The role of social environment and personality: Validation of antecedents of ıntercultural communication competence and its effects on customer satisfaction

Ali Ihtiyar iD

Zaman University, Cambodia

Corresponding author:
aihtiyar@zamanuniversity.edu.kh

Abstract

The article aims to better understand the impact of intercultural communication, social environment and personality on customer satisfaction and loyalty in grocery retailing. In this endeavour, the study illustrates the unique context of intercultural communication, to highlight several improvements in the literature, and to encourage the advancement of the intercultural communication in the literature. To initiate the research, a survey approach was taken. 681 questionnaires were returned out of 1100 that were distributed within selected grocery retailers in Klang Valley, Malaysia. The measurement of the constructs and their interrelationships are examined based on partial least square-structural equation modelling (PLS-SEM). The findings validate the proposed framework with statistically significant relationships among all constructs. Furthermore, it exposes additional insights into some practical and conceptual solutions for addressing the intercultural communication of culturally diverse encounters in the Malaysian grocery retail industry. These contributions postulate an impetus for future research in various service settings. Based on the theories, the study assesses the role of the social environment of grocery retail consumers and their personalities on intercultural communication competence (ICC) and its impact on inter-role congruence and interaction comfort. It is anticipated that by filling this knowledge gap, the research will assist in strengthening retail communication strategies, which require intercultural communication adjustments in a multicultural business environment. The ICC is expected to improve the retail industry competitiveness when it positively influences inter-role congruence and interaction comfort among customers.

Keywords: Social environment, intercultural communication, personality, customer satisfaction, retailing, mediation, and PLS-SEM.

Introduction

Culture influences the priorities customers place on certain activities, consuming features, and perceptions of services and/or products (Polsa et al., 2013). Therefore, understanding the cultural differences of culturally diverse customers is an essential outline for understanding customer behaviour in a multicultural marketing context. Understanding themes and concepts based on a multicultural perspective has gained the attention of marketing researchers as a means to explain the attractive features, price perceptions and service satisfaction among customers (Huang et al., 2016; Ihtiyar & Ahmad, 2015; Polsa et al., 2013).

The significance of service industries has increased expressively within the past decades, particularly among industrialised countries. During the period of development, new challenges for service providers have arisen due, in part, by the varying demands of culturally diverse customers. Thus, international service providers should create an efficient, innovative, competitive and steady marketing orientation for national and/or international markets (Ihtiyar, 2018). Furthermore, driven by the recent growth of internationalisation and the mobilisation of services, a number of studies have tested and investigated relationships between culture and customer satisfaction (Kuo et al., 2009), purchase behaviour (Souiden & Pons, 2009), loyalty (Omar & Musa, 2011), and interaction of service encounters (Sharma et al., 2012). The rationale of these studies within the context of culture is understanding, analysing, and improving the comprehensive solutions for service settings in multicultural societies (Matos and Leis, 2013). Furthermore, the cognitive inferences of the numerous implementations in practical and/or theoretical fields present culture as a significant and remarkable determinant in the marketing context (Wang and Mattila, 2010; Souiden and Pons, 2009), leading scholars or marketers not to disregard the influence of intercultural issues on customer behaviour.

Cultural diversity in a business discipline is becoming the most popular subject among diversified Asian societies (Awang-Rozaimie et al., 2011). Asian culture is one of the distinctive samples of a multicultural atmosphere that involves favourable intercultural communication competence and understanding in sustaining a harmonious cross-cultural relationship (Awang-Rozaimie et al., 2011). Among the Asian countries, the exceptional characteristic of Malaysia is its exceedingly variegated ethnic mix rendering, and it is a country with a multicultural or multiracial peculiarity with a greater need for intercultural understanding (Ihtiyar, 2017). Regarding the diversified population profile of Malaysia, in contrast to other countries such as Japan, South Korea, and China in Asia, Malaysia is identified as a multiracial/multicultural and multi-religious country with a greater need for intercultural understanding regardless of whether the operative marketers remain local or moves global (Ihtiyar & Ahmad, 2016).

Malaysia presents an enormously multicultural and combined ethnic structure of three dominant groups with the percentage of Malays at 50.35%, Chinese at 22.21% and Indians at 6.67%

(Statistics Department of Malaysia, 2013). Due to the cultural discrepancies, there is a clear deficiency of behaviour homogeneity where the nature of Malaysia's domestic market is highly categorised by ethnically segmented customers (Ihtiyar & Ahmad, 2015).

Earlier studies on Malaysian customers' influence on purchase decisions explored ethnicity as a meaningful predictor of shopping decisions (Butt and Run, 2012). It is, therefore, significant for academicians and practitioners to identify and understand cultural individuality to deliver value to a specific segment (Ihtiyar, 2018). Besides other contexts in marketing, multiculturalism has great significance and consistent application in the Malaysian society. However, there is limited consideration on the subject while empirical studies are marginal, particularly with regards to intercultural communication competence's efficiency in general, especially for ethnically different customers.

1. Literature review

An Integrated Framework

The proposed conceptual framework for analysing customer satisfaction with the antecedents of intercultural communication is presented in Figure 1. The framework incorporates and synthesises research within an overall model based on role theory, interdependence theory and cognitive consistency theory. The model concentrates on the customer perceptions and whether the proposed dimensions affect their perception positively or negatively. Furthermore, in the model, social environment (SE), personality (MP), intercultural communication competence (ICC), interaction comfort (IAC), interrole congruence (IRC) and perceived cultural distance (PCD) are assumed constructs of intercultural communication, and customer satisfaction (CS) and loyalty (L) is contemplated as a consequence of customers' shopping experience as highlighted in Oliver (1981).

Moreover, the study was conducted in the context of grocery retail industry, whereby numerous studies related to retailing in Malaysia have examined various topics in the retailing context in Malaysia. In recent years, grocery retailing in Malaysia has experienced rapid growth (Mohammed et al., 2015). Focusing on customer satisfaction has become a major goal in retailing, particularly in grocery retail, and thus, a complete understanding of its antecedents is essential for retailers and practitioners (Ihtiyar & Ahmad, 2015; Soong & Ting, 2014;). Although there are various studies on interrelationships of customer satisfaction with product categories, industry players, pricing, store atmosphere and so on, however limited studies have investigated interrelationship of intercultural communication (with antecedents and consequences) and customer satisfaction within the grocery retail in Malaysian market (Rizal et al., 2015; Soong and Ting, 2014; Awang. 2012).

