Scale development as a measuring tool of critical Javanese language’ awareness for pre-service Javanese teachers

Endang Sri Maruti1*, Bambang Yulianto1, Suhartono Suhartono3, Budinuryanta Yohanes1 and Bambang Eko Hari Cahyono1,2

Abstract: This study aims to develop a valid and reliable tool for measuring critical awareness of the Javanese language. The test item developed refers to relevant literature studies and is also based on existing awareness measuring tools. The test items are re-examined by Javanese linguists and Javanese language education experts to produce a measuring scale. The scale of critical awareness of the Javanese language consists of phonological awareness, morphological awareness, syntactic awareness, semantic awareness, and Javanese cultural awareness. The scale is designed with a Likert scale type and is applied to 69 students. The result shows that the developed scale is a valid and reliable way to measure critical awareness of the Javanese language. The success of learning the Javanese language depends on how well prospective teachers have critical awareness of the language.

Subjects: Language & Linguistics; Language Teaching & Learning; Literature

ABOUT THE AUTHORS

Endang Sri Maruti is a doctor student in Department of Language and Literature, Universitas Negeri Surabaya, Indonesia and Lecturer in PGSD, Universitas PGRI Madiun. Her research focuses on Javanese Language, primary education, and literacy. She can be contacted at email: endang.19011@mhs.unesa.ac.id; endangs@unisma.ac.id.

Bambang Yulianto is a Lecturer in Department of Language and Literature, Graduate School, Universitas Negeri Surabaya, Indonesia. His research focuses on language development, Indonesian language learning, education and literacy. He can be contacted at email: bambangyu@unesa.ac.id.

Suhartono Suhartono a Lecturer in Department of Language and Literature, Graduate School, Universitas Negeri Surabaya, Indonesia. His research focuses on pragmatics and Indonesian language learning. He can be contacted at email: suharto@unesa.ac.id.

Budinuryanta Yohanes is a Lecturer in Department of Language and Literature, Graduate School, Universitas Negeri Surabaya, Indonesia. His research focuses on pragmatic-logic and Indonesian language learning. He can be contacted at email: budinuryanta@unesa.ac.id.

PUBLIC INTEREST STATEMENT

The implications of the independent curriculum at the school and college level are in the independent learning of the independent campus (MBKM). Countries like Indonesia, which have hundreds of regional languages as their mother tongue, actually leave their local language behind in the learning process. This article explores key milestones in the history of the development of the regional language education curriculum, namely the independent curriculum. The author extends the principle of learning local languages especially Javanese, which is the need to involve all stakeholders in the educational process to solve the repeated challenges of national questions and self-determination in Indonesia. No country can exist and develop properly if the stakeholders do not believe in an independent curriculum. Therefore, the practical relevance of this article is to draw attention to the conflict between concern for Javanese as a regional language and the orientation of learning regional languages that are open to consistent recording of regional languages.
Keywords: critical language awareness; Javanese language; scale development

1. Introduction

According to Fairclough (2014), language awareness is conscious attention to the nature of language and its use as an element of language education. Individual experiences and perceptions substantially influence language awareness. It starts from Freire’s (1973) view on critical awareness, which represents how the oppressed party can change the social or individual situation. Critical awareness can be conceptualized into two main things, namely critical reflection and critical action (Watts, 2003). Based on these two concepts, critical awareness is the result of reflection and action towards transformation.

Critical awareness of language is a mental quality that allows people to gain insight and attention in terms of language production and how it works (Şeref & Varışoğlu, 2020). It is essential to develop a critical awareness of the language during acquiring and learning Javanese to ensure that every learner can possess it. In this process, each learner has different views in terms of developing critical awareness of language. Bolitho et al. (2003) also emphasized the need for a critical pedagogical approach that help students become more aware of how language works critically.

Critical awareness of language is not taught directly by teachers or textbooks but is developed gradually by learners, intuitively and internally. Ali (2011) has integrated critical language activities into the teaching and learning process of his students. Understanding language critically helps pupils develop thinking skills, optimistic attitudes, and a desire to learn and use a language during sociolinguistics courses (Alim, 2005). Conscious use of language is the most crucial indicator of language attitudes. It also applies in Javanese, as the intended use of Javanese is a manifestation of a positive language attitude. The built-in language attitude increases respect for the language and can help maintain the Javanese language and culture.

Based on the opinions of the experts above, it can be concluded that critical awareness of the Javanese language is defined as remarkable knowledge about the language, awareness perception, and sensitivity to learn and use Javanese in general, as well as conscious attention to the relationship between culture and language in each person. In line with Varışoğlu (2018) regarding the metalinguistic awareness scale, there are six aspects of the Javanese language’s critical awareness: phonological awareness, morphological awareness, syntactic awareness, semantic awareness, and communicative and Javanese cultural awareness. These six aspects will be developed for measuring scale.

Research on developing critical awareness scales has been done before. Diemer et al. (2017) have developed a critical awareness scale for oppressed or marginalized people to critically analyze their social and political conditions so they can support the existence of equality in the social system and an effort to change the perceived injustice. Furthermore, Diemer et al. (2020) also developed a simple critical awareness scale, but it still refers to critical reflection, critical motivation, and efficient critical action. This study results in 13 more specific items to measure critical awareness of structural inequalities, perceived motivation, and the capacity to affect change and social action to correct inequalities.

