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The Development and Validation of Scale for the Three Levels of Intercultural Awareness



Abstract: - The intercultural awareness scale was firstly constructed based on Will Baker's theory of intercultural awareness. Accordingly, 274 students from a higher vocational college in China have completed the scale. The collected data has been analyzed for the validation with SPSS 27.

Results:

According to the findings, the scale measuring three levels of intercultural awareness demonstrates both satisfactory validity and reliability.

Conclusion:

Intercultural awareness scale in this study will serve as a valuable tool for assessing students' intercultural awareness levels, thereby enhancing the effectiveness of English language education.

Keywords: Intercultural awareness, Scale development, Higher vocational English learners

1. Introduction

Language is a component of culture. Hence, the instruction of English as a second language is essential in relation to the cultural aspects prevalent in English-speaking nations. English holds significant importance as a fundamental public subject within China's higher vocational education system. The finalization of the Higher-vocational English Curriculum Standard (2021) occurred in March 2021. The second portion of concentration within the higher-vocational English curriculum is the awareness and understanding of cultural diversity, which emphasizes the importance of intercultural awareness.

Intercultural Awareness Scale (ICAS), which was developed to evaluate students' intercultural awareness in the context of English language instruction (Asma & Saka, 2020), is merely one among several researches that have been done to design intercultural awareness scales. To further promote the development of scales for three levels of intercultural awareness, the present study has developed an intercultural awareness scale by drawing upon existing literature and the theoretical framework proposed by Baker (2011; 2012). This scale encompasses three distinct degrees of intercultural awareness, each characterized by specific components.

2. Literature review

2.1 Definition of ICA

The earliest definition of intercultural awareness has been supplied by researchers, with its origins extending back to the 1970s. Hanvey (1979) defines intercultural awareness as the capacity of individuals engaged in intercultural discourse to exhibit a heightened sensitivity towards cultural elements (Huang, 2022). Tomalin and Stempleski

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(2013) argue that persons who possess intercultural awareness demonstrate an increased level of sensitivity towards a wide range of cultural perspectives.

Moreover, the notion of intercultural awareness can be comprehended as the formation of a connection between many distinct cultures, encompassing a form of interaction that integrates numerous cultural heritages (Byram & Zarate, 1997). Tomlinson and Masuhara (2004) argue that intercultural awareness involves a dynamic progression towards acquiring an internalized notion of cultural equality and an improved comprehension of both one's own culture and other cultures.

Baker (2011) offers a valuable portrayal that aims to enhance the precision of exploring intercultural awareness: Intercultural awareness is a purposeful acknowledgment of the influence that culturally unique forms, practices, and attitudes exert on communication at the international level. Furthermore, it involves the capacity to effectively and adaptively employ this comprehension in immediate interpersonal exchanges.

2.2 Levels of intercultural awareness

In Baker's (2011) study, a conceptual framework was put forth to elucidate the construct of intercultural awareness. This framework delineated three discrete levels, namely basic cultural awareness, advanced cultural awareness, and intercultural awareness. This paradigm covers two distinct forms of intercultural awareness: conceptual intercultural awareness and practice-oriented intercultural awareness. The understanding of the higher level will exert influence on the lower level within this conceptual framework. The main focus of the introductory level is to develop an understanding of the cultural elements related to the target language. The second layer involves an elevated degree of complex conceptual intercultural understanding. This level of praxis involves the ability to surpass cultural biases and acknowledge the possibility of misinterpretations that can emerge due to varying cultural contexts. The final level is intricately linked to intercultural awareness, encompassing the understanding of effective cross-cultural communication. The research undertaken by Baker (2011) provides a comprehensive visual depiction of the model being examined as illustrated in Figure 1.

