is our perceived differentiation of these groups and less is our tendency to treat all members in a similar negative fashion. Though one cannot avoid social categorization, with mindfulness and proper attitude one can avoid stereotyping. Yip (2010) suggests that it is possible to decrease uncertainty and anxiety through contact with local people and by cultivating an interdependent relationship with them. This factor was labeled ‘Reaction to Strangers’.
The third factor accounted for 26.56% of the common variance and had an eigenvalue of 1.59. The nine items included in this factor were 1, 2, 3, 6, 17, 19, 26, 34 and 36. Burleson and Samter (1990) suggest that perceived similarity in referential skills (i.e. the ability to convey information clearly), conversational skills (i.e. the ability to initiate and maintain an enjoyable conversation), and narrative skills (i.e. the ability to entertain through stories and jokes) influence attraction in initial stages of group interactions. Managers who have the motivation to ensure inclusive decision making keeping self-interest at a minimum are able to manage uncertainty and anxiety during group encounters. This factor was labeled ‘Group Interaction’.

The fourth factor accounted for 7.08% of the common variance and had an eigenvalue of 1.04. The three items that fell into this factor were 31, 32 and 33. A minimal level of anxiety and uncertainty is necessary to motivate people to communicate better. Gudykunst also brought in the concept of mindfulness being the way that anxiety and uncertainty can be maintained at optimum levels, when individuals think about their communication and continually work at changing what they do in order to become more effective. Langer (1989) went on to clarify that mindfulness implies being open to new information and recognizing that the other person may have a different perspective than we do. It is the ability to interpret the messages of strangers using their frame of reference rather than our own. The concept of mindfulness is further dealt with rather succinctly by Samovar, Porter and McDaniel (2012). For example, managers of multicultural teams need to keep in mind that though English is spoken all over the world, nuances such as speed of talking, usage of colloquialism or humour may create communication barriers. This factor was labeled ‘Mindfulness’.

The constructs taken into consideration prior to conducting the exploratory factor analysis were the seven identified by Gudykunst, namely, self-concept, motivation, reactions to strangers, social categorization of strangers, situational processes, connections with strangers, and ethical interactions. In addition, five factors, namely mindfulness, social interactions, group behaviour, empathy and openness were also considered when writing up the items for the questionnaire. The results of the exploratory factor analysis indicated that four factors were of significance in the context of Indian managers. Ten items relating to interaction with strangers converged under the factor named as “Reaction to Strangers”. Thus instead of different factors of reactions to strangers, social categorization of strangers, situational processes, and connections with strangers, emergence of one factor relating to strangers occurred in the factor analysis. Openness and flexibility appear to be important dimensions when working in culturally diverse groups. The factor of mindfulness was also found significant in accordance with
conclusions drawn by Gudykunst who brought in this factor in later editions of the AUM theory.

**Testing for Reliability**

To determine the internal consistencies of the entire 30-item CES and for each of the four factors, computation of coefficient alphas was carried out. The results indicated a coefficient alpha of 0.984 for the 30-item CES.

The coefficient alphas for the four factors were as follows:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Self-Concept</td>
<td>.988</td>
</tr>
<tr>
<td>2 Reaction to Strangers</td>
<td>.986</td>
</tr>
<tr>
<td>3 Group Interaction</td>
<td>.986</td>
</tr>
<tr>
<td>4 Mindfulness</td>
<td>.906</td>
</tr>
</tbody>
</table>

**Validation**

Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. It is possible to determine content validity by using a panel of knowledgeable persons who are able to judge how well the measuring instrument meets the standards though there is no numerical way to express the same (Kothari, 2012). For checking the content validity of the CES, the instrument was run through a panel of 5 industry experts who also agreed to give interviews.

These five experts were holding very senior level positions (CEO, Vice President) in IT related companies in Irvine, California which is a major town in the Silicon Valley, a hub of the IT industry. Four of them were Indians and one was an American. There were four males and one female. The profiles of the companies they worked in are given below. The researcher agreed to keep the names of the companies confidential.

<table>
<thead>
<tr>
<th>Position in Company</th>
<th>Gender/Age</th>
<th>Company HQ</th>
<th>Nature of Business</th>
<th>Annual Revenue (2011)</th>
<th>Number of Employees (2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice President</td>
<td>Male / 45</td>
<td>USA</td>
<td>IT Development &amp; Consulting</td>
<td>US $ 25 Billion</td>
<td>71,000</td>
</tr>
<tr>
<td>CEO</td>
<td>Male / 51</td>
<td>USA</td>
<td>IT Consulting</td>
<td>US $ 5</td>
<td>2,500</td>
</tr>
<tr>
<td>Vice President</td>
<td>Gender / Age</td>
<td>Country</td>
<td>Profession</td>
<td>Salary</td>
<td>Billion</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>---------</td>
<td>------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Male / 48</td>
<td>UK</td>
<td>IT Consulting/Audit</td>
<td>US $ 8 Billion</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>Male / 48</td>
<td>India</td>
<td>IT Consulting</td>
<td>US $ 7 Billion</td>
<td>150,000</td>
<td></td>
</tr>
</tbody>
</table>

All these experts had the opportunity of working with Indian managers. Four of them had been to educational institutes in India and then moved to USA for higher studies. They had firsthand experience of the problems of intercultural communication. They also interacted on a regular basis with Indian managers who were in the USA either on short term projects or on permanent positions. The American male who was a Vice President in an Indian company had lived in India for four years and also worked with multicultural teams having Indian managers.

