Indonesian Adaptation of The Cultural Intelligence Scale (CQS)

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Abstract

Indonesia is a country with diverse cultural backgrounds, so intercultural interactions often occur. This research aims to adapt the Cultural Quotient Scale developed by Ang and Van Dyne (2008) into Indonesian to support various research on cultural intelligence. The CQS measuring tool consists of 20 statement items and is divided into 4-factors, namely metacognitive, cognitive, motivational, and behavioral. Testing was carried out using the Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) methods involving 324 Satya Wacana Christian University students who were divided into 2 random sample groups (EFA, n=162 & CFA, n=162). The results of this research indicate that the 4-factor structure of the 17 items of the Indonesian version of the CQS statement has a "good fit" psychometric property model. This means that the Indonesian adaptation of CQS can be used in various related research. It is hoped that future research will be able to test the convergent validity of the adaptation of this measuring instrument.

Keywords: Indonesian version of cultural quotient scale, exploratory factor analysis, confirmatory factor analysis.

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Introduction

Cultural intelligence is the ability individuals need to engage in effective intercultural interactions (Harmi et al., 2020). Ang and Van Dyne (2008) further explain that cultural intelligence is the ability of individuals to function effectively in various cultures, including national, organizational, ethnic, and other types of cultures. Cultural intelligence is conceptualized as a specific form of intelligence focused on an individual's ability to understand culturally diverse situations (Latif, 2017). To apply cultural intelligence effectively, individuals need to have social skills to determine appropriate behavioral styles in intercultural environments (Husin & Ahmad, 2015).

The concept of cultural intelligence instruments developed by Ang and Van Dyne (2008) focuses on an individual's ability to understand, interpret, and respond to cultural differences effectively. The measurement of cultural intelligence developed by Ang and Van Dyne (2008) employs a multidimensional approach encompassing an individual's metacognitive, cognitive, affective, and behavioral aspects. Meanwhile, the concept of cultural intelligence developed by Sparrow et al., (2004) focuses on an individual's ability to learn and adapt to new cultures. The cultural intelligence measurement developed by Sparrow et al. (2004) is unidimensional, measuring only one dimension, namely cultural intelligence. Additionally, there is the concept of cultural intelligence developed by Early, Ang, Bhagat, and Peterson

(2005), which focuses on an individual's ability to work effectively in cross-cultural teams. This concept uses a multidimensional approach that includes cognitive and behavioral aspects.
Cultural intelligence is a concept developed by Early and Ang (2003) in response to the phenomenon of globalization, which has increased intercultural interactions, potentially leading to misunderstandings, tensions, and cultural conflicts. This theory explains how individuals can function (understand, strategize, and behave) within diverse cultural contexts. Cultural intelligence is formulated as a specific form of intelligence focusing on an individual's ability to understand and reason accurately in situations characterized by cultural diversity. This concept is rooted in the intelligence theory proposed by Sternberg (as cited in Early & Ang, 2003), which suggests that there are different locus of Intelligence within each individual.

Early and Ang (in Gooden et al., 2017) developed the construct of cultural intelligence and proposed that it consists of four dimensions. These dimensions are: metacognitive (about the cultural awareness an individual possesses when in a different cultural environment and the strategic abilities used to adapt), cognitive (the individual's knowledge of the culture in which they are situated), affective (the interest and willingness an individual shows in understanding cultural differences), and behavioral (the behaviors exhibited as a manifestation of understanding cultural differences).

Cultural intelligence is an essential framework for achieving cross-cultural competence (Gooden et al., 2017). Jyoti and Sumeet (2015) found in their research that individuals with high cultural intelligence exhibit strong task performance, excel, and can be assigned to international tasks due to their effective interaction skills in culturally diverse situations. Additionally, Boštjančič et al., (2018) revealed that individuals with high cultural intelligence possess good metacognitive, behavioral, and motivational abilities, enabling them to work effectively with others from different cultures.

