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Psychometric properties of the adapted critical language awareness instrument

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ABSTRACT

Concerning the Indonesian government's endeavors to safeguard Indonesia's standardized language and national language, numerous initiatives have been undertaken to uphold the disposition and consciousness of the Indonesian youth towards the language since they are the future custodians of the nation. This paper aims to present the psychometric features of the modified instrument to assess the extent of critical language awareness among undergraduate Indonesian students majoring in English. The adaptation process has six steps: translation, synthesis within the target culture, back translation, committee review, pretesting using 202 undergraduate students, and the final version of reviewers. The revised measure retains three variables: factor 1, which encompasses language variance, language prejudice, and language hegemony; factor 2, which includes bilingualism (Bil), Indonesia-English (Ind-Eng), and code-switching (CS); and factor 3, which pertains to language maintenance (LM). The customized critical language awareness measure for English students has been determined to possess both content and construct validity, establishing its validity and reliability. As mentioned earlier, this instrument can assess the level of students' critical language awareness in English as foreign language (EFL) countries.

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1. INTRODUCTION

Language awareness (LA) has been a focus in second language acquisition (SLA) research, particularly in the context of acquiring foreign languages [1]–[3]. This objective is pursued alongside the development of practical communication skills. LA has a pivotal role in the process of language learning, teaching [4], [5], and acquisition, particularly in cognitive strategies, the processes of noticing, and problem-solving [6]. This suggests that to achieve proficiency in a second or foreign language, it is necessary to have a deep understanding of both the source and target languages. The emergence of studies investigating LA within the Indonesian environment has been observed in prior research [7]. It is essential to consider the native language of these individuals learning a foreign language. The maintenance and preservation of every

language are undoubtedly vital [8]. Acquiring proficiency in a foreign language originating from a different country should not be misconstrued as a process that necessitates abandoning or disregarding one's native language. It is also captured from Indonesians having much exposure to some foreign languages, including English.

Scholars from the United Kingdom initially introduced critical language awareness (CLA) throughout the 1990s. The researcher posits that the inclusion of CLA is crucial when examining the issue of the strength problem within the context of language and literacy teaching. Clark, Fairclough, Ivanic, and Martin-Jones [9] further clarify this matter, stating that CLA can be an extension of the LA program. However, preserving CLA is crucial in maintaining language, particularly in heritage languages that are becoming less often used or encountering challenges [8]. It presents an alternative perspective regarding the concept of CLA.

CLA is crucial in language learning and teaching, particularly in English as a foreign language (EFL). Teachers benefit from CLA by understanding linguistic variation and integrating content and criticality in EFL syllabus design [10], [11]. CLA helps students identify persuasive ideologies using vocabulary and syntactic structures [1], but it also poses challenges for learners, especially EFL students [12]. Teachers must confront unconscious language gap assumptions and understand the mechanisms and results of educational structures related to CLA acquisition. Despite the proliferation of CLA initiatives in various academic and geographical settings, negative perceptions towards languages and their speakers persist. The term "linguicism" was introduced in the 1980s to highlight the phenomenon where social groups are identified or categorized based on language.

Due to the significance of CLA in SLA and the acquisition of foreign languages, extensive research has been conducted to delve into the intricacies of CLA in the context of heritage language acquisition. Multiple studies were undertaken to assess the CLA of bilingual pupils across various educational levels in numerous nations. However, most scholarly investigations use qualitative research methodologies, as [13], [14]. Several quantitative studies were undertaken to assess CLA by modifying or creating scales. The field of business and communication has been the subject of research conducted by [15]. This study was complemented by [16], who utilized the CLA scale to assess various aspects of language proficiency, particularly grammar and linguistics in the source language. Additionally, Garcia [17] employed the CLA scale to investigate the influence of ethnic identity on language proficiency. One of the studies examined in this analysis is a research conducted by [18], which aimed to create a scaling instrument for assessing the cross-linguistic influence (CLI) of Spanish students studying in an English-medium instruction (EMI) setting in the United States. The primary objective of this instrument is to safeguard the integrity and longevity of the Spanish language, which holds significant national importance. To preserve their CLA for Spanish as their heritage language, individuals must continue to engage with and acquire proficiency in other languages.