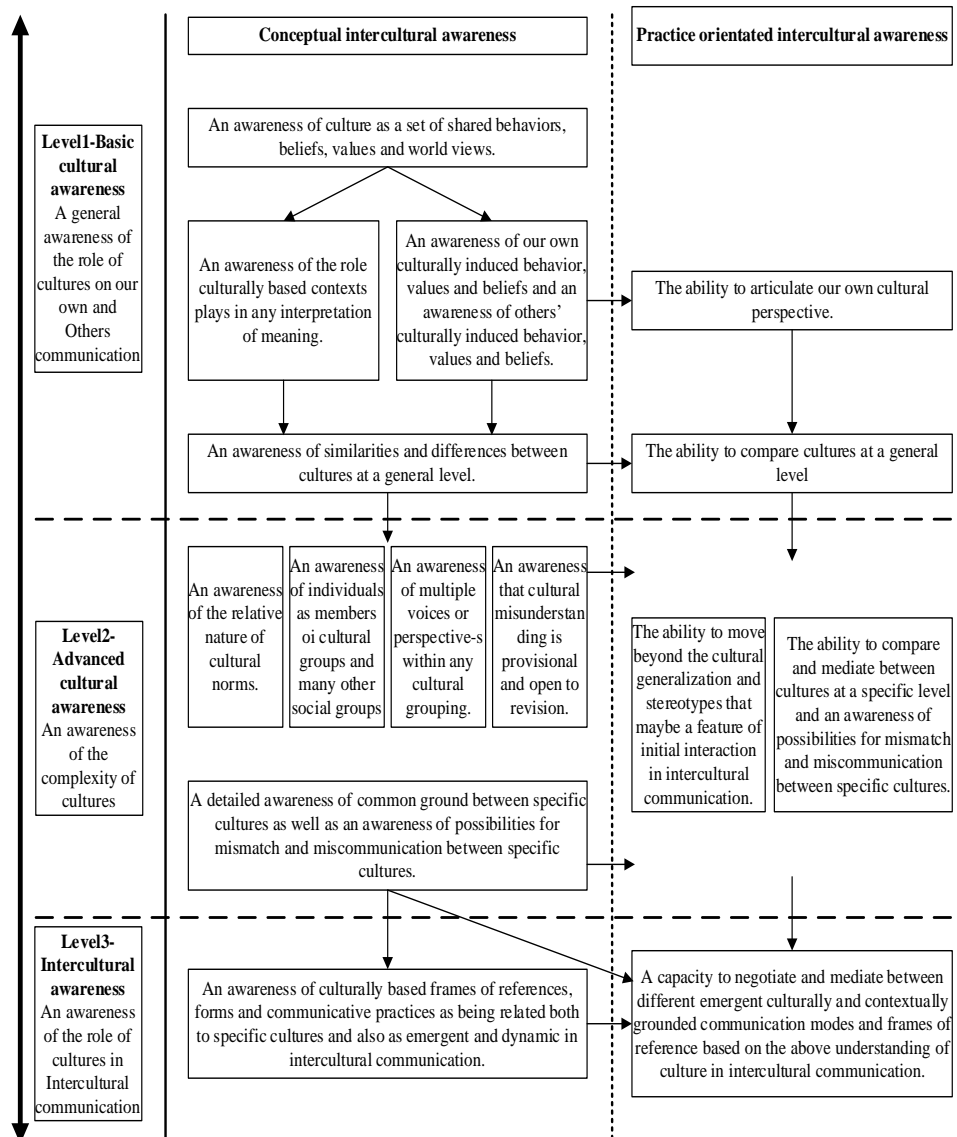


Figure 1 Model of intercultural awareness (Baker, 2011, p. 203)

Numerous models have been devised to assist research across multiple levels or dimensions, owing to the extensive scope of intercultural awareness. The present study will employ Baker's (2011) intercultural awareness paradigm, comprising three distinct levels, namely basic cultural awareness, advanced cultural awareness, and intercultural awareness. This paradigm covers two distinct forms of intercultural awareness: conceptual intercultural awareness and practice-oriented intercultural awareness. Both of these kinds are seen at every level inside the model. In order to augment the precision of each level, Baker (2012) put forth a conceptual structure comprising discrete elements for the cultivation of intercultural awareness. The framework encompasses four components pertaining to fundamental cultural awareness, five components pertaining to enhanced cultural awareness, and three components pertaining to intercultural awareness.

The main objective of this research will be to construct the intercultural awareness scale based on the 12 components of ICA, as outlined by Baker (2012). Furthermore, this study will also include subthemes of basic

cultural awareness and advanced cultural awareness as delineated by Abdzadeh and Baker (2020) into the framework of the intercultural awareness scale. The entire documentation of the instructional theoretical framework utilized in the development of the intercultural awareness scale can be found in Table 1.

Table 1 Instructional theoretical framework for the intercultural awareness scale in this research

Note. Adapted from " From cultural awareness to intercultural awareness: Culture in ELT" by Baker,

Levels of ICA	Elements	Definitions
Basic Cultural Awareness	1) General definition of culture	1) Culture's general definition
	2) National definition of culture	2) National conceptions of cultural behaviors
	Influence of First Culture	Our cultural behaviors are influenced by Chinese culture
	1) Self-stereotypes 2) Other stereotypes	1) The negative or positive judgments made about individuals based on Chinese culture. 2) The negative or positive judgments made about individuals based on other cultures.
Advanced Cultural Awareness	Relativity of cultural norms	Different interpretations cultural norms can have in different contexts.
	Awareness of different national cultural perspectives	There is a coexistence of different perspectives of national culture.
	Awareness of cultural identity	The identification of a shared system of symbols and meanings as well as norms for conduct.
	Awareness of cultural revision	Awareness that cultural understanding is open to change.
	Awareness of cultural differences	A detailed awareness of common ground and mismatch between specific cultures (Baker, 2012).
	Basic practice of intercultural communication	Practice to compare and mediate between cultures at a specific level (Baker, 2012).
Intercultural Awareness	Culturally based frames	Culturally based frames of reference, forms, and communicative practices as being related both to specific cultures and also as emergent and hybrid in intercultural communication (Baker, 2012).
	Initial interaction in intercultural communication	Initial interaction in intercultural communication as possibly based on cultural stereotypes or generalizations but an ability to move beyond these through (Baker, 2012).
	Advanced intercultural communication	A capacity to negotiate and mediate between different emergent social culturally grounded communication modes and frames of reference based on the above understanding of culture in intercultural communication (Baker, 2012).

