



## ATTITUDE TOWARDS INTERCULTURAL LEARNING COMMUNITY: AN EXPLORATORY AND CONFIRMATORY FACTOR ANALYSIS OF MEASUREMENT FOR A STUDY ABROAD CONTEXT

**Abdalla, Saleh Ali Nuri<sup>i</sup>**

English Language Department,  
Faculty of Languages,  
Alzzytuna University,  
Tarhuna, Libya

### **Abstract:**

This study uses rigorous validation procedures to validate an attitude towards the intercultural learning community (intercultural posture) scale. 180 Arabic learners at the International Islamic University of Malaysia (IIUM) were given a questionnaire with 25 items represented five sub-dimensions. Exploratory factor (EFA) and confirmatory factor (CFA) respectively applied to validate the final measurement model. SPSS and Amos were used for Data analysis. The final findings yielded only four sub-dimensions to support intercultural posture construct as a multidimensional concept represented: Attitude to Intercultural Tendency, Intercultural Friendship Orientation, Intercultural Working Group, and Intercultural Group Cohesiveness. A validated Intercultural posture of 12 measured items remained in the CFA result that confirmed the final valid instrument. The instrument scale would promote the identifications of variables in the sense of study abroad context which stimulus students' engagement in intercultural communication in learning the English language.

**Keywords:** intercultural posture, intercultural learning community, EFA, CFA, WTC

### **1. Introduction**

Increasing numbers of international students enrol in Malaysian universities; the development of English of non-native speakers definitely depends on their attitude towards the new study environment. Their relationships and interaction with professors, staff, and local students are also crucial to the success of the students (Croese, 2011). Besides, international learners are locating to "*open-mindedness, flexibility, enthusiasm, passion, and inclusion in the learning process*" (Jones, 2010). However, in the study abroad context, developing an "*attitude towards intercultural learning community: intercultural posture*", (Abdalla, 2016), is considered as a major positive factor in developing the willingness to communicate (WTC) directly or indirectly through other influencing factors. In second language research, individual differences have

---

<sup>i</sup> Correspondence: email [salehalnuri@gmail.com](mailto:salehalnuri@gmail.com)

been extensively examined to explain why some individuals are more successful communicators than others (Ellis, 2008). Research has scanned the influence of essential factors such as motivation, attitude towards learning, and communication anxiety on the language performance of learners (Yashima, 2002). Yashima et al. (2004) noted that *“a goal of the second language (L2) and foreign language (FL) learning is to facilitate better communication and understanding between individuals who come from different backgrounds and speak different languages”* (p.120). According to MacIntyre et al. (1998), a comprehensive model overview of several traits and state variables that affect WTC using the second language, however, different situations need to take other variables into account that could impact the WTC of a language learner. Yashima (2002) points out that *“a careful examination of what it means to learn a language in a particular context is necessary before applying a model developed in a different context”* (p. 62). She postulated a new construct which is an attitude toward the international community as a substitute to Gardner’s motivation of *“integrativeness and attitude towards learning situations”*.

Dornyei and Csizer (2002) emphasized that *“although further research is needed to justify any alternative interpretation, we believe that rather than viewing ‘integrativeness’ as a classic and therefore ‘untouchable’ concept, scholars need to seek potential new conceptualizations and interpretations that extend or elaborate on the meaning of the term without contradicting the large body of relevant empirical data accumulated during the past four decades”* (p. 456). However, highlighting to intercultural learning perspective in the study abroad context, the approach of intercultural learning community attitude instead of attitude towards the international community in Yashima’s (2002) study is addressed.