Each was asked a set of questions. The answers were content analyzed and served to reinforce the drawing up of the initial pool of items for the instrument. The experts also reviewed the final 30 items and commented on the same.

On the basis of the learning from the expert panel responses, the number of items was lowered to 24. The final scale had the four factors with reduced number of items for three factors and one item increased for the last factor.

1. Self-Concept    7 items (1 item deleted)
2. Reaction to Strangers    7 items (3 items deleted)
3. Group Interaction    6 items (3 items deleted)
4. Mindfulness    4 items (one item added)

**Testing for Reliability of Final Questionnaire**
The final Questionnaire was once again given to a new sample of 130 (102 male and 28 female) from IT and ITeS companies in the National Capital Region of Delhi. Each item in the final CES was followed by a 5-point Likert-type scale (1 = strongly disagree; 1 = strongly agree) which the respondents rated.

Computation of coefficient alphas was done for the final 24 item CES and for the four latent factors underlying the CES. Results indicated a coefficient alpha of 0.88 for the entire CES. This coefficient is consistent with the coefficient alpha (.984) obtained with data from Study 1 and within acceptable parameters. The coefficient alphas for the latent factors were as follows:
Table 5: Test for Reliability

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Self-Concept</td>
<td>.743</td>
</tr>
<tr>
<td>2 Reaction to Strangers</td>
<td>.702</td>
</tr>
<tr>
<td>3 Group Interaction</td>
<td>.740</td>
</tr>
<tr>
<td>4 Mindfulness</td>
<td>.768</td>
</tr>
</tbody>
</table>

Though the Cronbach’s alpha values are lower in the 24 item CES, they are still within acceptable parameters.

**Confirmatory Factor Analysis**

AMOS ver. 20 was used to conduct a Confirmatory Factor Analysis to establish convergent and discriminant validity of the scale. The conceptual model used for confirmatory factor analysis is given below.

![Communication Effectiveness Model](image)

**Fig.1: Communication Effectiveness Model**

**Sample.** The data were collected from companies in the IT and ITes sectors, located in the National Capital Region. Employees in these sectors have greater opportunities of multicultural exposure. This may occur as

1) they are often based away from the home country while working on projects;
b) they may be based in the home country but be part of a team with members from other countries;
c) they may also be part of project teams which have members based at locations across the globe.

Also employees at all levels of management in this sector have the opportunity of travelling and interacting with multicultural teams.

Data was collected from eight companies, of which 5 were indigenous and 3 were MNCs. The sample consisted of managers interacting with culturally diverse teammates over some length of time since, every interaction is crucial to develop bonding with the colleagues. The following four criteria were employed while drawing the samples:

1. Employees working in multicultural teams were preferred.
2. Employees interacting with multicultural teams were preferred.
3. Employees with minimum of 4 years work experience were preferred.
4. Preference was for employees who were at least Project Managers in their respective companies.

The sample comprised 406 managers, of whom 313 were male and 93 were female. 294 managers were in the 25 to 30 age group, 105 managers in the 31 to 55 age group and 7 in the 56 to 60 age group. (M=29.24 years; SD=6.94 years). All of the managers had an engineering degree. Some of them had completed MBA and some were working towards a business degree. 367 managers were based in India and 39 were based outside India. 349 managers had multicultural exposure while 57 of them had no exposure.

Procedure. Respondents were approached through contact of the authors who carried out administration of the survey. Survey forms were floated which comprised four sections dealing with indicators of communication effectiveness. The final section dealt with demographics of the respondents.

450, middle to senior level managers, were selected randomly from a pool of executives meeting the criteria given above. The questionnaires were sent through individual e-mail. Respondents were requested to return the completed questionnaires within a month and assured complete anonymity of responses. At the end of the stipulated period, 406 responses could be collected. A further two weeks were given to allow the return of more responses. However, none came back and thus we stopped the data collection phase. The data collection process yielded 406 usable data which was then collated and soft copy of the same was placed in a file in SPSS version 18.
Measures. The following 4 indicator variables were used to measure communication effectiveness – self-concept (7 items), reaction to strangers (7 items), group interaction (6 items), and mindfulness (4 items). Participants responded to all items for all the measures on a scale of 1 to 5 where 1 = strongly disagree and 5 = strongly agree.