W.,2012, ELT journal, 66(1), 62-70.

1.3 Scales for intercultural awareness

A broad range of scholars have made significant advances in the advancement of scales utilized for the assessment of intercultural awareness. The researcher has conducted a comprehensive examination of the literature on scales for intercultural awareness. The following section provides an analysis of various scales that are frequently employed for assessing intercultural awareness.

The intercultural sensitivity scale, devised by Chen & Starosta (2000) , is widely regarded as the most influential scale for assessing intercultural awareness. The Intercultural Sensitivity Scale is composed of a comprehensive set of 24 items, which are classified into five distinctive factors: interaction attentiveness, impression rewarding, self-esteem, self-monitoring, and perspective taking. Thitima (2015) further enhanced the Cross-Cultural Sensitivity questionnaire by incorporating additional scales, namely the Cultural Integration Ability Scale (C Scale), Behavioral Ability Scale (B Scale), Knowledge Ability Scale (I Scale), Attitude towards Others Scale (A Scale), and Empathy Ability Scale (E Scale). These scales were introduced to facilitate the examination of intercultural awareness.

In addition, the suggested intercultural awareness assessments cover five distinct qualities, including interest, knowledge, perception, application, and skill, according to the most recent research on intercultural awareness scales (Xu, 2021).

Furthermore, Huang (2022) established a questionnaire with the objective of evaluating intercultural awareness. This instrument consists of 15 items that encompass six dimensions: flexibility and adaptability, tolerance and patience, sense of humor, curiosity about diverse cultures' knowledge and customs, cultural confidence and self-control, and communication skills. The purpose of this survey was to assess the extent of intercultural awareness among college students (Huang, 2022, p. 475).

Based on the results of the literature analysis, several experts have made scales for intercultural awareness. Nevertheless, it is worth highlighting that none of the existing scales have incorporated the remarkable and insightful intercultural awareness framework of Will Baker. This signifies a gap in the current amount of research that necessitates further examination.

3. Research questions and methodology

3.1 Research questions

- What are the components that influence the design of scale for intercultural awareness?
- What is the extent to which the suggested scale of intercultural awareness demonstrates validity and reliability?
- How is the structural model of the scale for the three levels of intercultural awareness?

3.2 Research objectives

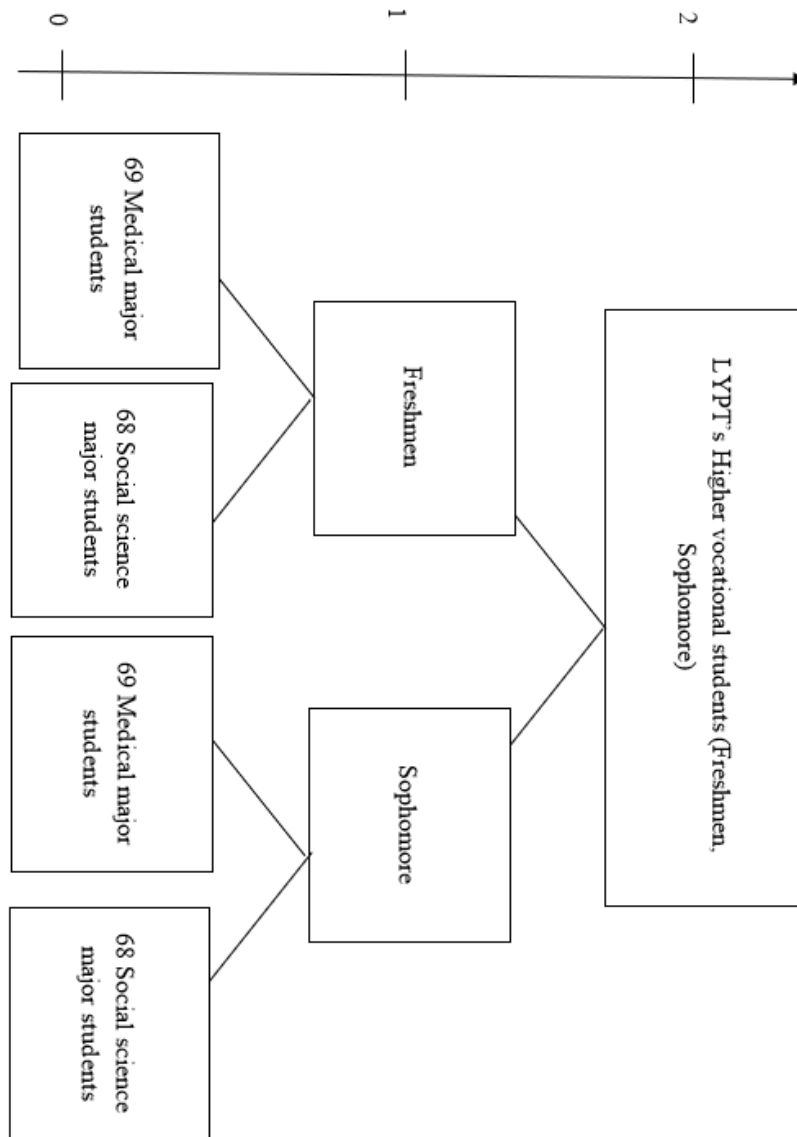
The objective of this study is to construct an intercultural awareness scale based on the theory of Baker (2012). Furthermore, the present study aims to assess the proposed intercultural awareness scale's validity and reliability through the utilization of the developed scale to students in one higher vocational college in Henan province.