Given the significance of CLA in maintaining native language proficiency within the EFL context, assessing students' CLA is imperative. By employing accurate measures, language learning and SLA can be enhanced while preserving a sense of pride in one's native language. Since Fair was first introduced by [19], it grabbed significance and has been subject to extensive evaluation using specialized tools designed for its measurement. Beaudrie *et al*. [18] developed a CLA measurement apparatus to assess the CLA levels of Spanish-speaking students studying English in the United States while also considering their favorable psychometric characteristics. Naturally, the applicability of this instrument research to the Indonesian setting is not direct. To align the instrument with the specific study context and ensure the reliability and validity of the adapted version, it is necessary to implement adaptation methods and, after that, assess the quality of the modified instrument.

Adapting a measuring instrument involves assessing its ability to measure the same construct across various languages and cultures accurately. This process includes selecting an interpreter, making appropriate accommodations, and ensuring that the adapted instrument maintains equality with the original version [20]. The method of adjusting this measuring instrument involves translating text from a source language to a target language and creating a text that is contextually relevant to the socio-cultural conditions of the target community. The efficacy of adaptation is contingent upon achieving cross-cultural consensus through establishing a shared contractual framework. Consequently, one of the primary objectives in adapting measuring tools is to facilitate the execution of cross-cultural research.

The present study shares the same contextual framework as the previous research. The primary objective of this research is to investigate the CLA exhibited by Indonesian students engaged in the study of English, with English being utilized as the medium of teaching. Furthermore, the instrument devised by [18] demonstrates satisfactory instrument quality. The present study focuses on several aspects that align with the current research objectives. These elements include factor 1, encompassing language variation, linguistic prejudice, and language hegemony. Factor 2 pertains to bilingualism (Bil), namely Spanglish (in this example, Indonesia-English (Ind-Eng)) and code-switching (CS). Lastly, factor 3 relates to language maintenance (LM). The CLA scale instrument was adapted in the context of Inherited Language based on the

grounds. Thus, the primary aims of this study are to demonstrate the outcomes of adaptation procedures on an instrument, ascertain the extent to which the constructs elucidate CLA of Indonesians learning EFL, and evaluate the extent to which the adapted essential instrument of LA satisfies the criteria of validity and reliability.

2. METHOD

This study is an exploration study, including a quantitative approach. It employs instrument adaptation measures in the context of development research. The procedures for the adaption instrument were derived from the work of Beaton *et al*. [21]. The process consists of six essential processes: translation, synthesis, back translation, expert committee review, pretesting, and final version reviewers. Those sequential phases have been conducted to create a qualified instrument to measure Indonesian university students' critical LA, taking English Education as the major in their higher education.

2.1. Participants

The present study comprised a sample of 202 university students who were pursuing a major in English education across various regions in Indonesia. The university students were selected to ensure a comparable background to the original instrument while adequately tailored to the chosen diction and topic under discussion. The convenience sampling method was employed in this study due to the vast size of the population and the researcher's inability to obtain a representative random sample from the accessible population [22]–[25]. Table 1 displays the demographic information of the research participants.

Table 1. Participants' demography in this study

Category	Frequency	Percentage (%)
Sex:		
Male	37	18
Female	165	82
Province:		
Java	100	49.5
Yogyakarta	20	10
Sumatra	55	27
Kalimantan	9	4.5
Sulawesi	1	0.5
Maluku	5	2.5
East Nusa Tenggara	12	6
Year:		
First	50	24
Second	64	32
Third	62	31
Fourth	12	6
Graduate Program	14	7

This study employed a comprehensive assessment to evaluate the validity and reliability of the adaption instrument. Data was collected through a Google form, which yielded responses from 202 participants representing various colleges in Indonesia. The sample included students in public and private universities located inside and outside Java islands in Indonesia, taking English Education as the major in their higher education. All participants in this study have been asked for their consent through a written consent inserted at the beginning of the form.