Table 6: Model Fit Indices

<table>
<thead>
<tr>
<th>Model</th>
<th>CMIN/df</th>
<th>GFI</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>NFI</th>
<th>RFI</th>
<th>IFI</th>
<th>TLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Factor CE Model</td>
<td>2.333</td>
<td>.994</td>
<td>.972</td>
<td>.057</td>
<td>.994</td>
<td>.987</td>
<td>.997</td>
<td>.990</td>
</tr>
</tbody>
</table>

The selection of indices for the study was based on the recommendations of Hu and Bentler (1995) and Hair, Black, Babin & Anderson (2010). Following the suggestion of McIntosh (2007), the first overall test of model fit selected was the chi-square test. As the chi-square test is extremely sensitive to sample size (Bentler 1990), the chi-square normalized by degrees of freedom (\( \chi^2/df \)) was used. An acceptable ratio for \( \chi^2/df \) value should be less than 3.0 (Hair et al. 2006). According to Hair et al. (2006), the recommended fit values for GFI and AGFI are .0.90. Likewise, while an RMSEA of 0.0 indicates perfect fit, values that are less than 0.06 are considered as good fits.

Table 7: Results related to Gender

<table>
<thead>
<tr>
<th></th>
<th>Male (N=313)</th>
<th>Female (N=93)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>4.08</td>
<td>4.09</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>t=-.472</td>
<td>t=-.578</td>
</tr>
</tbody>
</table>

Discussion and Conclusion

For the purpose of this study, ‘communication effectiveness’ was defined as, the ability of managers to have meaningful verbal and nonverbal goal-oriented interactions in culturally diverse environments so as to overcome anxiety and uncertainty. This was empirically confirmed by the results obtained from the final survey of 406 managers working in Indian IT industry.

Managers aspiring to team leadership positions need to communicate using a combination of skills, knowledge and attitude which fosters understanding and trust. Blunders in international operations are committed by global managers who ignore the importance of cultural sensitivity (Ricks, 1983; Chen, Gu & Tubbs, 2001). For instance, efficiency oriented American managers are focused
on closing deals in the shortest possible time and with iron clad contracts. Indian or Chinese managers whom they deal with are completely put off by their unwillingness to invest time for long term relationship building. Lutz (2008) posits that leaders need to communicate using the style found to be most effective for shaping the reality of the organization. This is possible when they are attentive towards the situation of the other persons in the organization and are able to grasp their perspectives.

The primary contribution of this study to management practice is the development of an instrument which can be used to assess communication effectiveness of Indian managers. Various aspects such as interaction sensitivity, interpersonal respect, willingness to communicate have been considered as measures of intercultural communication competence. The results of this study accentuate the importance of anxiety and uncertainty management. Tested on a sample of Indian managers, the instrument developed by the researchers has shown acceptable results for reliability and validity.

Analysis of the data collected for conducting confirmatory factor analysis has provided some further interesting insights. Drawing on the AUM theory, the scale thus developed, measured communication effectiveness against four dimensions, one of which was self-concept. Self-concept refers to the manner in which we view ourselves, as higher the level of confidence in ourselves, the lower is the anxiety level in the midst of strangers. An effective business leader first and foremost has knowledge of one’s self. Self-knowledge brings clarity of understanding, perception and focus. This clarity combined with the right attitude is what sets apart the individual and draws follower commitment. An awareness of the self enables the leader to see the big picture, seize the right opportunities at appropriate moments and influence action leading to desired change. Analysis of data showed that Indian managers also consider the factor of Self-Concept (mean = 4.12 in a scale of 5, range 2.71 to 4.86) to be an important factor of the construct of communication effectiveness.

The comparative mean score of Group Interaction was 3.73 (range 2.43 to 4.33) which is supported by the earlier findings of Pearson and Chatterjee (1999) who concluded that expectations and priorities of Indian managers have undergone a change. Though India is believed to be a collectivist society, the globalized business environment is changing the mind set of Indian managers who exhibit nuances of individualism and are trying to shake out of the age old traditions and “who you know” syndrome.
Gudykunst’s description of mindfulness is similar to the conceptualization of “conscious competence” in Howell and Fleischman (1982)’s model which states that in order to be more effective one needs to continually think about one’s communication and work at it. Though the mean score of “mindfulness” was 4.17 the range was 1.7 to 4.2. The item which read as: “When I work with people from other cultures, I am cautious about my nonverbal expressions” showed the greatest variability in responses.