Moreover, recent studies have called for attachment of intercultural communication in different service settings and markets (Tam et al., 2014; Sharma et al., 2012). The majority of the studies that investigate the Malaysian context are related to ethnicity (domestic perspective) (Rizal et al., 2015), sociology of religion (Ismail, 2015), communication (Mulyana & Zubair, 2015), public-

relation (Hashim and Mahpuz, 2011) and sociology of culture (Awang, 2012). They suggested including additional variables in their presented framework that may develop the understanding of intercultural communication in the Malaysian context. However, a careful review of the literature indicated that empirical studies examining emotional, cognitive, and behavioural factors of intercultural communication simultaneously are still limited. It is, therefore, significant for academicians and practitioners to identify and understand the impact of intercultural communication on customer satisfaction to deliver value to a specific segment (Sharma et al., 2012).

Another potential strength of the study lies in its capability to recommend approaches to reduce communication problems and to increase awareness among intercultural service encounters who possess dissimilar languages, ethnic beliefs, religious, values, norms and cultural backgrounds. The competencies here could include knowing the values of the different societies, their religion, ethnic beliefs, culture, language and practices in culture, as well as their verbal and nonverbal communication. This study will make recommendations for managerial, policy maker and practitioner level to enhance the intercultural service encounter's communication skills effectively. This is particularly significant for retailers, which consider the service encounters have different cultural backgrounds.

Considering these gaps, this study contemplates social environment (SE), multicultural personality (MP) as an antecedent of intercultural communication competence (ICC), and interaction comfort (IAC), customer satisfaction (CS), and loyalty as the consequence to examine integrated view of intercultural communication. Accordingly, a comprehensive framework is established, and it is contemplated as a momentum point to better understand the intercultural communication of intercultural service encounters in Malaysian retailing industry.

2. Exploring theoretical background

This review of literature will focus on the theoretical background of the research, which focuses on role theory, interdependence theory and cognitive consistency theory. It will also explain the research determinants of the proposed research framework by understanding its embedded theory and past literature. Then, it will suggest the research propositions that explain the interrelationships between the determinants.

Role Theory

Role theory was initially promoted by Biddle (1979) and later by Solomon et al. (1985) to posit that people interact in socially defined roles, which determine expectations via the concept of information asymmetry. It is 'a science concerned with the study of behaviours that are characteristic of persons within contexts and with processes that produce, explain or are affected by these behaviours' (Biddle, 1979). In accordance with this definition, social cohesions and environments affect individuals' personality and individuality as an integrative model of behaviour (Solomon et al., 1985). Therefore, the concentration of the theory among marketers is

essentially on the recognition of interaction of intercultural service encounters (ISE) on anticipated customer behaviours.

A significant topic in role theory recognises the significance of interpersonal (person-to-person) interaction in intercultural contexts and its overall influence on primary marketing outcomes such as the maximisation of customer satisfaction and loyalty (Sharma et al., 2012). Person-to-person interaction is becoming a crucial indicator to decrease dissatisfaction and create powerful strategies for many pure services or mixed products and services (Ihtiyar et al., 2015; Sharma et al., 2012; Paswan & Ganesh, 2005). To an extent, all employees involved in customer contact are considered service providers who represent the company to explain the product, promote it and to gain direct feedback from customers (Solomon et al., 1985). However, although the role of employees in interaction is significant, the interpersonal interaction is not defined as linear. Instead, it is a reciprocal and interactive experience among the service encounters.

Interdependence Theory

The perspective of interdependence theory is established on the logical analysis of the structure of interpersonal interactions (Sharma et al., 2012; Paswan & Ganesh, 2005). The theory implies a logical and explicable process to better understand specific situations, problems, motivations and opportunities via the similarity-attraction paradigm and concept of transformation. The theory hypothesises that the ability of a person to interact in a social environment is partly due to the anticipation of the social reward or social comforts (Rusbult & Van Lange 2003).

he interdependence theory also identifies that the most important characteristics of interpersonal situations are not just from intrapersonal perspectives but also through the interpersonal process or a comprehensive analysis of situation structure (Rusbult and Lange, 2008). A few studies on the theory resulted in interesting findings. For example, an individual in a multicultural team who has a foreign accent is frequently more culturally distant than another who can speak the official language fluently (Hill & Tombs, 2011). Another finding from the study that indicates that the linguistic ability of the employee in a service setting (i.e. American, British and Indian accent) influences the customers' perceptions and interpretations during the service experience in the call centre setting (Wang et al., 2009). Thus, clarifying, describing and decoding the interaction among the encounters is a crucial process to understand the consequences and possible outcomes of encounters better.

Cognitive Consistency Theory

An additional theory for explaining perspectives and to predict differences of intercultural service encounters (ISEs) in terms of intercultural communication conflicts is cognitive consistency theory. The theory assumes that behaviours or attitudes of individuals change when there are differences between expected and perceived situations, particularly when outcomes are significant to them (Pekerti & Thomas, 2015). In accordance with the theory, individuals who are comfortable with differences between realised situations do not attempt to change their opinions or behaviours in others. These behaviours are entitled inconsistency-support behaviours. Contrary to this

definition, individuals who are not comfortable attempt to change opinions or behaviours. These behaviours are entitled inconsistency-reduction behaviours (Iwao, 1997; Kelman and Baron, 1968).

In short, intentionally or unintentionally obtained information from the social environment is significant for encounters. Therefore, personality is linked to cognitive consistency orientation and communication behaviour (Vater & Schröder-Abé, 2015).

3. Socio-cultural environment

The environment is a major antecedent for explaining the consumption experiences in various businesses settings (Uhrich and Benkenstein, 2012). Previous studies in marketing literature, conceptually or empirically, have paid considerable attention to environment (as micro indicator) such as; impact of store environment on service setting (Jeong et al., 2012), social and physical atmospheric effects in hedonic service consumption (Uhrich and Benkenstein, 2012); the relationship of environmental externalities and consumption preferences (Jim and Chen, 2007); the relationship of physical environment and customer behaviour (Tombs, and McColl-Kennedy, 2003) and the role of environment in marketing services (Baker, 1986).