Although a great deal of efforts has been made in the past to examine empirically the various measured variables regarding attitudes in the context of home countries (Yashima, 2002; Kim, 2004; Yashima et al. 2004; Ghonsooly et al., 2012; Takahashi, 2015; Asmal, 2016; and Aliakbari et al; 2016 ), few studies have explored the changes in students’ attitudes perceptions in target language learning and communication in a study overseas context (Yashima and Zenuk-Nishide, 2008; Jang Ho Lee, 2018). However, the attitude towards the intercultural learning community in such a context had not paid much attention which is a significant gap. Scholars have recently developed an approach to learning from a community perspective. The *“quality of a learning community is that there is a culture of learning, in which everyone is involved in a collective effort of understanding”* (Bielaczyc & Collins, 1999, p.269). Constructivists also underline and promote active learning by individuals in order to create a knowledge-building learning community. In order to understand how to create knowledge and skills by students, while learning, the community needs to guide and help them (Bielaczyc & Collins, 1999). The way of building a learning community is a matter of learning because it has an effect on the satisfaction, retention, or learning of students (Brown, 2001). A group of learners can, therefore, function as a community to engage learners during the learning process in interactive activities. They spend extra time speaking to each other, establishing a collection of routines and practices to accomplish those tasks and goals (Wilson, 1996). *“Language is a defining behavioural feature of a cultural group, and thus acquiring the language involves taking on patterns of behaviour of that group. As a consequence, an individual’s attitudes towards that group and towards other cultural groups, in*

general, will influence his or her motivation to learn the language, and thus, the degree of proficiency attained" (Gardner, 2002, p.160).

Learning as a community environment offers opportunities for both students and teachers to promote intercultural communication and share knowledge. Students' commitment to intercultural learning community is unavoidable. The terminology of intercultural learning community is stated as a group of individuals who "*actively engage one another in collaborative learner-centered activities to intentionally foster the creation of knowledge while sharing a number of values and practices, including diversity, mutual appropriation, and progressive discourse*" (Ludwig-Hardman et al., 2003, p.26) and they come from different cultures. Nonetheless, in a context where intercultural communication with English speakers is on a daily basis, Unlikely, the concept of attitude towards international community developed by Yashima (2002), It is more appropriate to use this terminology of intercultural learning community in study abroad context, since learners are already engaged in the intercultural learning community.

The research concept of intercultural posture is investigated to validate its measurement scale in different contexts where students are already immersed in an intercultural learning community. The availability of intercultural conduct among students is on a daily basis. Hence, this study examines the results of exploratory factor analysis in addition to confirmatory factor analysis for proving the validity of measuring the construct of "*attitude towards intercultural learning community*" accurately and reliably.

## **2. Methods**

### **2.1 Participants**

The respondents of this study were 180 Arabic - speaking university students studying at the Malaysia International Islamic University. They joined this university as international students and English is the university's educational medium of instruction. Thus, they have more opportunities to experience intercultural communication with local and other students who came from none-Arabic countries. Their intercultural contact among intercultural learning community members offers a good opportunity to develop a favourite attitude towards this community which helps them to engage and increase WTC to interact with others effectively.

### **2.2 Instrument**

The respondents' answers were obtained using an English language questionnaire. The respondents have to respond to the following issues. Four questions measured the Intercultural friendship orientation (IFO) in English language learning and seven questions measured the approach-avoidance tendency developed by Yashima (2002). Four adapted questions measured the dimension of intercultural Group Work (IGW) and five adapted questions measured the dimension of intercultural group cohesiveness (IGC) from Matsubara (2007). Six questions measured the dimension of respect to other cultural differences (RCD) from Chen and Starosta (2000). The respondents' choice of answer each item was ranged from five Likert scales "*strongly, agree and strongly disagree*" and the reliability of all dimensions was ranged from .76 to .85.

### 2.3 Data Analysis

Initially, the participant's answer to the survey questions was inputted the SPSS. Two procedures of processing data analysis, Exploratory factor (EFA) and confirmatory factor (CFA), using the software of SPSS and AMOS respectively. The two analyses were conducted simultaneously to make sure that all items to measure the construct are grouped appropriately by double check investigation. *"If the EFA results show that each item is grouped appropriately and is supported by CFA results showing a fit model, then it is safe to conclude that the items in the grouping can accurately measure the intended construct"* (Natalya & Purwanto, 2018). However, to measure the attitude towards intercultural learning community that is a latent variable which cannot be measured directly. The researcher has chosen five sub-dimensions. They are "intercultural friendship", "intercultural group work", "intercultural group cohesiveness", "approach-avoidance tendency", and "respect other cultural differences", that have observed and measured indicators. One can directly measure the observed or measured variable and use it as an indicator for the latent variable (Natalya, Mashuri, & Siaputra, 2016 cited in Natalya & Purwanto, 2018). To conduct exploratory, several stages are needed. Stages including: choosing measured variables to be analyzed, extracting the factor, rotating the factor, and naming the formed factor and primary principles of the Kaiser–Meyer–Olkin Measure of Sampling Adequacy (MSA) with the significance of Bartlett's Test of Sphericity is the fundamental process of EFA analysis. The extraction method and orthogonal rotation of varimax were used to generate the uncorrelated extracted dimensions with eigenvalues bigger than 1. The factor loadings remained of 0.5 or greater will be chosen to measure each factor (Hair et al, 2006).