Various studies on cultural intelligence have been conducted. For instance, research by Şahin and Gürbüz (2014) explains that cultural intelligence is a predictor contributing to an individual's adaptive performance. Additionally, it was found that cultural intelligence is related to openness to experience and extraverted attitude (Presbitero, 2016). Cultural intelligence also plays a crucial role in reducing anxiety and effectively influences job satisfaction (Bücker et al., 2014).

The concept of cultural intelligence or cultural quotient (CQ) refers to an individual's capability to function effectively across various cultural contexts and was first developed by Early and Ang (2003). Subsequently, the cultural quotient scale was developed by Ang and Van Dyne (2008), based on the definition and dimensions of cultural intelligence proposed by Early and Ang (2003). The Cultural Quotient Scale was tested on students in Singapore three times. In the first study, the Cultural Quotient Scale consisted of 40 items and involved 576 students. The second study involved 447 students with a 20-item Cultural Quotient Scale, and the third study involved 204 students with a 20-item Cultural Quotient Scale.

The validation of the cultural intelligence scale has been conducted in various countries, such as Persia (Khodadady & Ghahari, 2011), Spain (Tabernero et al., 2015), China (Bücker et al., 2015), Serbia (Starčević et al., 2017), Slovenia (Boštjančič et al., 2018; Boštjančič et al., 2018), Italy (Gozzoli & Gazzaroli, 2018; Ghislieri et al., 2021), Croatia, Ireland, and Serbia (Piršl et al., 2022), and Congo (Ayikwa, 2022). The criterion validity test of the Cultural Intelligence Scale (CQS) adaptation into Italian was

conducted by exploring the correlation between cultural quotients and several constructs expected to be related. The results of the Italian adaptation of the CQS showed that all four CQ dimensions were significantly and positively correlated with resilience, self-efficacy, and openness to experience. Similarly, the adaptation of the CQS into German by Greischel et al. (2020) demonstrated good convergent and discriminant validity.

Generally, studies from these various countries show consistent results, confirming that the adapted cultural intelligence scale is composed of 4 factors and consists of the same 20 items as the original scale. However, the adaptation of the cultural intelligence scale into German (Greischel et al., 2021) produced different results. The German adaptation of the cultural intelligence measurement tool resulted in a bi-factorial model comprising specific factors (i.e., cognitive, motivational, and behavioral) as well as a general factor.

To the best of the researchers' knowledge, no studies have yet been conducted on adapting the cultural intelligence scale in Indonesia. A related instrument adaptation was carried out by Widodo and Chotimah (2023), who adapted the Multicultural Competence Scale for Prospective Teachers. However, this scale measures multicultural competence, a construct distinct from cultural intelligence, and is specifically designed for prospective teachers. Meanwhile, the cultural intelligence scale is designed for a broader population.

Research on cultural intelligence has been conducted across various groups, especially among university students (Al Ghanniy & Akmal, 2018; Geofany et al., 2022; Mulyati et al., 2022; Nugraha et al., 2022; Prayoga et al., 2022; Pujiyanto et al., 2022; Rojuaniah et al., 2023; Al Katuuk, 2023; Zulaeha et al., 2023). However, these studies primarily used qualitative methods, while some others employed quantitative methods by independently translating the cultural intelligence scale without undergoing a cultural adaptation process.

Indonesia is a country with diverse cultural backgrounds. This diversity results in high levels of intercultural interactions among all groups in various situations (Mailin et al., 2023). Therefore, the development of cultural intelligence measurement is necessary to support various studies related to intercultural interactions occurring in Indonesia.

As far as the research has been conducted, no adaptation of the cultural intelligence measurement tool into Indonesian has been found. Therefore, it is necessary to adapt the cultural intelligence scale to the Indonesian language. With a culturally adapted cultural intelligence scale available in Indonesian, research in Indonesia on cultural intelligence and related topics involving cross-cultural interactions can further advance. This study aims to measure the reliability, confirm the factor structure, and validate the scale that has been adapted to the Indonesian language.

Method

Design

This study employed a descriptive quantitative research design to provide a profile of the sample characteristics and baseline data on the adapted scale.