Social and cultural environment affects customers' decisions (Kotler and Keller 2012). In this study, social environment, as contemplated macro indicator, is a compromised of four main factors that are namely socio-economic status (SE7, SE8 and SE9), socio-education background (SE4, SE5 and SE6), socio-cultural environment (SE1, SE2 and SE3) and national socio-policy (SE10, SE11 and SE12). Socio economic deals with the impacts economic improvement has on social milieu. Socio-education assesses educational background that helps people to fully integrate in intercultural society. Socio cultural environment deals with set of interaction beliefs and practices among the people within a population while socio-policy is an assessment on national policy that deals with social integration and cohesion. The present study would assist to explain how individuals' social environment affects their personality, competence on intercultural communication and interaction comforts.

Hypothesis for socio-cultural environment

H1. Social environment determines interaction comfort.
H2. Social environment determines intercultural communication competence.
H3. Social environment determines multicultural personality.

3.1. Personality

Theories of personality concentrate on the dimensions of human characteristics that can be categorised under cognitive and affective patterns such as thoughts and emotions for explaining the behavioural aspects of human beings (Ihtiyar and Ahmad, 2015; Boag and Tiliopoulos, 2011). According to traditional definitions of personality, it is a self-motivated psychophysical system that creates an individual's characteristic patterns of behaviour, thoughts, and feelings and these patterns give direction to the individual's life (Boag and Tiliopoulos, 2011). The popular trait psychology approach materialised a theory called the Five Factor Model with determinants of neuroticism, extraversion, openness, agreeableness and conscientiousness (Hofstede and McCrae, 2004). Although the model has been researched from numerous scholars in various fields, there are debates concerning its limitations in explaining 'how culture shapes personality', 'how personality traits and culture interact to shape the behaviour of individuals and social groups' (Hofstede and McCrae, 2004) and 'what extent do the culture and sub-cultures in which people are immersed shape their personality?' (Dumont, 2010). Contrary to the conventional perspective on personality and the subsequent criticism, the study suggests understanding personality through cultural indicators.

In addition to understand personality through cultural indicators, personality has a significant role on to explain past ad previous experiences and communication process of individuals (Lee and Ciftci, 2014; Harrison-Walker, 2012) and strengthened (intercultural) communication process reduces perceived risk, increases satisfaction and improves relational exchange (Vater and Schröder-Abé, 2015; Lee and Ciftci, 2014; Ihtiyar and Ahmad, 2014; Harrison, 2012; Sharma et al., 2012). Therefore, considering to measure the interrelationship of customers' personality traits (with cultural indicators) and (intercultural) communication process contributes to better understand and predict the customers' behaviours in a multicultural service environment (Castillo, 2017). In other words, in order to increase positive experiences of customers in the service environment, service providers may consider customers' personalities and communication process (Castillo, 2017; Vater and Schröder-Abé, 2015; Lee and Ciftci, 2014; Harrison, 2012; Sharma et al., 2012)

In the present study, trait theory of personality within the multicultural personality perspective will assist in explaining the how individuals' personality affects their perceptions on cultural distance, ICC and IAC.

Hypothesis for Multicultural Personality:
  H4. Multicultural personality determines interaction comfort.
  H5. Multicultural personality determines intercultural communication competence.
  H6. Multicultural personality determines perceived cultural distance.

3.2. Intercultural communication

Interaction Comfort

Earlier studies in social psychology, sociology of culture and customer behaviour literature have provided several validated reasons of increasing customer comfort during service encounters.

Strengthened interaction comfort reduces the perceived risk, increases confidence, satisfaction and improves relational exchange (Sharma et al., 2012; Lloyd and Luk, 2011; Paswan and Ganesh, 2005).

As stated in the interdependence theory (Surprenant et al., 1987), each part of the interaction has an impact on another part because the behaviour of the second part is influenced by the outcomes of the first part. Interaction comfort is defined as the likeliness individuals share common norms, values, languages and other factors related to culture and this will improve predictability of individual's expectations and behaviour, decrease uncertainty and create effective communication. On the other spectrum, perceived dissimilarities in behavioural values or norms such as in language, religion and so on will lead to a sense of discomfort (Ihtiyar and Ahmad, 2015). In this study, interaction comfort is a critical dimension for mirroring the impact of ICC and IRC in the overall research framework.

Inter-role Congruence

A favourable interaction outcome depends on role clarity, and those each other's roles and perceptions during communication should be understood (Solomon et al., 1985). Unfortunately, even when ISEs transpire among between people of similar cultures, they may have different perceptions about each other, or they may not always be able to act within their expected roles in interaction (Huang et al., 2016). The inter-role congruence would be more complicated in intercultural interactions where participants must consider the different roles among retailers and consumers.

According to role theory (Solomon et al., 1985), the level of conflict and misunderstanding that are caused by the role perception (the degree of understanding and agreement between both sides on each other's role in an interaction) may involve breaking the communication between both sides, and it may lead to a dissatisfied shopping or service experience for customers.

Intercultural Communication Competence

Intercultural communication competence (ICC) is the aptitude to communicate effectively and correctly with people from culturally diverse social environments (Messner and Schäfer, 2012). It deals with the capability to think positively, discriminate the differences, internalise various cultural settings, manage the experiences properly and build effective communication with individuals from different cultures (Ihtiyar and Ahmad, 2016; Samovar et al., 2014). ICC influences cross-cultural interactions (Sharma et al., 2012) where people with stronger ICC have greater propensity to learn foreign languages and norms or values of other culture (Thomas and Peterson, 2014). Furthermore, revenue contribution, service concentration, interpersonal skills, social and job satisfaction are influenced by intercultural sensitivity (Sizoo et al., 2005). However, most of the encounter's expectations and reactions have been examined without ICC (Ihtiyar and Ahmad, 2015).

Individuals with lower ICC are likely to feel less comfortable and have weak inter-role congruence in intercultural encounters compared to those with higher levels of ICC (Friedman and Antal, 2005). Those with higher ICC exhibit more empathy and respect for individuals from various cultures, respond to curious circumstances and behaviours in a non-judgemental way without showing visible or perceivable discomfort and enthusiastically use their knowledge and experience to predict various expectations in numerous situations (Samovar et al., 2014). Individuals with higher ICC may not only be more aware of cross-cultural differences in service roles and

perceptions, but they are also more likely to agree with these differences. Furthermore, they have greater experience and knowledge about other cultures and can use this experience and knowledge efficiently with people from other cultures, compared to those with lower ICC (Thomas and Peterson, 2014). Hence, higher ICC may also contribute to reducing discomfort and uncertainty associated with ISEs. Thus, the study proposes and formulates the relationships among these dimensions that are namely intercultural communication competence, interaction comfort, interrole congruence and customer satisfaction.