Confirmatory factor analysis is a second-generation statistical analysis that forms a group with Structural Equation Modeling (SEM) (Rios & Wells, 2014). SEM is used in this study to examine or confirm the measurement model is valid or confirming that variables remained in a proper and consistent measurement model (Joreskog & Sorbom, 1993). To assess and validate the measurement model by CFA analysis, several indices of fit are required to ensure that items' questions are grouped correctly. The indices should be fulfilled the criteria of  $\chi^2/df < 3.0$ , GFI  $\geq 0.90$ , TLI  $\geq 0.90$ , CFL  $\geq 0.90$ , and RMSEA  $\leq 0.08$ . For validation issues, convergent, discriminant validity, and reliability should be assessed.

To evaluate the convergent validity, three measures are required: factor loadings, extracted to determine the convergent validity: factor loadings, average variance extracted (AVE), and construct reliability (CR). The loading function indicates the relationship between the variables and their indicators. The Average Variance Extracted (AVE) refers to a convergence measures between a group of items showing a latent dimension, while Composite Reliability (CR) refers to a measure of the reliability and internal consistency of items showing a latent dimension in CFA. The cut-off criteria for assessing three measurements is that factor loading, and AVE should be approximately .50 or greater, CR should be approximately .70 or greater (Hair et al.2010). According to Bagozzi, Yi, & Philips (1991), discriminating validity assesses the extent to that a dimension and its pointers vary from a dimension and its own indicator. Discriminant validity was assessed by examining AVE's square root values should be greater than the corresponding correlation between factors of attitude towards the intercultural learning community (Fornell and Larcker, 1981).

## 4. Results

Verifying expletory factor analysis to the dataset through Kaiser Meyer Olki, Bartlett's Test of Sphericity to calculate the sample adequacy revealed that the KMO value was ( $0.869 \geq 0.5$ ). The significance of Bartlett's Test of Sphericity was also less than  $\leq 0.05$  indicating that the data is ready for further analysis. The extracted from exploratory result remained 12 items and were grouped into four factors extracted from the exploratory factor analysis result represented the attitude towards the intercultural learning community construct as illustrated in the table 1. The loading items ranged from .53 to .82. It is worth mentioning that the criteria for exclusion or delete items based on weak loading less than the cut-off value of .50 and cross-loading values.

**Table 1:** Exploratory factor analysis

Dimensions of intercultural posture		Factor			
		1	2	3	4
Attitude to intercultural Tendency (AIT)	AIT1	.569			
	AIT2	.695			
	AIT6	.737			
	AIT7	.534			
	RCD1	.630			
	RCD2	.642			
	RCD5	.630			
Intercultural Friendship Orientation (IFO)	IGC3		.730		
	IGC5		.570		
	IFO1		.678		
	IFO2		.692		
	IFO3		.654		
Interest in intercultural Group Work (IGW)	AIT4			.600	.
	IGW2			.571	.
	IGW3			.689	.
	IGW4			.694	.
Intercultural Group Cohesiveness (CGC)	IGC1				.821
	IGC2				.808
Eigenvalue		8.52	2.71	1.67	1.14
% of Variance		31.57	10.23	6.20	4.23

The EFA has merged the dimension of Respect to other culture differences (RCD), three items, and Approach-avoidance tendency (AAT), four items, in one dimension. Therefore, the new name of the Attitude to intercultural Tendency (AIT) was given to this dimension. The rest dimensions remain the same. Some other items moved from one dimension to another dimension such as items of IGC3, IGC5, and AAT4.