2.2. Instruments

The survey employed an adapted version of the CLA instrument for the heritage setting, initially produced by Beaudrie *et al*. [18]. They present a scholarly work that introduces a validated assessment tool designed to evaluate the level of CLA awareness among students who study languages other than their native tongue. The validation result demonstrates the instrument's quality, where the loading factor exceeds 0.4, and the reliability estimates are indicated by an alpha coefficient of 0.71. Furthermore, a connection exists between the present study and the research of Beaudrie *et al.* Specifically, both studies focus on university students from a particular nation who learn a foreign language besides their native language. Beaudrie *et al.*'s study [18]examined Spanish-English and Indonesian-English language learners. The instrument comprises 21 statements distributed across three dimensions: language variance (LV), language prejudice (LP), and English hegemony (EH), which is a total of nine items of statements. The second dimension encompasses

Bil, Ind-Eng and CS which are eight items of statements. Lastly, the third dimension focuses on LM, consisting of four statement items.

2.3. Procedures

In conducting this study, some procedures for adapting instruments were followed. Multiple iterations of the steps involved in adapting an instrument exist, one of which is the stage of instrument adaptation proposed by Beaton *et al*. [21]. This is because Beaton's adaptation process considers cross-cultural differences among research contexts. It does matter to be considered since each place has its language, habits, customs and culture. They assert that the initial step in the adaptation process, after obtaining consent from the developer, is the act of translation. The method of instrument adaption in this study is illustrated in Figure 1.

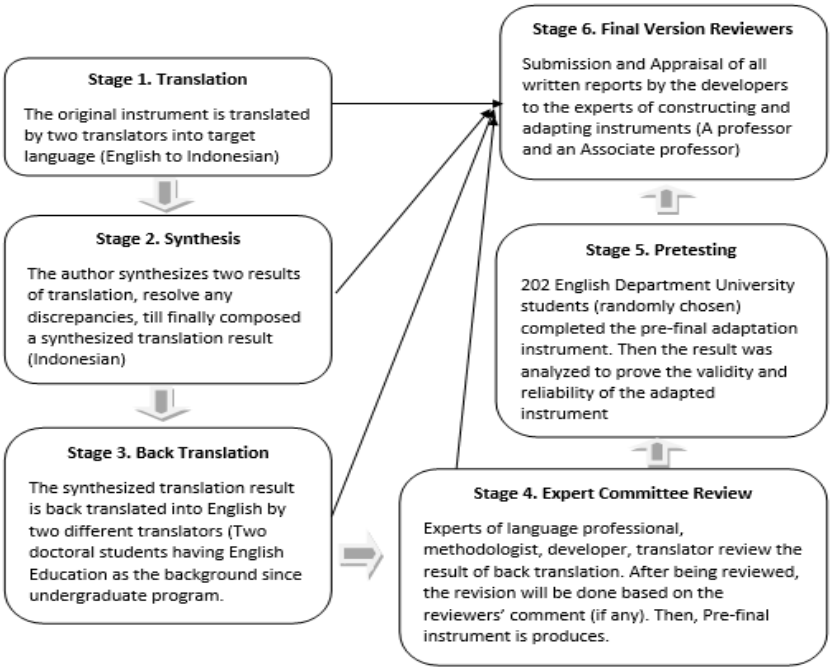

Figure 1. The instrument adaptation process

This research focuses on adapting a CLA instrument through six stages: translation, synthesis, back translation, final version reviewers, pretesting, and expert committee review. The initial translation involved converting the questionnaire's original language to Indonesian, followed by synthesis, where independent translators A and B gathered and synthesized the translated outcomes. The third stage involved reverse translation from Indonesian to English, with the findings returned to different translators. The fourth stage involved an expert committee review, where the instrument was presented to four professionals, ensuring it retained its original conceptual framework. The fifth phase involved a pretesting test on 202 university students to assess readability and reliability. Reviewers evaluated the final version, and the findings were communicated to educational analysis, assessment, and measurement experts.