Participants

Participants in this study were students from the 2021 and 2022 cohorts at 14 faculties of Satya Wacana Christian University, totaling 324 students. Demographic data collected included gender, year of enrollment, faculty, and place of origin. The 324 participant data were then divided into two groups for factor analysis, with 162 data for exploratory factor analysis (EFA) and 162 for confirmatory factor analysis (CFA).

Adaptation Procedure

The scale adaptation procedure in this study followed the International Test Commission Guidelines for Translating and Adapting Tests (International Test Commission, 2018). The adaptation process consisted of forward translation and review by experts in psychology, particularly those with expertise in cultural intelligence and psychological measurement.

Questionnaire

This study used the Cultural Quotient Scale (CQS) developed by Ang et al. (2007). Permission to adapt the scale was requested via email to Dr. Soon Ang, PhD, including research questions, sample descriptions, and research design as an overview of the study. The scale comprises 20 items divided into four dimensions: metacognitive (4 items), cognitive (6 items), motivational (5 items), and behavioral (5 items). The scale was adapted into Indonesian and distributed via various social media platforms to Satya Wacana Christian University students through Google Forms.

Data Analysis

The data analysis in this study included item discrimination tests, reliability tests, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) using IBM SPSS version 26.0 and JASP version 0.19.1 software.

Result

Participant Demographics

Participants in this study were predominantly female, with 219 female students (67.59%), while male students numbered 105 (32.4%). 197 (60.8%) participants were from the class of 2021, and 127 (39.19%) were from the class of 2022. The majority of participants came from the Faculty of Information Technology (51 students), the Faculty of Psychology (47 students), and the Faculty of Economics and Business (43 students), while others came from various other faculties. Pulau Jawa was the dominant region of origin for participants in this study, with 110 students (33.95%). Most participants (172 students or 53.08%) had been residing in Salatiga for 6 to 12 months, and 272 participants (83.95%) lived in boarding houses. Complete demographic data can be seen in Table 1.

Table 1

Participant Demographics

Demographic Data		Frequency	Percentage
Gender	Male	105	32.4%
	Female	219	67.59%
	Total	**324**	**100%**
Cohort Year	2021	197	60.8%
	2022	127	39.19%
	Total	**324**	**100%**
Faculty	Language and Arts	5	1.54%
	Biology	10	3.08%
	Economics and Business	43	13.27%
	Law	19	5.86%
	Social and Communication Science	33	10.18%
	Interdisiplinary	10	3.08%
	Medicine and Health Sciences	27	8.33%
	Teacher Training and Education	29	8.95%
	Agriculture and Business	8	2.46%
	Psychology	47	14.5%
	Mathematics and Natural Science	9	2.77%
	Electronics and Computer Engineering	3	0.92%
	Information Technology	51	15.74%
	Theology	30	9.25%
	Total	**324**	**100%**
Origins	Sumatera	41	12.65&
	Borneo	34	10.42%
	Java	110	33.95%
	Bali and Nusa Tenggara	39	12.03%
	Sulawesi	32	9.87%
	Maluku Islands	20	6.17%
	Papua	48	14.81%
	Total	**324**	**100%**
Length of Stay in Salatiga	<6 months	2	5.88%
	6-12 months	172	53.08%
	12-18 months	73	22.53%
	18-24 months	35	10.8%
	>24 months	42	12.96%
	Total	**324**	**100%**
Residence	Dormitory	9	2.77%
	Boarding House	272	83.95%
	Rented House with Friends	43	13.27%
	Total	**324**	**100%**

Reliability Test and Item Discrimination Test

The Cronbach's Alpha value obtained from the scale reliability test was 0.907, indicating that the statements in this scale are reliable based on the reliability reference value of ≥0.70 (Azwar, 2020). Based on the results of the item discrimination test, it was found that the range of Corrected Item-Total Correlation values was between 0.445 and 0.628 (see table 2), indicating that all statements in this scale have good discrimination because the Corrected Item-Total Correlation value is ≥0.30 (Azwar, 2020).