3.3 Research design

This study has developed a scale for assessing the intercultural awareness of higher vocational English learners based on the intercultural awareness model of Baker (2011). Additionally, the suggested scale for intercultural awareness has been subjected to analysis by two specialists in the fields of intercultural awareness and scale design in order to ensure its validity.

The researchers employed a hierarchical clustering sampling strategy to identify the students who participated in this study. The process of hierarchical clustering entails the creation of a binary merge tree in Figure 2, which commences with the representation of individual data components as leaves, each handled as a distinct set consisting of a single member. The procedure proceeds by iteratively merging the two subsets that are deemed to be the most similar, as determined by a specific criterion, and this process continues until the root of the tree is reached, thereby covering all the components under examination (Nielsen, 2016).

Figure 2 Binary Merge Tree for Hierarchical Clustering



4. Developing the scale for ICA

4.1 Proposed design of scale for ICA

The researchers commenced the process of scale development by conducting a comprehensive literature review in the relevant field. A question pool was generated, comprising a collection of probable items. The items have been uniquely constructed based on three distinct degrees of intercultural awareness: basic cultural awareness, advanced cultural awareness, and intercultural awareness. The draft form comprised a total of 50 items. The materials that had been prepared were requested for assessment by specialists in the subject. In order to achieve this objective, the form was distributed to two specialists in the field of measurement and evaluation, as well as two specialists in the relevant domain, as previously utilized by Tavşancıl (2014). Based on the feedback received, an agreement was reached among the majority of experts to remove four elements, which were subsequently excluded from the scale. The final iteration of the scale was developed as a 5-point Likert scale consisting of 46 items. The administered scale was administered to the group of participants involved in the research study. The

participants assigned scores to the statements on a scale ranging from 5 (indicating complete agreement) to 1 (indicating complete disagreement). Based on the expert group's validating suggestions, the questionnaire has been divided into four distinct parts. The first part encompasses students' consisting of Q1-6; gender and focuses on gathering personal information. The second part, consisting of questions Q7 to Q16, aims to assess basic cultural awareness. The third part, comprising questions Q17 to Q32, delves into advanced cultural awareness. Lastly, the fourth part, encompassing questions Q33 to Q46, explores intercultural awareness.

4.2 Validity and reliability of ICA scale

The collected data were analyzed through Quantitative Data Analysis Software (SPSS). Data of two participants using less than 40 seconds to finish the questionnaire have been deleted to guarantee the validity. The exploratory factor analysis was performed to determine to construct validity of the scale. To obtain information about the item discrimination values, total item correlation was checked. The internal consistency reliability was explored through Cronbach alpha reliability coefficient.

4.2.1 Reliability

The internal consistency reliability was explored through Cronbach alpha reliability coefficient (Saka & Asma, 2020). Cronbach (1951) developed the coefficient alpha applicable to most item-scoring systems which has become the most widely used reliability index. The reliability of the ICA scale in this research has also been analyzed with Cronbach's Alpha in SPSS 26 which has been illustrated in Table 2. Based on the SPSS analyzing results, the Alpha values from 0.70 to 0.95 are considered as acceptable (Tavakol & Dennick, 2011). Cronbach's alpha coefficients of 0.9 or above indicate very good reliability for the test or scale, between 0.8 and 0.9 indicates good reliability, between 0.7 and 0.8 indicates acceptable reliability, between 0.6 and 0.7 indicates fair reliability, between 0.5 and 0.6 indicates less than optimal reliability, and if it is below 0.5, the questionnaire has to be considered for reformatting. As the reliability analyzing results in Table 3 indicate, the value of Cronbach's Alpha for all the items equals 0.969. The values of Cronbach's Alpha for the three levels of intercultural awareness are 0.936, 0.941, and 0.950 individually. Therefore, the ICA scale in this research is with very good reliability from different dimensions.