Research on developing a critical awareness of language scale has also been done by Varışoğlu (2018). The Turkish language metalinguistic awareness scale was developed. This research has produced six metalinguistic awareness scales that are valid and reliable. This study is different from the previous studies. If the previous studies developed a critical awareness scale and a metalinguistic awareness scale, the recent research focuses on developing a critical awareness of the Javanese language scale. The language awareness scales in Indonesia, especially for the
The Javanese language, have never been created. Moreover, the scale of critical awareness of the Javanese language has also not existed until now. This study needs to be done to fill the gap.

The specific aim of this research is to develop a valid and reliable scale that can assist in determining the critical awareness of the Javanese language. This awareness scale is important to develop because, in addition to creating a scale that can measure and determine the level of critical awareness of the Javanese language, it is also to observe language attitudes that lead to the level of preservation of the Javanese language and culture. Critical awareness of the language of prospective teachers is a determinant of the success of the Javanese language learning process.

1.1. The researchers
Our interest in exploring Javanese language awareness is examined in the context of literature, it is seen that issues regarding awareness tend to be handled individually and are mostly focused on certain types of awareness, while other topics are less researched and the sample groups studied mainly consist of children. In all these studies, no specific research has been carried out regarding measurement and evaluation tools for Javanese language awareness and the measurement instruments used in the research tend to lag behind the subjects studied. Therefore, through our study, we wanted to measure the critical awareness of the Javanese language because the success of learning the Javanese language depends on how well prospective teachers have critical awareness of the language. Authors in this study are researchers and lecturers and students in English education and education. The first author, a Ph.D. Candidate in Department of Language and Literature, Graduate School, Universitas Negeri Surabaya, Indonesia and Lecturer in Department of Teacher Training and Education, Universitas PGRI Madiun. She had experience and training in primary education in Javanese Language, project-based learning, education and literacy. The second author is a faculty member at one public university in Surabaya. The third author is a faculty member at one public university in Surabaya. The fourth author is a faculty member at one public university in Surabaya, Indonesia.

1.2. Methods
The purpose of this study is to test the validity and reliability of the critical awareness scale to measure critical awareness in the Javanese language with exploratory factor analysis (John & Benet-Martinez, 2014). The scale was developed based on language awareness theory and critical awareness theory (Alim, 2005; James, 1999; Varışoğlu, 2018). According to Alim (2005), James (1999), and Varışoğlu (2018), the critical awareness aspect of the Javanese language can be divided into six parts, namely phonological awareness, morphological awareness, syntactic awareness, semantic awareness, communicative awareness, and Javanese cultural awareness. These six aspects are described through 42 items that can measure the critical awareness of the Javanese language in students of Universitas PGRI Madiun. The subjects of this study are 69 students of Universitas PGRI Madiun as the sample and 360 students on the application stage. The criteria for selecting the subjects were as follows: active students at Universitas PGRI Madiun, native Javanese speaker, and willing to participate in the research voluntarily. The details of the characteristics shown in Table 1.

In this study, there are two parts to the validity test: the content validity test and the construct validity test. Content validity tests were carried out through expert judgment, which is done by asking for opinions from experts. After the instrument is was constructed to measure critical awareness at the Javanese language level based on six predetermined aspects derived from specific theories, expert judgment is was carried out by individuals who considered experts in this field. This study consulted two experts, who are Javanese linguists and Javanese language education experts. The assessment is was carried out based on the relevance of the items to the indicators of critical awareness of the Javanese language. A revision was held after consulting with the Javanese language experts to see the strength of each item. The consultation results were used as input to remove irrelevant items and refine the instrument to be suitable for use. Next, there are two ways to test construct validity: looking at item-total correlations and doing factor analysis.
Table 1. The characteristics of the participants

| Characteristics      | N  |
|----------------------|----|
| gender               |    |
| Female               | 231|
| Male                 | 129|
| Study program        |    |
| Primary Education    | 248|
| Indonesian           | 72 |
| English              | 40 |
| Level                |    |
| Bachelor             | 328|
| Master               | 32 |
| Total                | 360|

The item-total correlation test is performed to select the valid items. The magnitude of the correlation coefficient that meets the requirements to be accepted is 0.3, considering the item's representativeness. However, if an item can describe the goal of measurement, then it can be considered and maintained even though the correlation value reaches more than 0.3 (Azwar, 1999). After that, an exploratory factor analysis (EFA) is conducted. Two steps are carried out: determining the variable and extracting the factor from the specified variable. The first stage is to determine the value of the Bartlett Test of Sphericity, which determines the correlation between variables.