Table 2
Item Discrimination Test

Items	Corrected Item-Total Correlation
Meta1	0.538
Meta2	0.519
Meta3	0.574
Meta4	0.484
Cog5	0.548
Cog6	0.553
Cog7	0.595
Cog8	0.512
Cog9	0.576
Cog10	0.508
Mot11	0.516
Mot12	0.597
Mot13	0.628
Mot14	0.590
Mot15	0.601
Behav16	0.445
Behav17	0.600
Behav18	0.536
Behav19	0.526
Behav20	0.494

Exploratory Factor Analysis (EFA)
Based on the Kaiser-Meyer-Olkin (KMO) test, the obtained KMO value was 0.904, indicating that the sample in this study was adequate for conducting exploratory factor analysis, concerning the good KMO value standard of 0.60 (Yong & Pearce, 2013). Furthermore, the significance value of the Bartlett test obtained was 0.000 (Yong & Pearce, 2013), indicating that the analysis will proceed with principal component analysis. Subsequently, the items will be displayed in factor loadings, and the value of each statement will be examined. If there are statement items with values less than 0.50 (Yong & Pearce, 2013), those items will be deemed invalid and must be eliminated from the scale (see table 3).

Table 3
Kaiser-Meyer-Olkin (KMO) and Bartlett Test Results

KMO Measure of Sampling Adequacy	Bartlett's Test of Spericity (Sig.)
0.904	0.000

Based on the results of the Exploratory Factor Analysis, it was found that four factors were formed. Factor 1, cognitive, consists of items 5, 6, 7, 8, 9, and 10 with a range of values from 0.574 to 0.742. Factor 2, motivational, consists of items 11, 12, 13, 14, and 15 with a range of values from 0.550 to 0.707. Factor 3, behavioral, consists of items 16, 17, 18, 19, and 20 with a range of values from 0.553 to 0.739, and Factor 4, metacognitive, consists of items 1, 2, 3, and 4 with a range of values from 0.438 to 0.728. There is one item (item 4) with a value of 0.438 which is less than 0.50, so this item should be eliminated or removed from the scale (Yong & Pierce, 2013). Additionally, there are two items (items 15 & 17)

spread across two factors; therefore, these two items should be eliminated from the scale construction (see table 4).

Table 4
Rotated Factor Matrix Test Results

Items	Factor Loadings			
	1	2	3	4
1Meta1				0.657
Meta2				0.697
Meta3				0.728
Meta4				**0.438**
Cog5	0.574			
Cog6	0.649			
Cog7	0.742			
Cog8	0.727			
Cog9	0.664			
Cog10	0.658			
Mot11		0.578		
Mot12		0.653		
Mot13		0.707		
Mot14		0.628		
Mot15	**0.303**	**0.550**		
Behav16			0.542	
Behav17		0.313	0.596	
Behav18			0.739	
Behav19			0.687	
Behav20			0.553	

Confirmatory Factor Analysis (CFA)
Before conducting the CFA testing, the researcher conducted assumption testing consisting of the Kaiser-Meyer Olkin test (KMO), Anti-Image Correlation, and Communalities using IBM SPSS version 26 software.

Based on the results of the Kaiser-Meyer-Olkin test, it was found that the KMO value was 0.904 which is greater than 0.60 and means that the sample in this study has been adequate for conducting confirmatory factor analysis (Table 5).

Table 5
KMO and Bartlett's Test Results

KMO Measure of Sampling Adequacy	Bartlett's Test of Spericity (Sig.)
0.904	0.000

The test results in Table 6 show Anti-Image Correlation values ranging from 0.857 to 0.935 which are greater than 0.50 (Matsunaga, 2010), thus it can be concluded that the statement items in this scale have met the assumption of Measure of Sampling Adequacy (MSA) and can be further analyzed without eliminating specific items.