The CFA findings of the attitude towards intercultural learning community are shown in Table 2. The value of factor loading for Attitude to Intercultural Tendency (AIT) ranged from 0.67 to 0.77, with CR and AVE values of 0.80 and 0.514 respectively. The same finding was found for Intercultural Friendship Orientation (IFO). The factor loading weights ranged from 0.53 to 0.95 and the CR and AVE weight were 0.81 and 0.533 respectively. The items of Interest in Intercultural Group Work (IGW) had factor loading values of 0.62 and 0.86 with CR value .71 and AVE value .560. Similarly, to Intercultural Group Cohesiveness (IGC), factor loading values were .80 and .86 with CR value of .81 and AVE value of .692.

**Table 2:** Confirmatory factor analysis

Dimension		$\lambda$	EVA	$\alpha$	CR
<b>Attitude to Intercultural Tendency (AIT)</b>			.514	.81	.80
Item 1	AIT1	.70			
Item 2	AIT7	.77			
Item 3	RCD2	.72			
Item 4	RCD5	.67			
<b>Intercultural Friendship Orientation(IFO)</b>			.533	.80	.81
Item 1	IFO1	.80			
Item 2	IFO2	.95			
Item 3	IFO3	.53			
Item 4	IGC5	.57			
<b>Intercultural Group Work( IGW)</b>			.560	.69	.71
Item 1	IGW2	.86			
Item 2	IGW4	.62			
<b>Intercultural Group Cohesiveness( IGC)</b>			.692	.81	.81
Item 1	IGC1	.80			
Item 2	IGC2	.86			

By looking at EVA and CR values in the table 2, we can decide that convergent validity was achieved. As we can see in the table (3), the dimensions of Attitude to Intercultural Tendency (AIT), Intercultural Friendship Orientation (IFO), Intercultural Group Work (IGW), and intercultural Group Cohesiveness (IGC) were really different from each another.

**Table 3:** Discriminant validity

Dimension	AIT	IFO	IGW	IGC	EVA
AIT	<b>.717</b>				.514
IFO	.703	<b>.730</b>			.533
IGW	.440	.679	<b>.749</b>		.560
IGC	.390	.435	.533	<b>.832</b>	.692

(In bold) Square Root value of AVE. Off-diagonal is the comparison between dimensions correlation.

According to Fornell and Larcker (1981), table 3 indicates the discriminant validity of the construct. The correlations between dimensions are less than their square root of EVA values. Therefore, discriminant validity was achieved.

In CFA's first order, each item was assigned fitly into its sub-dimension. Second-order CFA was necessary to ensure that each dimension truly measured the construct of intercultural posture.

**Table 4:** First and second-order models fit

Good fit Indices	$\chi^2$	df	$\chi^2/df$	GFI	CFI	TLI	RMSEA
First order model	87.448	48	1.823	.925	.954	.937	.069
Second order model	99.026	50	1.981	.918	.943	.925	.075

The findings of CFA in both first and second-order models are acceptable. Both models indicate enough fit and fulfilled criteria of goodness of fit, as presented in Table 4.

## 5. Conclusion

This article reports the stages and results of a set of work that has been carried out to establish and validate a scale that can be used to assess the attitude towards intercultural learning community. Although there is no standardized scale to measure the construct structure, however, it can be concluded that the instrument used in the study is valid and useable in the study abroad context. The CFA confirmed and endorsed the measuring construct as multidimensional with respect to its four dimensions: Attitude to intercultural Tendency (AIT), Intercultural Friendship Orientation, Intercultural Group Work (IGW), and Intercultural Group Cohesiveness (IGC). The validation of the measurement of the construct was confirmed and the poor items were excluded by the use of rigorous statistical methods. The novelty of the result subsequently proves the proposed integration on the basis of previous research. Therefore, the construct of the adapted scales provided satisfactory reliability and validity results, but further studies are needed. Finally, this paper is expected to add new knowledge to existing research in second or foreign language learning through the idea of attitude towards intercultural learning community. Validating this model using another intercultural learning community in other countries could be a possible future direction.

## References

- Abdalla, S.A.N., 2016. Arabic-Speaking University Students' Willingness to communicate in English in the Study abroad context. PhD Thesis, University Sains Malaysia.
- Aliakbari, M., Kamangar, M., & Khany, R., 2016. Willingness to Communicate in English among Iranian EFL Students. *English Language Teaching* 9(5): 33. [doi.org/10.5539/elt.v9n5p33](https://doi.org/10.5539/elt.v9n5p33).
- Asmalı, M., 2016. Willingness to Communicate of Foreign Language Learners in Turkish Context. *Procedia - Social and Behavior* 232:188-195. [doi.org/10.1016/j.sbspro.2016.10.044](https://doi.org/10.1016/j.sbspro.2016.10.044)
- Bagozzi, Richard, Yi, Youjae & Phillips, Lynn, 1991. Assessing Construct Validity in Organization Research. *Administrative Science Quarterly* 36: 421-458. doi: 10.2307/2393203.