Hypotheses for Intercultural Communication:

H7. Intercultural communication competence determines customer satisfaction.
H8. Intercultural communication competence determines interaction comfort.
H9. Intercultural communication competence determines interrole congruence.
H10. Inter-role congruence determines customer satisfaction.
H11. Inter-role congruence determines interaction comfort.
H14. Interaction comfort determines customer satisfaction.

3.3. Perceived cultural distance

Dissimilarities or familiarities about the cultural background of culturally diverse customers indicate significant changes in their expectations and/or perceptions of service or goods and shopping experiences (Sharma et al. 2012). In the literature of sociology, social psychology, positive psychology and associated fields, dissimilarities or familiarities of individuals have been investigated under cultural distance. Most studies utilise cultural distance using various indexes. For instance, Hofstede's cultural dimensions are uncertainty, avoidance, individualism-collectivism, masculinity-femininity and power distance (Sharma et al., 2012). Instead of this general approach, the present study will consider applying Sharma et al.'s (2012) method entitled *"perceived cultural distance"* to measure overall differentiation among individuals from different cultures.

Perceived cultural distance (PCD) measures 'an individual difference of the perceived discrepancies between social and physical aspects of home and host culture environments' (Sharma et al., 2012). According to this definition, individuals' personality and their social environment may influence perceived cultural distance. Although Sharma et al.'s (2012) model, which is assumed as a core model for the present study, did not reflect how personality influenced perceived cultural distance. The present study seeks to fill this gap by integrating personality into the current model.

In addition to Sharma et al. (2012) and Suanet and Van de Vijver (2009), the present study assumes that social environment and personality have a significant impact on perceived cultural distance.

Hypotheses for Perceived Cultural Distance

H12. Perceived cultural distance determines interaction comfort.

H13. Perceived cultural distance determines inter-role congruence.

3.4. Customer satisfaction

Customer satisfaction is one of the most examined topics in the marketing literature. A review reveals that the interrelationship among service evaluation, loyalty and topics related to culture has become a competitive power for intercultural marketers (Vesel and Zabkar, 2009). For instance, CS has been found to reduce costs for attracting new customers and dealing with poor quality, defects and complaints (Ihtiyar, 2018; Michel et al., 2008). This study concentrates on conceptual and managerial thinking and articulates these linkages and assumes that ICC, IAC and IRC may affect CS, specifically the buying experience of customers in a multicultural atmosphere.

Hypothesis for Shopping Experience:

H15. Customer satisfaction determines loyalty.

# 4. Research framework and methodology

4.1. Research Framework

The study proposes a research framework and research design to empirically examine the interactions among the determinants discussed above based on the theories proposed in Figure 1.

In designing this research, the nature of the research problems and the objectives of the study, which are translated from the conceptual framework, served as a basis to indicate the type of design to be applied. This research tests whether the proposed model can conceptualise and explain the endogenous and exogenous variables related to ICC in a multicultural service environment. To that end, a survey was designed based on the intercultural sensitivity scale for measuring intercultural communication competence (ICC) by Chen and Starosta (2000), the multicultural personality scale by Van Oudenhoven and Van der Zee (2002), and items derived from Sharma et al. (2012), Zeithaml et. al. (1996), Phau and Ferguson (2013), Huddleston et al. (2009), Shen et al (2011), Wang et al (2009), Sinha (2010), Spanierman et al (2010), Parker et al (2012) and Kraay et al (2003).

Figure 1 Research Framework
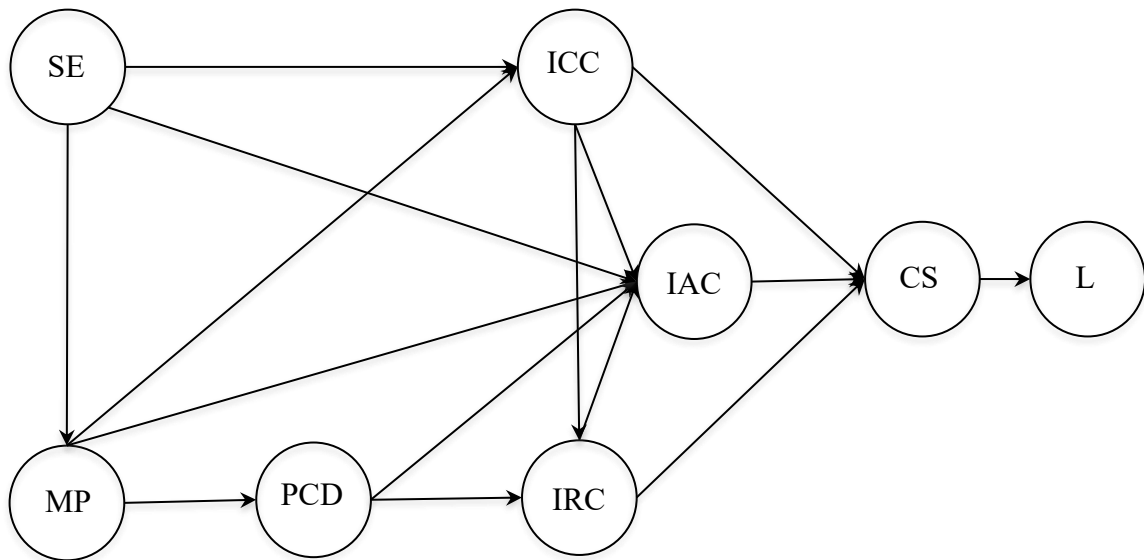
4.2. Research Methodology

To provide an empirical assessment of the proposed research model shown in Figure 1, a quantitative technique was performed using the cross-sectional data collection approach. For the purpose of this study, customers who were from Klang Valley were targeted to test and examine the model statistically. Due to the time limitations, reduction of cost, increased ease of distribution, improved data accuracy and difficulties to collect the data, both online and paper-pencil questionnaires were used to collect the primary data from the target population (Kays et al., 2012). The questionnaires were categorised into two sections. The first part of the questionnaire intends to obtain the information relating to the demographic profile of the respondents, such as age, gender, ethnicity, education, income and purchasing frequency (Table 1). The second section aims to collect the information regarding the research construct relationships. Additionally, to increase the readability of the questionnaire and reduce the wording errors, a pre-test (N 43) and pilot test (N 153) was undertaken.