2.4. Data collection

Additional preliminary testing was conducted by administering surveys on the adaption instrument through the utilization of Google Forms to a sample of significant English students from several universities in Indonesia. The dissemination pertains to a one-week duration, targeting all undergraduate and graduate students enrolled in universities in Indonesia. The convenience sampling method selected the participants, which involved disseminating a message among those with connections with friends or colleagues enrolled in undergraduate and graduate English programs.

2.5. Data analysis

Lissitz and Samuelson [26] assert that a test device's validity can be determined by examining the test content and doing empirical research on the test scores obtained from the test instrument. In the context

of this instrument, the assessment of its validity is accomplished through the utilization of content validity utilizing the content validity index (CVI) as a metric for evaluation and construct validity using partial least squares (PLS) to examine the validity and reliability of the adaption instrument through the application of confirmatory factor analysis. The variance-based structural equation modeling (VBSEM) technique, namely the PLS method, was employed in this study with the aid of the SmartPLS 3.0 software application developed by Ringle *et al*. [27]. In addition to its application in confirmatory analysis, VBSEM is useful in predictive applications and theory construction [28], [29]. Table 2 provides principles for assessing the validity and reliability of the instrument model, serving as a valuable point of reference.

Table 2. The validity and reliability of the data

Guidance	Acceptance level	Descriptions	Sources
	Validity of the constructs		
Convergent validity	Loading factor > 0.5/preferably 0.7 AVE > 0.5 CR > 0.7	It indicates that the constructs can reflect the variables (latent) purposed.	[30], [31]
	Reliability of the constructs		
Construct reliability (CR.)	0.7 or higher	Estimates of the reliability (internal consistency) of the constructs are reasonable.	[30], [32]
Average variance extracted (AVE)	0.5 or higher		

Guidelines for assessing the reliability and validity of data in research are provided in Table 2. The Table 2 is separated into two sections. The first one addresses construction validity and emphasizes convergence validity using composite reliability (CR), average extracted variance (AVE), and load factor. When the loading factor is more than 0.5, ideally 0.7, and the AVE and CR are higher than 0.5 and 0.7, respectively, the construction accurately reflects the target variable. A CR of 0.7 or above implies a satisfactory internal consistency between items measuring the same building in the second section, which focuses on construction reliability. Similarly, AVE greater than 0.5 suggests that a latent structure adequately captures variance. This standard establishes a baseline for assessing how inflexible research data are.

3. RESULTS AND DISCUSSION

3.1. Modified instrument

There is a lack of substantial disparity between translators A and B throughout Stage 1. A limited number of words were ultimately altered. The selection of a more suitable word equivalent is subsequently made to depict the outcomes of the two translations. During this phase, following the creation of the synthesized translations and before proceeding to the subsequent stage of back translation, the researcher modifies some terms that pertain to the specific research setting as desired by the researcher.

The evaluation of translation outcomes is conducted according to the criteria proposed by McDonald [33] to measure the quality of translations regarding accuracy, acceptability, and readability. The average scores for all translated statements are 2.33, 2.67, and 2.67, respectively. The mean score of the translation outcome is 2.56, encompassing less precise and acceptable translations. Therefore, it can be inferred that the outcomes of the initial translation phase are deemed satisfactory. It is also the same as the result of the assessment of the back translation. The mean value for accuracy, acceptability, and readability indicators across all statements is 2.67. The mean instrument quality of back translations, including acceptable ratings, is 2.67.