- Bielaczyc, K., & Collins, C., 1999. Learning communities in classrooms: A reconceptualization of educational practice, New Jersey: Lawrence Erlbaum, PP269-292.
- Chen, G.-M., Starosta, W.J., & Chen, G., 2000. The development and validation of the intercultural sensitivity scale. *Human Communication* 3. Retrieved from [https://digitalcommons.uri.edu/com\\_facpubs](https://digitalcommons.uri.edu/com_facpubs).
- Crooks, G., & Schmidt, R.W., 1991. Motivation: Reopening the research agenda. *Language learning* 41(4): 469-512.
- Dornyei, Z. & Csizer, K., 2002. Some dynamics of language attitudes and motivation: results of a longitudinal national wide survey. *Applied linguistics* 23: 421-462.
- Ellis, R. (2008). *The study of second language acquisition*. (2nd Ed.). New York: Oxford University Press.
- Fornell, C. & Larcker, D. F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research* 18(1): 39-50.
- Gardner, R.C., 2002. *Social psychological perspective on second language acquisition*, New York, NY: Oxford University Press, pp.102-169.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson. R.E, 2010. *Multivariate Data Analysis* (7th ed). NJ: Pearson Prentice Hall.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Yatham, R.L., 2006. *Multivariate data analysis* (6th ed.). NJ: Pearson Prentice Hall.
- Jang Ho Lee, 2018. The effects of short-term study abroad on L2 anxiety, international posture, and L2 willingness to communicate, *Journal of Multilingual and Multicultural Development*, doi: 10.1080/01434632.2018.1435666.
- Jones, E. 2010. Internationalization and the student voice: Higher education perspectives. *Journal of Research in International Education* 3:313-315.
- Joreskog, K. & Sorbom, D., 1993. LISREL 8: Structural equation modeling with the SIMPLIS command language. Chicago: Scientific Software International Inc.
- Ludwig-Hardman, S., 2003. Case study: Instructional design strategies that contribute to the development of online learning community. PhD thesis, University of Colorado.
- MacIntyre, P.D., Clement, R., Dornyei, Z., & Noels, K.A., 1998. Conceptualizing willingness to communicate in an L2: A situational model of L2 confidence and affiliation. *Modern Language Journal* 82(5): 545-562.
- Matsubara, K., 2007. Classroom group dynamics and motivation in the EFL context. Paper presented at the JALT2006, Tokyo: JALT.
- Natalya, L. & Purwanto, C.V., 2018. Exploratory and confirmatory factor analysis of the academic motivation scale (AMS)–Bahasa Indonesia. *Makara Human Behavior Studies in Asia* 22(1):29-42. doi: 10.7454/hubs.asia.2130118
- Rios, Joseph & Wells, Craig, 2014. Validity evidence based on internal structure. *Psicothema*. 26. 108-16. 10.7334/psicothema2013.260.
- Takahashi, C., 2015. L2 Motivation and Young Self-Instructed Learners' Persistence in Learning English: A Causal Analysis. *SiSAL Journal* 6(4):365–381.



- Wilson, B. (1996). *What is a constructivist learning environment?* In B. Wilson (Ed.), *Constructivist learning environments: Case studies in instructional design*: Englewood Cliffs, NJ: Educational Technology Publications.
- Yashima, T., 2002. Willingness to Communicate in a Second Language: The Japanese EFL Context. *The Modern Language Journal*86(1): 54-66.
- Yashima, T., Lori, Z.-N., & Shimizu, 2004. The influence of attitudes and effect on willingness to communicate and second language communication. *language learning* 54(1):119-152.
- Yashima, T., & Zenuk-Nishide, L., 2008. The impact of learning contexts on proficiency, attitudes, and L2 communication: Creating an imagined international community. *system* 36(4): 566-585.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). and European Journal of Literature, Language and Linguistics Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).