Following the successful results of the pre-test and pilot test, the study proceeded with the actual data collection. In June 2014, questionnaires were distributed to potential respondents in Malaysia. By the end of September 2014, 1100 questionnaire were distributed, and 707 responded questionnaires were received. Of these, 26 were not completed and thus rejected for this study. The study gathered 681 completed questionnaires, which are appropriate for further assessments.

Table 1 Frequency Distribution of Demographic Indicators

Demographic Indicators	Status	Percentages
Gender	Female	56.09%
	Male	43.91%
Age	20-24	19.24%
	25-29	23.94%
	30-34	17.62%
	35-39	15.12%
	40-44	9.69%
	45 and 45+	14.39%
Ethnicity	Malay	56.24%
	Chinese	12.33%
	Indian	11.89%
	Others	19.54%
Education	Primary	0.00%
	High School	5.88%
	Diploma	12.35%
	Degree	81.77%
Purchasing Frequency (Monthly)	1 – 2	29.22%
	3 – 4	44.93%
	5-6	16.45%
	7≤	9.40%
Amount of Purchasing in one time	≤ RM 99	18.94%
	RM 100 – RM 199	37.30%
	RM 200 - RM 299	23.05%
	RM 300 ≤	20.71%
Income	≤ RM 1999	19.24%
	RM 2000- RM 2999	16.15%
	RM 3000- RM 3999	14.24%
	RM 4000≤	50.37%
Stores	Aeon-Jusco	22.91%
	ColdStorage	2.79%
	Giant	24.96%
	Mydin	11.01%
	NSK	3.96%
	Tesco	19.24%
	Others	15.13%

Missing Value Treatment

Missing values is a unanimous problem in surveys, which leads to difficulties in the multivariate data analyses in behavioural and social sciences (Rezaei, 2015). To manage the missing values, Gold and Bentler (2000) suggested using the Expectation Maximisation Method (EMM). In accordance with the Hair et al. (2013), missing data of up to 5% was not large and does not cause problematic results. In terms of the study, the number of collected responses was 681 with 59 missing data points from 36774 points, and the percentage was 0.0016, which was not a significant value.

The second phase of the analysis was to adjust the missing values. EMM was utilised to input the values for further assessment. Furthermore, EMM generated Little's MCAR test statistics via

SPSS 21.0, and according to the assumption of the test, the test result should generate an insignificant Chi-Square result for randomisation of missing values. According to the Chi-Square result, the data represented insignificant values, and the values for the model were Chi-Square = 1020.596, DF = 882, Sig. = 0.0601.

Common Method Bias

Common method bias (CMB) is a critical challenge in quantitative studies, which influences the validity of the findings on the results of constructs, item reliabilities, structural relationships and the co-variation between latent constructs (MacKenzie and Podsakoff, 2012). To decrease the probability of CMB, Hair et al. (2013) suggested conducting Harman's one-factor test. Another step for the assessment model is calculating the potential common method bias. The study applied Harman's one-factor test to determine whether the data included any potential common method bias (Hashim, 2012). The criterion for common method bias is that the accounted covariance for a single factor should be lower than 40%. For this study, the statistical results indicate that common method biases are not a concern in the study.

Non-Response Bias

The last assumption in the study was to ensure that non-response bias is not a concern in the study and there was no difference between early and late distributions among respondents in terms of key constructs in the model, demographic indicators and responses collected online and individually (Hair et al., 2013; Lewis et al., 2013). Non-response bias is a "critical issue" during the data collection via survey methods, particularly online surveys. The main concern of researchers is that non-response bias affects the generalizability of the research findings (Hair et al., 2013). Therefore, researchers should seek to reduce non-response bias. To evaluate the assumption, the collected responses, which were categorised early responses (n=455 of 681) and late responses (n=226 of 681), an independent sample T-test was employed. The criterion is that the p-value for the t-statistics should be greater than 0.05 (Hair et al., 2013). The results of T-test indicated no statistical difference between early and late respondents for the measurement items.

Method of Measurement and Structural Model Analysis

Following the data collection period, selecting an appropriate statistical analysis remains a challenge for studies in business, management and social sciences (Sarstedt et al., 2014). Regarding this, analysing the obtained data using the partial least square-structural equation model (PLS-SEM) technique provides several advantages for studies in customer behaviour. (Sarstedt et al., 2014, Hair et al., 2014). In contrast to first generation techniques, the PLS-SEM technique does not require complicated assumptions such as distribution, and sample size (Wong, 2013; Hair et al., 2013). Furthermore, the technique is performed for complicated cause-effect-relationship models, which includes several latent constructs that are indirectly measured by several indicators (Rezaei, 2015; Hair et al., 2013) and it is not appropriate for confirmatory testing (Chin, 2010). In accordance with Wong (2013) and Hair et al. (2013), evaluating the model consists of a two-stage approach, namely a measurement model and structural model. According to Wong (2013)

and Hair et al. (2013), the measurement model must meet the minimum requirements in terms of construct reliability, outer loadings, indicator reliability, and average variance extracted. The structural model assesses the size and significance of path coefficients, coefficients of determination, predictive relevance, model fit (GoF and SRMR) and effect size (f^2 and q^2) (Wong, 2013; Hair et al., 2013) by examining the bootstrapping procedure of 5000 resamples.

Hence, bootstrapping and blindfolding were examined to assess the measurement and structural model via SmartPLS software 3.0.

5. Empirical results

Assessment of Measurement Model

To examine the measurement model, the study applies the criteria proposed by Wong (2013) and Hair et al. (2013). According to them, composite reliability, outer loadings, Cronbach's alpha, average variance extracted (AVE for convergent validity) and discriminant validity, which is determined by VIF values, cross-loading and Fornell-Larcker criteria were assessed to examine the measurement models. As shown in Table 2, the majority of the outer loadings of the constructs are well above the minimum threshold value of 0.70. However, according to Neupane et al. (2014), Wong (2013) and Lew and Sinkovics (2013), if the research is exploratory, the loading scores should be at least 0.40 or greater. According to these authors, the loading scores are well above the minimum value. Composite reliability and Cronbach's α values for internal consistency reliability are also above the minimum threshold level of 0.70. Furthermore, the AVE values for convergent validity are well above the minimum threshold level of 0.50 thereby demonstrating convergent validity for all constructs.

To assess discriminant validity tests as to whether the items do not unintentionally measure or not (Urbach and Ahlemann, 2010), cross-loading criteria (Chin, 1998) and Fornell-Larcker's criteria were used. The summary of validity results to evaluate a measurement model is presented in Tables 3, 4 and 5.