Specifically, several Spanish terminologies were replaced with Indonesian equivalents, the term "Hispanics" was substituted with "Indonesian," and some Spanish keywords were translated into English or Indonesian. Additionally, the research background was adjusted to cater to English primary students in Indonesia. Table 3 presents the modifications made to the original instrument to create the adapted instrument.

This study customizes instruments for English majors in Spanish and Indonesian-speaking countries. The process includes word adaptation, synthesis, back translation, and translation, considering factors like cultural sensitivity. Cross-cultural communication is met by replacing Spanish phrases with Indonesian terminology, demonstrating that translation is tailored to linguistic conventions and relevant cultural norms. This supports Katan's assertion that a successful translation fulfills cultural sensitivities and comprehends the context in addition to being linguistically accurate [34]. Added to that, adjusting the context and culture

meets the expectations and norms of the target culture [35], so that, it is genuinely urgent to implement in the process of translating adapted instruments to avoid misunderstanding and misinterpretations [36].

After all translations results are met the target context and culture, the three bundles of instruments are analyzed each relevance among them. In the aspect of EH, LP, EH, there are 8 items (item 1-8), from 9 items of adapted instrument version are relevant with the original ones both in English version, that is still in English but has been adjusted with the current context and Indonesian version. For item 9 of this factor is considered less relevant. For Bil, Ind-Eng and CS, item 2, 3, 5, 6, 7, 8 that are relevant in both versions, and item 1, and 4 are less relevant. Futher, for LM, item 2 and 3 are relevant, whereas 1 and 4 are less relevant. Table 4 displays the outcomes of the adaptation process. The Tables 3 and 4 presented herein provide a comparative analysis of the elements found in both the original and adapted instruments, as observed in both the English and Indonesian versions.

Table 3. Changes in original and adapted instruments

Original Instrument	Adapted instrument
Spain	Indonesia
Spanish	Indonesian
Spanish-speaking Hispanics	Students of English major
American	Students of English major
Immigrants	Students of English major
American culture	English culture
Families	Students
Public	Campus
Spanglish	Indonesian - English
Parquear	Female
Estacionar	Woman

Table 4. The outcomes of the adaptation process

Original instrument	Adapted instrument	Indonesian version
LV, LP, EH		
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Less relevant	Less relevant
Bil, Ind-Eng, CS		
Relevant	Less relevant	Less relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Less relevant	Less relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Less relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
LM		
Relevant	Relevant	Less relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Relevant
Relevant	Relevant	Less relevant

According to the data presented in Table 4, the first dimension of the questionnaire encompasses topics related to linguistic variety, LP, and the dominance of English. The primary aspect of the first dimension involves recognizing that language is an inherent and natural variable that changes due to interaction across time [18]. The assertion aligns with the findings reported by some research [37], [38]. Conversely, the perspectives of educators, the community, and society toward dialects tend to be subordinate and occasionally derogatory. The amalgamation of two languages in a dialect appears to result in a disorderly distortion of both languages, rendering it unsuitable for instructional purposes within a classroom setting [8], [18], [39]. The English language holds a preferential position in the academic curriculum for students pursuing a degree in English. This assumption is similarly evident in the initial dimension of the questionnaire.

3.2. Content validity

Testing the instruments' validity needs to be conducted to prove their quality. Some validity tests should be done. They are criterion-related, content and construct validity [40]. Face validity is seldom done since it only assesses the instrument's surface. Content validity refers to the extent to which a measurement instrument adequately represents the construct or concept it is intended to measure. It is a crucial aspect of ensuring accuracy and reliability. Content validity encompasses two essential components: the adherence to valid values and the utilization of appropriate sampling strategies [41]. Additionally, to establish the validity of this modified tool, the outcome of each stage in the adaptation process is consistently reviewed by experts in educational research, assessment, and measurement. These reviewers, who hold the positions of professor and associate professor, possess the necessary competence to evaluate the final version of the instrument.