Table 6

Anti-Image Correlation

Items	Anti-Image Correlation
Meta1	0.896
Meta2	0.901
Meta3	0.896
Meta4	0.917
Cog5	0.925
Cog6	0,909
Cog7	0.891
Cog8	0.878
Cog9	0.887
Cog10	0.915
Mot11	0.935
Mot12	0.917
Mot13	0.918
Mot14	0.931
Mot15	0.934
Behav16	0.886
Behav17	0.901
Behav18	0.884
Behav19	0.857
Behav20	0.904

Based on the results presented in Table 7, the range of extraction values falls between 0.454 and 0.733. This indicates that one statement item (item 4) possesses an extraction value of 0.454, suggesting it is not adequately accounted for within the metacognitive factor. In simpler terms, item 4 does not appear to relate closely to the construct being measured. Alternatively, item 4 may potentially align more closely with the other three factors within this variable. Conversely, all remaining items, with values ranging from 0.512 to 0.733, demonstrate relevance to the factors established within the measured variable.

Table 7

Communalities

Items	Extraction
Meta1	0.662
Meta2	0.684
Meta3	0.733
Meta4	**0.454**
Cog5	0.512
Cog6	0.569
Cog7	0.670
Cog8	0.644
Cog9	0.607
Cog10	0.574
Mot11	0.572
Mot12	0.636
Mot13	0.686
Mot14	0.645
Mot15	0.564
Behav16	0.518
Behav17	0.605
Behav18	0.678
Behav19	0.672
Behav20	0.524

Furthermore, the researcher conducted Confirmatory Factor Analysis (CFA). The CFA testing process was carried out twice, where the first test was conducted to determine the mapping of statement items to each factor, the factor loading values for each statement item, and the values of GFI, RMSEA, CFI, and SRMR. In the first test, it was found that the statement items in this scale were mapped to 4 factors that corresponded to the results of the EFA and the mapping already conducted by the scale developers. Then, the test results showed GFI (0.901), RMSEA (0.060), CFI (0.931), and SRMR (0.051) values, thus indicating that this scale falls into the "acceptable fit" model concerning RMSEA <0.08, CFI >0.9, and SRMR <0.10 (Matsunaga, 2010) (see Table 8).

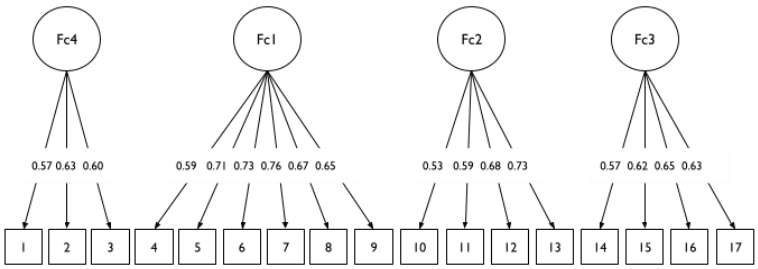

Figure 1. Final Model of Cultural Intelligence Measurement

Table 8

CFA Test Results

Items	Original Version				Modified Version (Suggested EFA results)			
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 1**	**Factor 2**	**Factor 3**	**Factor 4**
Meta1				0.561				0.570
Meta2				0.621				0.637
Meta3				0.614				0.603
Meta4				**0.516**				**Deleted**
Cog5	0.596				0.597			
Cog6	0.708				0.710			
Cog7	0.734				0.736			
Cog8	0.767				0.766			
Cog9	0.674				0.670			
Cog10	0.650				0.650			
Mot11		0.523				0.532		
Mot12		0.612				0.591		
Mot13		0.680				0.683		
Mot14		0.719				0.733		
Mot15		**0.624**				**Deleted**		
Behav16			0.616				0.574	
Behav17			**0.600**				**Deleted**	
Behav18			0.658				0.622	
Behav19			0.587				0.657	
Behav20			0.591				0.637	
Parameter Ketepatan Model		GFI = 0.901 RMSEA = 0.060 CFI = 0.931 SRMR = 0.051			Parameter Ketepatan Model		GFI = 0.926 RMSEA = 0.56 CFI = 0.950 SRMR = 0.045	

The final model of the cultural intelligence measurement can be observed in the figure above (Figure 1). Based on the results of the CFA testing, it was found that Factor 1 represents cognitive, Factor 2 represents motivational, Factor 3 represents behavioral, and Factor 4 represents metacognitive aspects.

Assembly of the Final Scale

Based on the entire series of tests conducted, 17 statement items can be used to measure the level of cultural intelligence in Indonesia, as presented in the table below.