Assessment of Structural Model

The following phase of the measurement model is the confirmation step for the model, which examines the collinearity, capabilities of the model's predictive ability, predictive relevance and interrelationships of the constructs (Wong, 2013 and Hair et al., 2013). The study examined the collinearity problem using SmartPLS 3.0, and the results indicate that the values of the predictor constructs were lower than the tolerance level, which is VIF value of 5.00. Following this step, the structural model was assessed, and Table 6 and Table 10 show the results of the hypothesis testing, structural relationships and hypothesis decisions.

Table 2 Construct Validity

Construct	Item	Outer loading	AVE[a]	CR*	Cronbach's A
CS	CS1	0.769	0.651	0.918	0.893
	CS2	0.824			
	CS3	0.807			
	CS5	0.769			
	CS7	0.865			
	CS8	0.802			
IAC	IAC1	0.902	0.824	0.929	0.824
	IAC2	0.911			
	IAC3	0.897			
	IAC4	0.920			
ICC	ICC1	0.821	0.610	0.916	0.894
	ICC10	0.751			
	ICC3	0.770			
	ICC4	0.771			
	ICC5	0.809			
	ICC6	0.796			
	ICC7	0.653			
	ICC9	0.747			
IRC	IRC1	0.881	0.808	0.955	0.940
	IRC2	0.839			
	IRC3	0.939			
	IRC4	0.937			
	IRC5	0.895			
L	L1	0.700	0.650	0.902	0.865
	L2	0.860			
	L3	0.845			
	L4	0.796			
	L5	0.819			
MP	MP14	0.590	0.506	0.835	0.758
	MP15	0.667			
	MP2	0.765			
	MP3	0.745			
	MP4	0.772			
PCD	PCD1	0.840	0.717	0.927	0.901
	PCD2	0.842			
	PCD3	0.854			
	PCD4	0.926			
	PCD5	0.767			
SE	SE1	0.890	0.580	0.915	0.912
	SE2	0.895			
	SE3	0.867			
	SE4	0.711			
	SE5	0.665			
	SE6	0.720			
	SE7	0.690			
	SE8	0.591			

p*: 0.01; 2.58, p**: 0.05; 1.96, P***:0.10; 1.65   AVE: Average Variance Extracted; CR: Composite Reliability

The values for R^2 and Q^2 of the endogenous latent constructs were obtained using the PLS algorithm procedure. According to Hair et al. (2013), Q^2 values of each construct in the model are greater than zero for a predictive relevance. Table 7 shows the results of R^2 and Q^2. According to the results, customer satisfaction (CS) and perceived cultural distance (PCD) indicate small effect sizes; interaction comfort (IAC) and multicultural personality (MP) present large effect sizes, and finally, interrole congruence (IRC) and intercultural communication competence (ICC) show medium effect sizes. Furthermore, the Q^2 values of each construct are above zero.

In addition, the f^2 effect size, which shows the impact of a specific predictor construct on an endogenous latent construct, and the q^2 effect size for the predictive relevance are presented in Table 8.

Assessment of Mediation Effect for the Model Constructs

Baron and Kenny (1986) highlighted that a mediation relationship for the selected constructs refers to the relationship between an independent and a dependent variable as explained via a third variable. The calculation of mediation is based on the impact of an independent on a dependent variable. To better understand the mediation impact for the model, the study applies the guidelines of Baron and Kenny (1986).

The following criteria are assumed to determine whether there is a statistical significance of the mediation effect or not. The statistical significance of indirect effects between two constructs is decided based on the *Z value*. The null hypothesis *(H_0-there is no indirect effect between two variables)* is rejected when the *Z value* is greater than the critical level at the 1.96, $p<0.05$ (Hashim, 2012).

Table 3 Discriminant validity–Fornell-Larcker Criterion.

Constructs	CS	IAC	ICC	IRC	L	MP	PCD	SE
CS	**0.651**							
IAC	0.184	**0.824**						
ICC	0.213	0.068	**0.610**					
IRC	0.077	0.616	0.563	**0.808**				
L	0.599	0.097	0.158	0.089	**0.650**			
MP	0.112	0.461	0.057	0.355	0.121	**0.506**		
PCD	0.025	0.050	0.090	0.172	0.080	0.095	**0.717**	
SE	0.156	0.075	0.220	0.106	0.128	0.154	0.064	**0.580**