The validity of the test equipment about this material can be evaluated through two approaches, namely the Lawshe method and the Aiken method [41]. The Aiken approach is employed to assess the content validity of the customized instrument of CLA for Indonesian university students pursuing English as their major. In conducting content validity, four validators with expertise are in measurement and assessment, language practitioner, research methodology, and English Education. The scheme to validate the instrument being adapted is using the Delphi technique. Four experts assessed the instrument's content validity, and the acquired results are provided in Table 5.

Table 5. Content validity result

Dimension	Statement	CVI	Criteria
LV, LP, EH	1	0.5	Mediocre
	2	0.625	Mediocre
	3	0.75	Mediocre
	4	0.5625	Mediocre
	5	0.5625	Mediocre
	6	0.5625	Mediocre
	7	0.625	Mediocre
	8	0.75	Mediocre
	9	0.5625	Mediocre
Bil, Ind-Eng, CS	1	0.5625	Mediocre
	2	0.5625	Mediocre
	3	0.5625	Mediocre
	4	0.75	Mediocre
	5	0.625	Mediocre
	6	0.625	Mediocre
	7	0.625	Mediocre
	8	0.5625	Mediocre
LM	1	0.6875	Mediocre
	2	0.75	Mediocre
	3	0.625	Mediocre
	4	0.625	Mediocre

The content validity assessment results for the different language use and attitude variables are shown in Table 5. The three primary dimensions of the Table 5 are LM, bilingual, Ind-Eng, and CS, LV, LP, and English hierarchy. Each dimension has multiple statements with matching CVI scores (ranging from 1 to 4 for the third dimension and 1 to 9 for the first two). Higher scores suggest more content validity. CVI ratings range from 0 to 1. Based on the evaluation criteria, most of the statements in this Table 5 have CVI scores between 0.5 and 0.75, suggesting a low content validity level. Furthermore, the CVI score evaluation criterion is designated as "mediocre." Thus, all items in this adapted questionnaire are considered good to measure the objective of the questionnaire.

3.3. Construct validity

Assessing the appropriateness of the statistical model employed for data analysis poses a challenging task. The data analysis in this study employs partial least squares structural equation modeling (PLS-SEM) using SmartPLS 3.0 software. This choice is motivated by several factors, including the manageable sample size, suitability for formative-reflective measurement models, and the ability to explore relationships between variables in the construction instrument. The framework shown in Figure 2 illustrates the dimensions of the heritage language's CLA, as Beaudrie's theoretical work.

Based on the findings shown in Figure 2, it can be posited that three factors influence the CLA of the inheritage language. The initial dimension encompasses LV, LP, and EH. The three sub-dimensions were operationalized using nine items, each representing a certain sub-dimension. The eight things in question

pertain to the domains of Bil, specifically within the context of Ind-Eng, as well as the phenomenon of CS (CS). The last dimension encompasses LM and comprises four distinct components. Those components unite in an instrument to measure the CLA of Indonesian university students taking English Education.