Table 2 Reliability analysis from different dimensions

Reliability Statistics	Cronbach's Alpha	N of Items
All the items	0.969	46
L1 of ICA	0.936	10
L2 of ICA	0.941	16
L3 of ICA	0.950	14

Note: Q7-16 indicate the first level of ICA (Basic cultural awareness); Q17-32 indicate the second level of ICA (Advanced cultural awareness); Q33-46 indicate the third level of ICA (Intercultural awareness).

4.2.2 validity

The validity evidence of the Intercultural Awareness Scale in this research was provided by the exploratory factor analysis and the correlation values for every item.

The principal component analysis method has been utilized for the factor analysis. Before computing the exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) test and Bartlett Sphericity test results were taken into account to test sampling adequacy which has also been used in the research of Saka & Asma (2020).

As is shown in the Table 4, the total items' value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy equals 0.950. The KMO values for the three levels of ICA are 0.923, 0.926 and 0.928 representatively. Since the KMO value is higher than .90 are considerably marvelous for factor analysis (Tavşancıl, 2014), this research on the higher vocational students' intercultural awareness is suitable for factor analysis on all the items and all the three levels of ICA.

For Bartlett's test, if the significance is less than 0.05, the original hypothesis is rejected, indicating that the factor analysis can be done. If the original hypothesis is not rejected, indicating that these variables may provide some information independently, and it is not suitable for factor analysis. As shown in Table 3, the p value of the Bartlett's test for all the items equals 0.000 ($<.05$) indicating that the original hypothesis is rejected and the factor analysis can be done in the ICA scale in this research. As for the three levels of ICA, all of them have 0.00 p values indicating that variables for the three levels of ICA are correlated with each other individually, factor analysis is effective, and the degree is appropriate.

Table 3 KMO and Bartlett's Test of the ICA Scale

	Kaiser-Meyer-Olkin	Bartlett's Test of Sphericity		
	Measure of Sampling Adequacy	Approx. Chi-Square	df	Sig.
All Items	.950	12402.549	780	0.00
L1 of ICA	.923	2285.110	45	0.00
L2 of ICA	.926	4498.338	120	0.00
L3 of ICA	.928	3463.306	91	0.00

Note Q7-16 indicate the first level of ICA (Basic cultural awareness); Q17-32 indicate the second level of ICA (Advanced cultural awareness); Q33-46 indicate the third level of ICA (Intercultural awareness).

4.3 Factor analysis of the ICA scale

As for finalizing the number of factors, Cattell (1966) emphasized the point where the variance's downward fall and the straight line representing the scree meet is typically considered the cutoff point for determining the number of factors. In the scree plot in Figure 3 generated from the factor analysis of SPSS 26, there is the downward fall from component 1 to component 3 and then the line from component 4 to component 40 generally remains straight. Therefore, the intercultural awareness scale of this research includes three components or factors based on the data analyzing results.

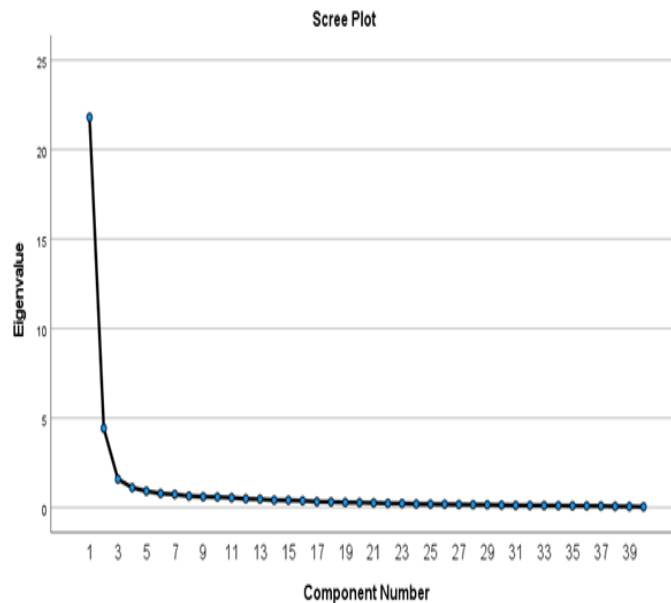


Figure 3 Scree plot of ICA scale

4.3.1 Factor analysis results

As for the variables for every factor, this research has designed the model that Factor 1 (First level of ICA) includes Q7 to Q16, Factor 2 (Second level of ICA) includes Q17 to Q32, Factor 3 (Third level of ICA) includes Q33 to Q46. Factor analysis results of the collected data have been illustrated in Table X below to evaluate the designed model for the intercultural awareness scale.

The Factor Analysis results in Table 5 reveal that Factor 1 measures Q8, Q9, Q10, Q11, Q13, and Q14 at 0.000*** respectively. At a significance level of 0.000***, the original hypothesis is rejected. Additionally, the standardized loading coefficients for all these variables exceed 0.6, indicating a substantial amount of variance explained. This suggests that the variables can be effectively represented on the same factor.