Table 9
Items Cultural Intelligence scale in Indonesian

No.	Items
1.	Saya sadar akan pengetahuan budaya yang saya gunakan ketika berinteraksi dengan orang-orang dengan latar belakang budaya yang berbeda.
2.	Saya menyesuaikan pengetahuan budaya saya ketika saya berinteraksi dengan orang-orang dari budaya yang tidak saya kenal
3.	Saya sadar akan pengetahuan budaya yang saya terapkan pada interaksi lintas budaya.
4.	Saya mengetahui sistem hukum dan ekonomi budaya lain.
5.	Saya mengetahui aturan bahasa (kosakata, tata bahasa) dari bahasa daerah lain
6	Saya mengetahui nilai budaya dan keyakinan religi dari budaya lain.
7.	Saya mengetahui sistem pernikahan di budaya lain.
8.	Saya mengetahui kesenian dan kerajinan tangan budaya lain.
9.	Saya mengetahui aturan ekspresi perilaku nonverbal budaya lain.
10.	Saya menikmati berinteraksi dengan orang dari budaya yang berbeda.
11.	Saya yakin bahwa saya dapat bersosialisasi dengan orang lokal di budaya yang tidak familiar bagi saya.
12.	Saya yakin saya dapat mengatasi stres dalam penyesuaian budaya yang baru untuk saya.
13.	Saya menikmati tinggal di budaya yang tidak familiar untuk saya.
14.	Saya mengubah perilaku verbal saya (cth: logat, nada bicara) ketika diperlukan dalam interaksi lintas budaya.
15.	Saya memvariasikan kecepatan berbicara saya ketika situasi lintas budaya membutuhkannya.
16.	Saya mengubah perilaku nonverbal saya ketika situasi lintas budaya membutuhkannya.
17.	Saya mengubah ekspresi wajah saya ketika interaksi lintas budaya membutuhkannya

Discussion

Cultural intelligence is an individual's ability to function effectively in cross-cultural situations (Fantini, 2009; Early & Ang, 2003). The concept of cultural intelligence developed by Sparrow, et al., (2004) complements other perspectives on intelligence that solely focus on cognitive factors (Early & Ang, 2003; Moyano et al., 2014). To measure cultural intelligence, Ang and Van Dyne (2008) developed the Cultural Quotient Scale (CQS). This study adapted that measurement tool into the Indonesia language, thereby contributing to further research on cultural intelligence in Indonesian society.

The results of the reliability test indicate that the Indonesian version of the CQS measurement tool has a high-reliability score (α = 0.907). This means that the Indonesian version of the CQS measurement tool is considered reliable and can be used to measure the cultural intelligence of Indonesian society. Additionally, the results of the item discrimination test in the study show that all statement items in the Indonesian version of the CQS have good corrected-item total correlations, ranging from scores of 0.445 to 0.628. This indicates that all statement items in the CQS are capable of distinguishing individuals or groups with high or low cultural intelligence (Azwar, 2020).

The EFA testing results on the first sample group indicate that the Indonesian version of the cultural intelligence scale comprises 4 factors. However, in this testing, items number 4, 15, and 17 were eliminated, leaving 17 statement items. Item number 4 ("I check the accuracy of my cultural knowledge

when I interact with people from different cultures") had a factor loading value of 0.438, which is less than 0.50, and therefore, it needed to be eliminated from the scale (Yong & Pierce, 2013).

Additionally, there were 2 statement items, item 15 ("I am confident that I can adapt to shopping conditions in different cultures") and item number 17 ("I use pauses and silence differently to adjust to different cross-cultural situations"), which had factor loading scores in 2 factors. Hence, both of these statement items had to be eliminated from the scale. The testing results indicated that item number 15 had factor loading in the motivation and metacognitive factors, while item number 17 had factor loading in the motivation and behavioral factors.