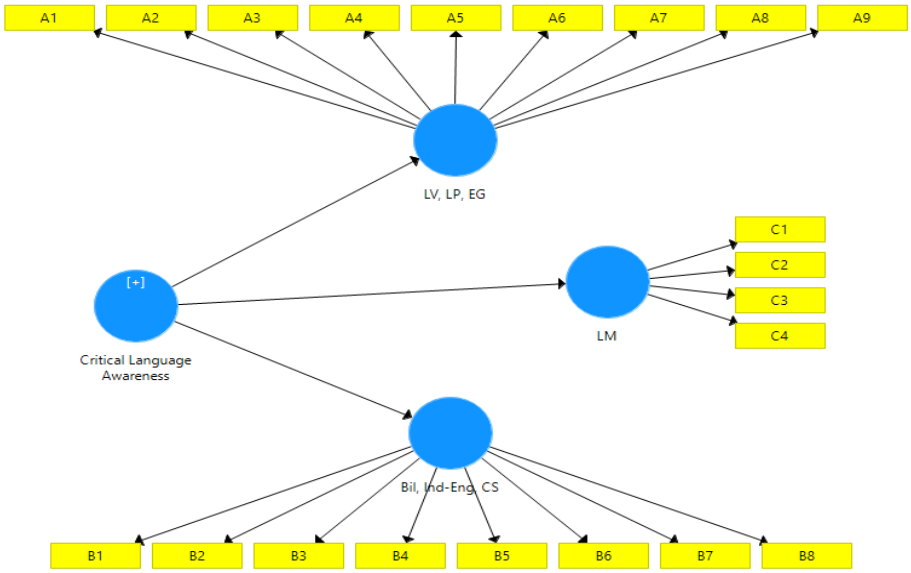

Figure 2. The concept CLA of the heritage language

Further, in exploring the results of the questionnaire spread, a statistical strategy is used to analyze the quality of the items in the instrument. The utilization of variant structural equation modeling (SEM) on PLS-SEM with the assistance of SmartPLS 3.0 software enables the execution of the internal consistency reliability model. The present study utilizes a comprehensive SEM framework, incorporating several components and indicators [31], [42]. It was noted that PLS-SEM has the capability to both forecast and provide explanations for the constructs of interest. Examining pretesting outcomes uses the concept of convergent validity to assess the extent to which an item can measure the same underlying construct within a given research [31]. The assessment of concurrent validity involves the computation of three measures: loading factors, CR, and the AVE. The initial component is the external loading assessment, often known as the loading factor. Table 6 displays the loading factor obtained from the analysis conducted using smartPLS 3.0.

Table 6. The loading factors

Dimension	Item	Loading factor
LV	1	0.464
LP	2	0.597
EH	3	0.641
	4	0.395
	5	0.358
	6	0.620
	7	0.579
	8	0.532
	9	0.687
Bil	10	0.695
Ind-Eng	11	0.589
CS	12	0.667
	13	0.460
	14	0.324
	15	0.609
	16	0.700
	17	0.654
LM	18	0.695
	19	0.527
	20	0.845
	21	0.729

Data in Table 6 exhibits the loading factors indicating the validity of the adapted instrument. Hair *et al*. [31] suggest that a loading factor over 0.708 and CR of more than 0.5 are desirable criteria. It is advisable to exclude loading factors within the range of 0.4 to 0.7 [43]. Besides, it has been suggested that the minimum allowable loading factor value that the fingers can still mention is 0.3, since 0.3 still indicates that the minimum significance [44]. Based on Mardapi's standard of loading factor showing good instrument validity, the 21 items in adapted instruments are valid. This is because the loading factors of the 21 items inside the construct of the CLA instrument for Indonesian heritage have successfully met the established validity criterion, surpassing the threshold of 0.3.

3.4. Reliability

Reliability refers to the consistency and stability of a measurement or assessment. The subsequent step involves evaluating the construct's reliability based on several values obtained from the study conducted using SmartPLS. These values include Cronbach's Alpha, CR-Rho-A, and AVE [45]. The CR values were obtained through data analysis, which is used to assess internal consistency reliability. It is generally accepted that a CR value greater than 0.7 indicates appropriate internal consistency [31]. Additionally, it is essential to note that in the analysis conducted using SmartPLS, the value of Cronbach's Alpha should be greater than 0.7 to ensure the reliability of the results.

The validity criterion is satisfied by meeting the Internal Consistency Reliability analysis outcomes requirement through CR. Internal Consistency Reliability determines if the items included in a questionnaire can effectively measure the constructs under investigation [31]. Nunnally and Bernstein [46] conducted a study to assess the Internal Consistency Reliability, finding that the CR values were 0.6 to 0.7, indicating acceptability and suitability for exploratory investigations [46]. An alternative approach to conceptualizing a construct involves the utilization of Cronbach's Alpha. An outstanding predicate should yield an alpha coefficient greater than 0.7 [46]. Table 7 reports the reliability estimation of the instrument based on the result of the analysis.