As shown in Table 5, the measurement items of Factor 2, namely Q18, Q19, Q20, Q21, Q23, Q25, Q29, Q30, and Q31, all exhibit a level of significance of 0.000***. Consequently, the original hypothesis is rejected. Additionally, the standardized loading coefficient for these items exceeds 0.6, indicating that they provide sufficient variance explained. This suggests that these variables can be considered to belong to the same factor.

Moreover, as shown in Table 4, the measurement items of Factor 3, namely Q34, Q35, Q37, Q38, Q44, Q45, and

Q46, have a level of significance of 0.000***. As a result, the original hypothesis is rejected. Additionally, the standardized loading coefficients of these items are greater than 0.6, indicating that they have sufficient variance explained. This suggests that these variables can be considered to belong to the same factor.

Table 4 Factor analysis results of the designed factor components model

Factor	Variable	Unstandardized	Std. Error	<i>p</i>	Standardized factor loading (Std. Estimate)
		factor loading (Coef.)			
ICA L1	Q8	1.000	-	-	0.831
ICA L1	Q9	1.026	0.054	0.000	0.887
ICA L1	Q10	1.065	0.055	0.000	0.898
ICA L1	Q11	1.005	0.063	0.000	0.795
ICA L1	Q13	1.020	0.057	0.000	0.858
ICA L1	Q14	1.063	0.054	0.000	0.903
ICA L2	Q19	1.000	-	-	0.902
ICA L2	Q18	0.892	0.048	0.000	0.803
ICA L2	Q20	0.996	0.043	0.000	0.889
ICA L2	Q21	1.041	0.044	0.000	0.899
ICA L2	Q23	0.985	0.042	0.000	0.891
ICA L2	Q25	0.966	0.045	0.000	0.859
ICA L2	Q29	0.883	0.049	0.000	0.795
ICA L2	Q30	1.021	0.047	0.000	0.866
ICA L2	Q31	0.967	0.047	0.000	0.849
ICA L3	Q35	1.000	-	-	0.811
ICA L3	Q34	0.950	0.062	0.000	0.792
ICA L3	Q37	0.903	0.061	0.000	0.775
ICA L3	Q38	1.071	0.060	0.000	0.886
ICA L3	Q44	0.984	0.061	0.000	0.822
ICA L3	Q45	0.977	0.059	0.000	0.844
ICA L3	Q46	1.065	0.059	0.000	0.892

Note: A '-' indicates that the item is a reference item.

4.3.2 AVE and CR for every factor

The findings from the assessments conducted on the average variance extracted (AVE) and combined reliability (CR) for every factor in Table 5 below indicate that: Based on ICA L1 (the first factor), the average variance extracted (AVE) has a value of 0.744, above the threshold of 0.5. Additionally, the combined reliability (CR) has a value of 0.946, surpassing the threshold of 0.7. These findings suggest that the extraction of the measures inside

the factor is of high quality. According to the analyzing results, the Average Variance Extracted (AVE) of ICA L2 has a value of 0.744, surpassing the threshold of 0.5. Additionally, the Combined Reliability (CR) has a value of 0.963, beyond the threshold of 0.7. These results indicate that the extraction of the measures inside the factor is of high quality. Moreover, the Average Variance Extracted (AVE) of ICA L3 has a value of 0.693, surpassing the threshold of 0.5. Additionally, the Combined Reliability (CR) has a value of 0.940, beyond the recommended threshold of 0.7. These results indicate that the extraction of the measures inside the factor is of high quality.

Table 5 Average variance extracted (AVE) and combined reliability (CR) of each factor for the ICA scale

Factor	AVE (Average Variance Extracting)	CR (composite reliability)
ICA L1	0.744	0.946
ICA L2	0.744	0.963
ICA L3	0.693	0.940

4.4 Evaluation of the model for ICA scale

4.4.1 Analysis of the proposed coefficients of the three factors

According to the model path coefficient for the three factors listed in Table 6 below, it is evident that the significance P value for the relationship between Factor 1 and Factor 2 is 0.000***. The significance, represented horizontally, indicates that the original assumption is rejected, thus confirming the validity of this path. Furthermore, the influence factor for this path is determined to be 0.896. Based on the observed correlation between Factor 2 and Factor 3, the statistical significance, as indicated by the p-value of 0.000***, suggests that the initial assumption is rejected. Consequently, this pathway can be considered valid, with a substantial effect factor of 0.976. Based on the correlation between Factor 1 and Factor 3, the obtained significance p-value is 0.188. Furthermore, there is no statistically significant relationship observed in the horizontal direction. Consequently, the initial assumption cannot be refuted, indicating that this pathway lacks validity.