Table 4 Discriminant validity–Loading and Cross-loading Criterion

Constructs	CS	IAC	ICC	IRC	L	MP	PCD	SE
CS1	**0.769**	0.160	0.187	0.068	0.411	0.083	-0.003	0.107
CS2	**0.824**	0.203	0.237	0.115	0.429	0.102	0.043	0.121
CS3	**0.807**	0.142	0.180	0.058	0.394	0.130	-0.018	0.137
CS5	**0.769**	0.105	0.139	0.020	0.441	0.061	-0.032	0.166
CS7	**0.865**	0.159	0.163	0.060	0.559	0.092	-0.044	0.125
CS8	**0.802**	0.126	0.138	0.052	0.606	0.081	-0.051	0.109
IAC1	0.169	**0.902**	0.631	0.561	0.104	0.388	0.048	0.071
IAC2	0.194	**0.911**	0.609	0.540	0.113	0.397	0.071	0.031
IAC3	0.152	**0.897**	0.610	0.545	0.078	0.457	0.024	0.091
IAC4	0.154	**0.920**	0.650	0.589	0.058	0.430	0.040	0.079
ICC1	0.208	0.625	**0.821**	0.524	0.129	0.448	0.057	0.158
ICC10	0.175	0.442	**0.751**	0.422	0.167	0.341	0.076	0.226
ICC3	0.199	0.507	**0.770**	0.398	0.137	0.448	0.091	0.183
ICC4	0.142	0.454	**0.771**	0.398	0.087	0.421	0.053	0.131
ICC5	0.157	0.629	**0.809**	0.451	0.121	0.495	0.048	0.180
ICC6	0.126	0.603	**0.796**	0.431	0.083	0.475	0.082	0.143
ICC9	0.156	0.464	**0.747**	0.441	0.146	0.400	0.093	0.191
IRC1	0.065	0.519	0.497	**0.881**	0.064	0.310	0.117	0.124
IRC2	0.081	0.564	0.477	**0.839**	0.061	0.328	0.154	0.054
IRC3	0.075	0.571	0.531	**0.939**	0.109	0.319	0.181	0.096
IRC4	0.072	0.558	0.525	**0.937**	0.087	0.333	0.166	0.092
IRC5	0.053	0.555	0.498	**0.895**	0.078	0.308	0.153	0.114
L1	0.354	0.007	0.020	-0.022	**0.700**	0.072	0.063	0.111
L2	0.569	0.085	0.145	0.106	**0.860**	0.112	0.054	0.119
L3	0.500	0.052	0.093	0.065	**0.845**	0.071	0.080	0.119
L4	0.450	0.078	0.138	0.061	**0.796**	0.076	0.075	0.096
L5	0.506	0.150	0.211	0.118	**0.819**	0.146	0.055	0.076
MP14	0.083	0.213	0.241	0.157	0.089	**0.591**	0.108	0.115
MP15	0.029	0.283	0.327	0.229	0.062	**0.667**	0.076	0.076
MP2	0.097	0.346	0.470	0.279	0.121	**0.765**	0.050	0.133
MP3	0.076	0.335	0.417	0.243	0.062	**0.745**	0.094	0.080
MP4	0.105	0.417	0.467	0.321	0.093	**0.772**	0.038	0.142
PCD1	0.010	0.039	0.070	0.118	0.086	0.093	**0.839**	0.049
PCD2	-0.044	0.039	0.069	0.129	0.028	0.114	**0.842**	0.063
PCD3	-0.039	0.008	0.022	0.108	0.050	0.044	**0.854**	0.050
PCD4	-0.042	0.048	0.083	0.146	0.056	0.109	**0.926**	0.040
PCD5	0.005	0.062	0.111	0.200	0.107	0.035	**0.767**	0.064
SE1	0.098	0.102	0.251	0.155	0.079	0.135	0.024	**0.890**
SE2	0.148	0.106	0.226	0.134	0.128	0.145	0.020	**0.895**
SE3	0.124	0.129	0.213	0.132	0.113	0.165	0.065	**0.867**
SE4	0.118	-0.048	0.066	-0.034	0.107	0.010	0.049	**0.711**
SE5	0.148	-0.024	0.077	-0.017	0.108	0.096	0.108	**0.665**
SE6	0.122	-0.067	0.080	-0.047	0.097	0.070	0.070	**0.720**
SE7	0.135	-0.069	0.095	-0.034	0.065	0.087	0.036	**0.690**
SE8	0.148	-0.015	0.043	0.005	0.132	0.099	0.146	**0.591**

Table 5 Discriminant validity– Variance inflation factors Values (VIF)

Constructs	CS	IAC	ICC	IRC	L	MP	PCD
CS					1.000		
IAC	2.227						
ICC	2.023	1.910		1.008			
IRC	1.712	1.502					
L							
MP		1.461	1.024				1.000
PCD		1.035		1.008			
SE		1.055	1.024			1.000	

p*: 0.01; 2.58, p**: 0.05; 1.96, P***:0.10; 1.65

Table 6 Results of hypothesis testing and structural relationships

Constructs	Beta	T Statistics	P Values	Decision
CS -> L	0.599	23.073	0.000	Supported
IAC -> CS	0.115	2.205	0.028	Supported
ICC -> CS	0.190	3.356	0.001	Supported
ICC -> IAC	0.467	11.390	0.000	Supported
ICC -> IRC	0.552	16.811	0.000	Supported
IRC -> CS	-0.101	1.988	0.047	Supported
IRC -> IAC	0.336	8.498	0.000	Supported
MP -> IAC	0.098	2.959	0.003	Supported
MP -> ICC	0.536	17.905	0.000	Supported
MP -> PCD	0.095	2.344	0.019	Supported
PCD -> IAC	-0.054	2.001	0.045	Supported
PCD -> IRC	0.122	3.463	0.001	Supported
SE -> IAC	-0.075	2.420	0.016	Supported
SE -> ICC	0.137	3.617	0.000	Supported
SE -> MP	0.154	3.654	0.000	Supported

p*: 0.01; 2.58, p**: 0.05; 1.96, P***:0.10; 1.65

Table 7 Result of R2 and Q2

Constructs	R^2	Q^2	t Size
CS	0.050	0.034	Small
IAC	0.562	0.463	Large
ICC	0.327	0.198	Medium
IRC	0.330	0.267	Medium
L	0.358	0.229	Medium
MP	0.022	0.011	Medium
PCD	0.008	0.006	Small

*Value effect sizes are namely level of 0.02 is small, 0.15 is medium and 0.35 is large.

Table 8 Result of f^2 *and* q^2

Constructs	Path Coefficients		
CS-> L	0.599	0.559	N/A
IAC ->CS	0.115	0.006	0.009
ICC -> CS	0.190	0.019	0.018
ICC -> IAC	0.467	0.263	0.207
ICC -> IRC	0.552	0.447	0.333
IRC -> CS	-0.101	0.006	0.011
IRC -> IAC	0.336	0.179	0.117
MP -> IAC	0.098	0.015	0.019
MP -> ICC	0.536	0.418	0.207
MP -> PCD	0.095	0.009	N/A
PCD -> IAC	-0.054	0.007	0.019
PCD -> IRC	0.122	0.021	0.032
SE -> IAC	-0.075	0.013	N/A
SE -> ICC	0.137	0.027	N/A
SE -> MP	0.154	0.024	N/A

*Value effect sizes are namely level of 0.02 is small, 0.15 is medium and 0.35 is large.