The CFA test indicates that this Indonesian version of the cultural intelligence scale comprises 4 factors consisting of 17 statements. This testing result differs from the original cultural intelligence measurement tool developed by Earley & Ang (2003). The modification was made by the researchers to achieve psychometric property testing results that meet the "good fit" criteria. These research findings contrast with those of Moyano et al., (2014), who adapted the cultural intelligence measurement tool into Spanish. The results of Moyano et al. (2014) show that the CFA results are similar to the original measurement tool (Ang et al., 2008), with four factors and twenty statement items.

Modifications to the cultural intelligence scale in another adaptation study were found in the research by Greischel et al., (2021), which examined a population in Germany. Greischel et al.'s (2021) study found that the adaptation of the cultural intelligence measurement tool into German resulted in a bi-factorial model comprising specific factors (namely cognitive, motivational, and behavioral factors) as well as a general factor.

The differences between the results of the original measurement tool and the Indonesian version may be due to a high tendency of social desirability among the Indonesian population. It is evident from statement number 4 that 65.74% of participants chose "agree" and "strongly agree" responses. Similarly, for statement number 15, 64.19% of participants selected "agree" and "strongly agree" responses. Regarding statement number 17, 71.29% of participants chose "agree" and "strongly agree" responses. Indonesia itself is a country with diverse ethnicities and cultures, characterized by values of tolerance as depicted in the motto "Bhineka Tunggal Ika" (Unity in Diversity). This could be a reason why Indonesian society tends to be expected to show a willingness to interact with people from diverse cultures.

Moreover, it is suspected that these three statement items contain biases in evaluating the personal skills possessed by participants. Participants in this study come from various cultural backgrounds in Indonesia, each with different communication habits. These regional differences may lead to different perceptions in interpreting the definitions of "accuracy of cultural knowledge," "the circumstances or situations related to the act of shopping.," and " the deliberate and strategic use of moments of silence or pauses in communication."

From the results of the test, it is known that the Indonesian version of the cultural intelligence scale has four components similar to its original version but with a different number of statement items. Factor 1 (cognitive) consists of 6 statement items. This factor depicts an individual's knowledge of the culture in their environment. Factor 2 (motivational) comprises 4 statement items, illustrating the interest individuals show in understanding cultural differences. Factor 3 (behavioral) consists of 4 statement items

referring to behaviors exhibited as manifestations of cultural understanding. Lastly, factor 4 (metacognitive) comprises 3 statement items, measuring an individual's cultural awareness when in different cultural contexts and the strategic abilities used for adaptation.

Limitation

This study has several limitations. One limitation is the translation process of the measurement tool, which only employed the forward translation method and did not involve backward translation. Subsequent research is recommended to conduct a translation process that includes both forward and backward translation to yield better translation results. Another limitation is the lack of comprehensive validity testing in this study, thus failing to provide evidence of concurrent and discriminant validity. Additionally, data collection in this study was conducted only among students from one university, thus not representing a broader population group. However, participants in this study were sourced from various regions in Indonesia, including Sumatra, Jawa, Kalimantan, Bali and Nusa Tenggara, Maluku Province, and Papua. Future research is expected to examine more diverse groups that were not represented in this study.

Conclusion

The results of this study indicate that the Indonesian version of the cultural intelligence measurement tool demonstrates a "good fit" model among university students in Indonesia. These findings suggest that the psychometric properties of the Indonesian version of the cultural intelligence measurement tool are suitable for further research on cultural intelligence within populations using the Indonesian language. For future research, the adaptation of this measurement tool can be developed for testing among other groups, such as urban or rural communities or middle-aged and elderly adults. This study is expected to contribute to the measurement of cultural intelligence in Indonesia and to research and interventions aimed at enhancing the cultural intelligence of Indonesian society. Furthermore, future research is also recommended to include validity testing using convergent validity methods to determine whether this measurement tool consistently yields similar results to other measures assessing the same construct.

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Conflict of Interest
The researchers declare that this paper has no conflicts of interest.

Author Contribution
All authors have contributed equally to the study's conceptualization, interpreting data, reviewing, and editing the manuscript.

Data Availability
Data can be provided upon request to the author.

Declarations Ethical Statement
The study followed the guidelines of the Declaration of Helsinki.

Informed Consent Statement
Informed consent was obtained from all persons involved in the study.

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