Table 6 Regression Coefficients of the three levels of intercultural awareness

Latent variable	→	Explicit variable	Non standardized coefficient	Standardization coefficient	Standard error	Z	P
Level 1	→	Level 2	0.907	0.896	0.072	12.646	0.000***
Level 2	→	Level 3	0.899	0.976	0.103	8.725	0.000***
Level 1	→	Level 3	-0.11	-0.118	0.084	-1.316	0.188

Note: ***, **, * represents the level of significance of 1%, 5% and 10% respectively

4.4.2 Structural Equation Model (SEM) analysis results

The Amos 17.0 software was used to fulfill the structural equation model (SEM) analysis of the proposed ICA scale in order to assess the adequacy of the scale. The model fit indices were derived by validating the hypothesis model using confirmatory factor analysis (CFA). As the analyzing results indicate, the RMR, CFI, NNFI, TLI, IFI, PGFI, PNFI, PCFI, SRMR values of indicators of structural fit models for the proposed ICA scale are satisfactory with the revised structural model by eliminating the variable with low regression value. The goodness-of-fit indices of the structural equation model (SEM) indicate that the ICA scale's structural model path diagram, as depicted in Figure X, exhibits a strong fit with the observed data. These indices fall within the acceptable range and align with the evaluation criteria for overall model fit in SEM. Consequently, we can infer that the improved ICA scale model demonstrates high validity.

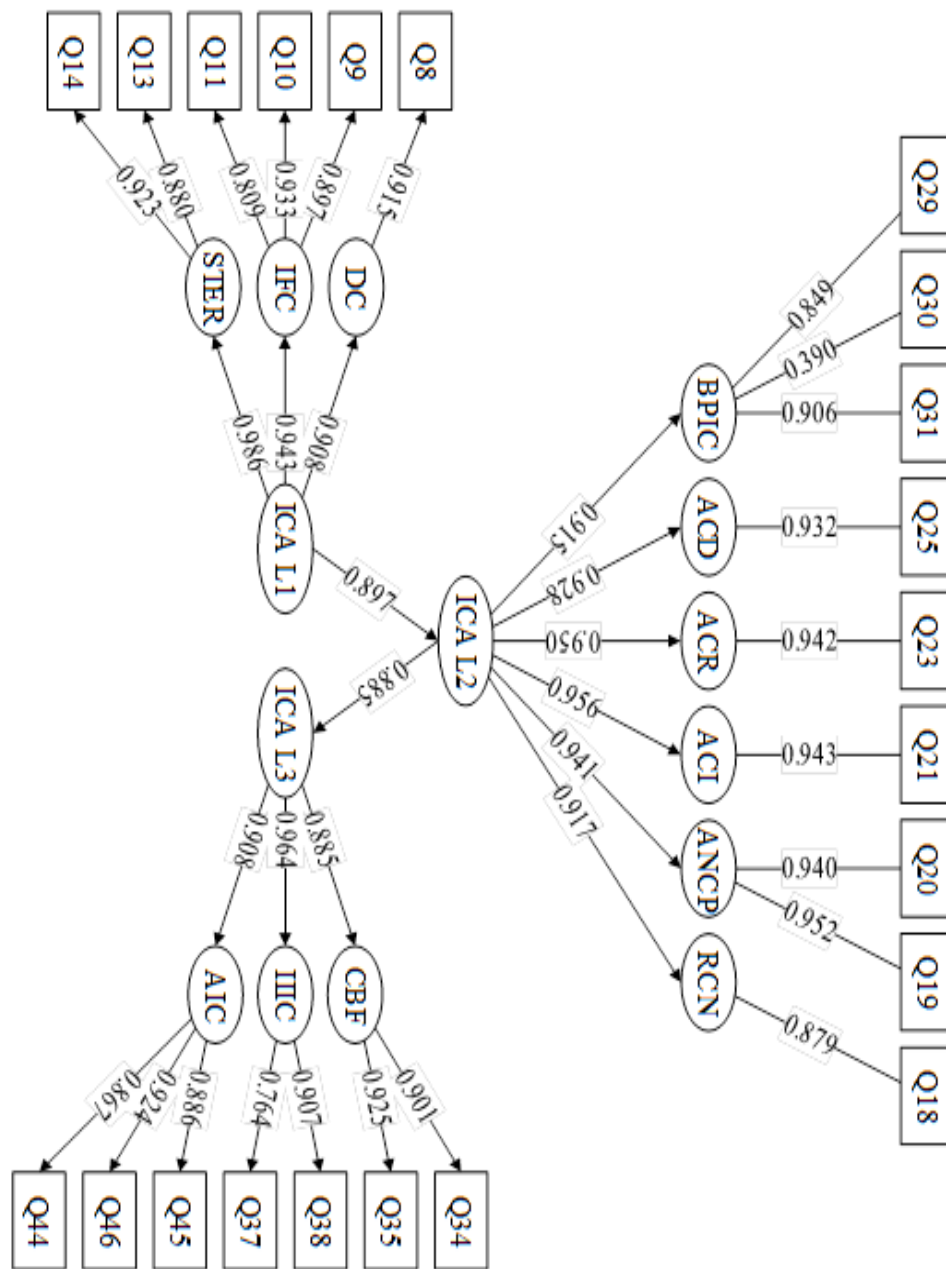


Figure 4 Revised ICA Scale Structure Model Path

Note. ICA L1 = Basic cultural awareness(DC= Definition of culture, IFC = Influence of first culture, STER =