Table 9 Hypothesis and decisions of the model

Hypothesis	Beta	T-Statistics	P Values	Decisions
H1.SE -> IAC	-0.075	2.420	0.016	Supported
H2.SE -> ICC	0.137	3.617	0.000	Supported
H3.SE -> MP	0.154	3.654	0.000	Supported
H4.MP -> IAC	0.098	2.959	0.003	Supported
H5.MP -> ICC	0.536	17.905	0.000	Supported
H6.MP -> PCD	0.095	2.344	0.019	Supported
H7.ICC -> CS	0.190	3.356	0.001	Supported
H8.ICC -> IAC	0.467	11.390	0.000	Supported
H9.ICC -> IRC	0.552	16.811	0.000	Supported
H10.IRC -> CS	-0.101	1.988	0.047	Supported
H11.IRC -> IAC	0.336	8.498	0.000	Supported
H12.PCD -> IAC	-0.054	2.001	0.045	Supported
H13.PCD -> IRC	0.122	3.463	0.001	Supported
H14.IAC -> CS	0.115	2.205	0.028	Supported
H15.CS-> L	0.599	23.073	0.000	Supported

p*: 0.01; 2.58, p**: 0.05; 1.96, P***:0.10; 1.65

Table 10 Sobel Test Statistics for the Model

Hypothesis		Direct No Med.	Direct W/Med	IV to Med Beta	Med to DV Beta	IV to Med SE	Med to DV SE	Sobel Test Value	Z Value	*t* Value	P Value
H16	MP➜ICC➜IAC	0.464	0.109	0.560	0.630	0.033	0.033	12.6833	0.0000	3.257	0.001
H17	PCD➜IAC➜CS	-0.074	-0.029	0.055	0.194	0.054	0.040	*0.9968*	0.3189	0.468	0.626
H18	MP➜IAC➜CS	0.127	0.035	0.463	0.174	0.032	0.044	3.8146	0.0001	*0.718*	0.473
H19	IRC➜IAC➜CS	0.093	-0.056	0.617	0.225	0.030	0.049	4.4815	0.0000	*1.063*	0.288
H20	ICC➜IAC➜CS	0.192	0.036	0.218	0.591	0.045	0.026	4.7380	0.0000	*1.030*	0.303
H21	ICC➜CS➜Loyalty	0.126	-0.012	0.186	0.602	0.044	0.025	4.1636	0.0000	*0.362*	0.717
H22	IAC➜CS➜Loyalty	0.120	0.046	0.077	0.598	0.045	0.027	*1.7060*	0.0880	1.230	0.219
H23	IRC➜CS➜Loyalty	0.227	0.173	0.692	0.071	0.023	0.053	*1.3383*	0.1808	3.311	0.001

p*: 0.01; 2.58, p**: 0.05; 1.96, P***:0.10; 1.65

Conclusion

The most significant contribution of the study is that it is a theoretically and empirically integrated model developed from social psychology, sociology of culture and marketing communication and consumer behaviour in marketing. The boundaries of these disciplines provide a comprehensive framework for understanding antecedents and the impact of customer behaviour in grocery retail marketing in Asia. The study has extended the understanding of major and confirmed the relationships among these constructs and the proposed hypotheses.

The relationships of perceived cultural distance, interrole congruence (IRC) and interaction comfort (IAC) were illustrated by hypotheses H11 and H12. In accordance with Sharma et al. (2012), perceived cultural distance (PCD) determines IAC and IRC; according to outcomes of the study, hypotheses for the model were admitted as *"fail to reject"*. In other words, perceived cultural distance has a statistically significant impact on IAC and IRC and findings of the study were matched with findings of Sharma et al. (2012) (as illustrated in Table 10). In parallel with these perspectives, impact of personality and social environment on perceived cultural distance enlighten and therefore the retailers should consider to improve their strategies on *"reducing negative perceptions of cultural variety on culturally diverse customers"*.

Concerning inter-role congruence, interaction comfort and customer satisfaction (CS), the constructs have not been tested directly. The aim of establishing a direct interrelationship instead of an indirect perspective, as mentioned in Sharma et al. (2012) and Paswan and Ganesh (2005), is that customers and employees identified are as a service encounter by role theory and interdependence theory. Both theories explain that service encounters are dependent on each other because the behaviour of customer or employees influence the perceptions of other. In other words, the interaction between service encounters is clearly interrelated with the definition of scripts and roles during the interaction of encounters. Therefore, any fluctuations, misunderstanding and

confusion from this relationship lead to a dissatisfactory shopping experience and hence, role clarification for enhanced interaction between customers and employees are key components for many service settings (Ranjan et al., 2015; Zhang et al., 2014; Sharma et al. 2012).

The model also examined the mediator effects according to the statistical outcomes whereby the majority of the hypotheses failed to be rejected (except H16, H22 and H23). Hence, the present study reveals the mediation effects of intercultural communication competence (ICC), IAC, and CS. In addition to this, the model also conceptualised and justified the social environment (SE) and personality (MP) for the model. In explaining related hypotheses, the relationships of between social environment, multicultural personality and IAC, ICC and PCD respectively and associations with assumed theories were examined. Social environment and personality are crucial dimensions for understanding the complicated process of communication and its impact on other constructs. Individual differences and its background in terms of behavioural aspects such as socio-cultural experiences influence interaction involvements and perceptions on cultural encounters (Harrison, 2012). Although, conventional theories of personality have concentrated on the dimensions of human characteristics that can be categorised under cognitive and affective patterns such as thoughts and emotions for explaining the behavioural aspects of human beings (Ihtiyar and Ahmad, 2015; Boag and Tiliopoulos, 2011). In contrast, the study suggests understanding personality through cultural indicators. In other words, a personality that is involved in various patterns of individual differences and affects how people interact with one another (Lee and Ciftci, 2014). Therefore, personality has a significant role on the perceptions and communication process of individuals (Lee and Ciftci, 2014; Harrison-Walker, 2012) and strengthened (intercultural) communication that is based on mentioned variables process reduces perceived risk, positive contributes to shopping experience, increases satisfaction and improves relational exchange (Vater and Schröder-Abé, 2015; Lee and Ciftci, 2014; Ihtiyar and Ahmad, 2014; Harrison, 2012; Sharma et al., 2012).

In analysing the model, the model employed the PLS-SEM model with new implementations. Sharma et al. (2012) employed the model with a co-variance-based approach (CB-SEM), whereas the present study applied the PLS-SEM perspective. It applies the new criteria of the PLS-SEM approach for the fit index of the model. According to calculation of Standardized Root Mean Square (SRMR) criteria for model is 0.047, which is lover than criterion level 0.08. Furthermore, GoF index was calculated as 0.397 and the obtained value for the model was classified in the GoFlarge category.

Intercultural communication poses one of the considerable challenges for service providers in the multicultural service environment, and Malaysia is included. Particularly, when the communication strategy of the service providers is not correctly executed, intercultural communication conflicts would heat up and generate incurable problems among service encounters such as difficulties in relational exchange, misunderstanding, dissatisfaction and etc. Hence, the findings recommend that managers and entrepreneurs in service settings should consider these suggestions to resolve intercultural communication conflicts and increase

intercultural communication awareness, training in communication skills, encourage to improve general knowledge of other cultures, as well as setting up a unique organizational culture that integrates both cultures.

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