Table 7. Reliability estimation

Constructs	Cronbach's Alpha	Rho_A	CR	AVE
LV, LP, EG	0.706	0.728	0.791	0.305
Bil, Ind-Eng, CS	0.737	0.763	0.812	0.360
LM	0.658	0.692	0.797	0.502

It is well acknowledged that Cronbach's Alpha is a measure used to assess the reliability of an instrument. A commonly accepted criterion for high reliability is an alpha value exceeding 0.7. Two of the three dimensions examined are observable, specifically the LV, LP, and EH dimensions, yielding an Alpha coefficient of 0.706. Bil, Ind-Eng, and CS dimensions also exhibit a coefficient of 0.737. The two dimensions in question are considered to have a high level of reliability [31], [46]. However, the Alpha coefficient for the LM dimension is 0.658. The dependability of the LM dimension is reported to be low. Similar observations were made regarding the Rho_A coefficient, with the dimensions remaining consistent with the prior analysis; the values obtained were more than 0.7, namely 0.728 and 0.763, for the two dimensions. However, the dimension related to LM continued to be below 0.7, precisely 0.692.

Various outcomes arise in the findings of CR when the CR coefficients exhibit values beyond 0.7, specifically 0.791, 0.82, and 0.797, respectively. The findings derived from the CR measure can serve as a valuable addition to the data acquired from Cronbach's Alpha and Rho_A. An essential indicator of construct reliability (CR) is the average variance extracted (AVE). According to Hair Jr *et al*. [31], the standard value of AVE should exceed 0.5. The findings of the AVE analysis exhibit disparities in comparison to Cronbach's Alpha and Rho_A. Specifically, the values of the first dimension (LV, LP, EH) and the second dimension (Bil, Ind-Eng, CS) fall below the established threshold of 0.305 and 0.360, respectively. The third dimension (LM) demonstrates adequacy according to the established norm since its Cronbach's Alpha and Rho_A values, albeit below 0.7, exceed the minimum threshold of 0.5, with a coefficient of 0.502. Based on the analysis results, it can be inferred that while not all of the Cronbach's Alpha and Rho_A values reach the threshold of 0.7, the instrument construct of the adaptation process demonstrates reliability and high consistency, as evidenced by an AVE value [47] for LM that surpasses the established standard.

4. CONCLUSION

The primary focus of this study is to investigate the concept quality, validity, and reliability of a modified questionnaire as an instrument for assessing CLA among Indonesians who consider it their heritage

language. The present study involves adapting an instrument that has been developed and proved valid and reliable as well as had similar research context. This adaptation is specifically tailored to suit the research context in Indonesia, focusing on university students majoring in English. Adapting a questionnaire into Indonesian involved six stages: translation, synthesis, back-translation, expert committee review, pretesting, and final version evaluation. This resulted in a questionnaire consisting of three dimensions and twenty-one statement questions. Changes were embraced to satisfy the identified requirement within the four stages. The outcome of the pretest provides evidence for the validity and reliability of the adapted instrument of CLA for Indonesian heritage, thereby addressing the study question. Based on the analysis conducted, it is recommended that the following actions be taken. The modified apparatus can assess the CLA of bilingual pupils about their native language. The preservation of legacy languages is upheld despite the considerable efforts made by bilingual students to attain proficiency in foreign languages. The instrument that has been modified can be effectively utilized in different languages by adhering to the adaptation procedures elucidated in the text.

This paper offers insightful information regarding the psychometric characteristics of modified CLA instruments. These tools can assess students' fundamental language abilities, guide curriculum development, and improve teaching strategies. By providing insights into the characteristics and aspects of CLA, the research also advances our understanding of this awareness as a construct in language education. Additionally, it adds to the continuing discussion on the value of CLA in language acquisition and how it advances linguistic and sociocultural competency. The results could lead to more theoretical studies on critical language consciousness in various educational and linguistic situations.

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