Griffin (2006) had the opportunity to experience the application of each of the two dimensions of anxiety and uncertainty when he spent a month with students and teachers at Mickleston College at a remote island in the Philippines. Gudykunst and Nishida (1999) examined the effect of anxiety and uncertainty on perceived effectiveness of communication in two relationships (strangers and close friends) and two cultures (United States and Japan). They concluded that a moderate, negative relationship existed between anxiety and attributional confidence (the inverse of uncertainty) across relationships and cultures. Support for AUM theory is also provided by the empirical study of Duronto, Nishida and Nakayama (2005) who conclude that anxiety and uncertainty are good predictors of avoidance in interpersonal and intercultural communication.

In addition to establishing the relevance of the Anxiety/Uncertainty Management theory, this research also confirms that four (namely, Self-Concept, Reaction to Strangers, Group Interaction and Mindfulness) out of the eight causal factors identified by Gudykunst were of significance in the context of Indian managers.

As mentioned earlier, ten items relating to interaction with strangers have converged under the factor named as “Reaction to Strangers”. Instead of different factors of reactions to strangers, social categorization of strangers, situational processes, and connections with strangers, emergence of one factor relating to strangers has occurred in the factor analysis. This construct deals with one’s reaction towards strangers or the manner in which one is able to process information about strangers and adopt flexible and empathic behaviour towards them.

The dimension of group interaction refers to a team leader rising above ethnocentrism and ensuring inclusiveness to get the performance from all team members. Finally, the global manager must adhere to ethics and not have recourse to short term methods for quick returns. Mindfulness, was originally conceptualized by Langer, and was added in by Gudykunst in later versions of the theory.
A further insight gained from the data analysis was with respect to communication effectiveness of women managers. It is very common to ascribe stereotypical characteristics to women, thereby increasing the challenges faced by them for success in leadership positions. According to Eagly and Karau (2002), biased evaluations create the role incongruity between women and the perceived needs of leadership. Stereotypical associations of communal qualities (e.g. compassionate, people-oriented) as opposed to agentic qualities (e.g. assertive, competitive) are made with respect to women (Eagly & Carli, 2007). In a study of women managers in the UK, Oshagbemi and Gill (2003), found that on most aspects of leadership women and men were similar. Mean score of Communication Effectiveness indicate a score of 4.08 for male managers and 4.09 for female managers. The t-test also failed to reveal a statistically significant difference between male and female managers. Further testing of the scale may go a long way towards enabling women in their quest for leadership positions. Training programs must begin with a pre-assessment of the individual’s strengths and weaknesses. This scale provides the tools for assessment of the important dimension of communication effectiveness in cross cultural environment.

While talking about five team competencies, Stevens and Campion (1994) identified communication as one of the most important competencies required by managers to effectively lead multicultural teams. Information gleaned from the application of the communication effectiveness scale, may be used to increase teamwork and promote better interpersonal relationships for leadership and organizational success in the global environment.

India is now an emerging economy and several Indian companies are either acquiring companies across borders or setting up global operations away from home. Moreover, India is the premier location for off shoring activities (McKinsey & Company 2005) as U.S.-based IT software and service firms hold their largest pool of foreign IT professionals in India. Organizations use the primary mechanism of selection (McCall & Hollenbeck, 2002) in order to ensure that the right personnel are placed in the right positions. Selection for global assignments has been predominantly based upon technical competence and job knowledge. This study provides evidence that inclusion of an assessment of communication effectiveness should be part of the selection process for global assignments. The study provides the tools for assessment and appropriate interventions may be provided once the gaps are identified.

**Limitation**

The limitation of drawing samples from IT and ITes related sectors exist. Paucity of time and resources did not allow coverage of more sectors. It cannot be
determined from this study whether the results would be the same if one looks at different sectors like manufacturing, tourism or services. Though the reliability and validity of the scale have been established, further testing across sectors is desirable and would enable greater generalizations of the results.

The self-report scale relies on the fidelity of the participants. Conclusions drawn from a 360 degree kind of reporting including assessment from multiple sources including peers, subordinates, and superiors could perhaps be more robust.

Though there is continued debate about the advantages/disadvantages of performance-based data versus self-reported data in gathering such information, there is empirical evidence to suggest that people are capable of reflecting on their communication behavior to provide the information that self-reports are used for (Riggio & Riggio, 2004). However, a major shortcoming of past studies is that often participants who have little experience in intercultural situations are asked for self-reports of behavioral choices in hypothetical intercultural situations. This shortcoming has been taken care of to a certain extent by selecting participants who are often engaged in intercultural interactions.

Future Research
Future researchers may like to expand the scope of the current study by including research participants from different industry segments. By including participants from other sectors such as automobile, pharmaceuticals, banking, it would be possible to gain better understanding of the impact of communication effectiveness. This would enable greater generalizations of the results.

An extended longitudinal study can be conducted to check if communication effectiveness increases with greater international exposure.

Researchers could also increase the robustness of the study by including peer group feedback. This would lend more authenticity to the results.
References