Stereotype), ICA L2 = Advanced cultural awareness (RCN = Relativity of cultural norms, ANCP = Awareness of different national cultural perspectives, ACI = Awareness of cultural identity, ACR = Awareness of cultural revision, ACD = Awareness of cultural differences, BPIC = Basic practice of intercultural communication), ICA L3 = Intercultural awareness (CBF = Culturally based frames, IIIC = Initial interaction in intercultural communication, AIC = Advanced intercultural communication)

As shown in Figure 4, the structural model for ICA scale has been revised based on the structural equation model analysis results in order to guarantee the requirements of the Indicators of Structural Fit Models. Therefore, the revised ICA scale includes ICA L1 (Basic cultural awareness) which is analyzed from three perspectives: DC (Definition of culture) with Q8, IFC (Influence of first culture) with Q9, Q10 and Q11, STER (Stereotype) with Q13 and Q14. Moreover, the ICA L2 (Advanced cultural awareness) is analyzed from six perspectives: RCN (Relativity of cultural norms) with Q18, ANCP (Awareness of different national cultural perspectives) with Q19 and Q20, ACI (Awareness of cultural identity) with Q21, ACR (Awareness of cultural revision) with Q23, ACD (Awareness of cultural differences) with Q25, BPIC (Basic practice of intercultural communication) with Q29, Q30 and Q31. As for the third level of ICA L3 (Intercultural awareness), three dimensions have been analyzed in this scale. The first dimension is CBF (Culturally based frames) with Q34 and Q35. The second dimension is IIIC (Initial interaction in intercultural communication) with Q37 and Q38. The third dimension is AIC (Advanced intercultural communication) with Q44, Q45 and Q46.

5. Discussion

The intercultural awareness scale has been constructed based on the 12 components of ICA (Baker, 2012). Furthermore, the developed ICA scale also incorporates subthemes of basic cultural awareness and advanced cultural awareness as delineated by Abdzadeh and Baker (2020). Moreover, the developed intercultural awareness scale has also combined the ICA scale of Asma and Saka (2020), Huang (2022) and the intercultural sensitivity scale devised by Chen & Starosta (2000). All these components are the influencing factors for the developing of the intercultural awareness scale in this research.

As the reliability analyzing results of the developed ICA scale indicate, the value of Cronbach's Alpha for all the items equals 0.969. The values of Cronbach's Alpha for the three levels of intercultural awareness are 0.936, 0.941, and 0.950 individually. Therefore, the ICA scale in this research is with very good reliability from different dimensions with Cronbach's alpha coefficients of above 0.9 (Tavakol & Dennick, 2011).

As for the validity of the developed ICA scale, the total items' value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy equals 0.950. The KMO values for the three levels of ICA are 0.923, 0.926 and 0.928 representatively. Since the KMO value is higher than .90 are considerably marvelous for factor analysis (Tavşancıl, 2014), the developed ICA scale is also valid for further factor analysis. As for the variables for every factor, this research has designed the model that Factor 1 (First level of ICA) includes Q7 to Q16, Factor 2 (Second level of ICA) includes Q17 to Q32, Factor 3 (Third level of ICA) includes Q33 to Q46. Based on the factor analysis result, Q7, Q17 and Q33 with null p value have been deleted from the developed ICA scale.

Based on the structural equation model (SEM) analysis results, the structural model for ICA scale has been revised accordingly. Therefore, the revised ICA scale includes ICA L1 (Basic cultural awareness) with Q8, Q9, Q10, Q11,

Q13 and Q14. Moreover, the ICA L2 (Advanced cultural awareness) is analyzed with Q18, Q19, Q20, Q21, Q23, Q25, Q29, Q30 and Q31. In addition, the third level of ICA L3 (Intercultural awareness) is analyzed with Q34 Q35, Q37, Q38, Q44, Q45 and Q46.

6. Conclusion

The three levels of the intercultural awareness scale developed in this research have been constructed based on the 12 components of ICA in the intercultural awareness theory of Baker (2012). Moreover, the reliability and validity of the developed intercultural awareness scale are satisfactory. This research has filled the gap that there is no scale to analyze three levels of intercultural awareness of higher vocational English learners in China.

Nevertheless, the scope of this study is restricted to a specific higher vocational institution located in Henan province. It is recommended that the scale measuring the three levels of intercultural awareness be administered to students residing in different areas of China.

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