Furthermore, sample adequacy measurement is carried out using the Keiser-Meyers-Oklin (KMO) Measures of Sampling Adequacy rule. This method is done by comparing the magnitude of the observed correlation coefficient with its partial correlation coefficient. The second stage is done by performing factor extraction on all variables, and rotating factors on the variables. The next stage is naming the factors, which is determined by the factor load, explained by the factor for each variable. The factor with the most significant variance explains that it is a general factor on the Javanese critical awareness scale. The last stage is to do a reliability test through Cronbach's alpha reliability. The reliability coefficient ranges from 0.00 to 1.00, so the measuring instrument is more reliable if it is close to 1.00.

1.3. Ethical considerations

This study relied on human beings as the main source of the research data. To deal with the research ethics, though in Indonesia, an IRB approval process is not common, we concealed the names of people, places, and the research site through the use of pseudonyms to keep the rights of human participants. We also convinced our participants that their participation was completely voluntary, and their accounts and answers would be confidentially treated.

1.4. Results and discussions

1.4.1. Results

2. Content validity

The content validity technique used is expert judgment, carried out by two professionals in Javanese. This stage aims to assess the initial 62 items of the critical awareness of the Javanese language scale. At this stage, 42 suggested final items were obtained, and 20 items were discarded because they did not meet the criteria of the measuring instrument. The full questionnaire is included as an Appendix. The next stage is to test the validity of the criteria using the Person Product Moment correlation technique, and a value of 0.857 is acquired. With the values obtained, it can be concluded that the items on the critical awareness of the Javanese language measuring tool developed are valid.

3. Construct validity

(a) Structure Validity

Calculation of KMO (Kaiser-Meyer-Oklin Measure of Sampling Adequacy) is used to determine whether or not the sample data is used in factor analysis. In addition to the KMO test, the Barlett
Table 2. KMO and Bartlett’s Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | Bartlett’s Test of Sphericity |
|-----------------------------------------------|------------------------------|
|                                               | Approx. Chi-Square | df | Sig. |
|                                               | 3506.549           | 861 | .000 |

The Bartlett Test of Sphericity results in 

Chi-Square (df, Sig.) = (3506.549, 861, .000).

Test is also carried out to determine the level of correlation between the items developed (Tezbasaran, 1997). The significance level of the Bartlett test and KMO test value is more significant than 0.50. The KMO values can be categorized as follows: 0.60 is categorized as moderate, 0.70 is categorized as good, 0.80 is categorized as very good, and 0.90 is categorized as extraordinary (Seker et al., 2004). The results of the Bartlett test and KMO values obtained in this study are shown in the following Table 2 above.

Based on Table 2 above, the Bartlett Test of Sphericity result is 3506.549, with a significance level of 0.000 which means there is a significant correlation between observer items. The calculation result of KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) is 0.883 (p > 0.50). These results indicate that the sample size of the items is categorized as very good. The scale items have been declared suitable for factor analysis.

To determine the structural validity of the developed scale, covariance values are used. In this study, the load factor values among the 42 scale items range from 0.810 to 0.959. The load factor value of the 42 scale items developed can be seen in Table 3.

Based on Table 3 above, the load factor values for the 42 item scales have been met and are suitable for the requirements for determining subcomponents of the scale.

(b) Factor Analysis

The second step of the structural validity test is to perform factor analysis by factor extraction. In this study, all variables have been extracted to produce 42 extracted items. Eigenvalues and line graphs are

Table 3. Value of item scale load factor

| Item | Value of Scale Load Factor | Item | Value of Scale Load Factor | Item | Value of Scale Load Factor |
|------|---------------------------|------|---------------------------|------|---------------------------|
| 1    | .859                      | 15   | .838                      | 29   | .934                      |
| 2    | .916                      | 16   | .885                      | 30   | .837                      |
| 3    | .919                      | 17   | .859                      | 31   | .856                      |
| 4    | .911                      | 18   | .871                      | 32   | .878                      |
| 5    | .822                      | 19   | .912                      | 33   | .912                      |
| 6    | .879                      | 20   | .874                      | 34   | .844                      |
| 7    | .908                      | 21   | .904                      | 35   | .873                      |
| 8    | .959                      | 22   | .918                      | 36   | .905                      |
| 9    | .884                      | 23   | .847                      | 37   | .880                      |
| 10   | .915                      | 24   | .953                      | 38   | .816                      |
| 11   | .918                      | 25   | .936                      | 39   | .899                      |
| 12   | .878                      | 26   | .924                      | 40   | .831                      |
| 13   | .834                      | 27   | .933                      | 41   | .873                      |
| 14   | .883                      | 28   | .810                      | 42   | .832                      |
used to see the correlation value between items and determine the number of influential factors (Köklü et al., 2007). Based on the graph 1 of factor extraction results, it is found that there are six-factor components with a cumulative variance value of 79.502%, as shown in the following scree plot graph 1.

![Scree Plot](image)

Graph 1. Line Graph Showing the Number of Factor.

Factor extraction is carried out using Principal Component Analysis. In the scree plot graph above, the line graph is obtained by combining the eigenvalues with items. The intersection in the chart above shows a sharp decline, and starting from the sixth item, it begins to show a horizontal line. Based on the graph, there are six more significant factors that can be used as the main factors. The six factors from the Principal Component Analysis extraction method that are still not rotated yet can be seen in Table 4.

Based on the table, the first factor accounts for 21.233% of the total variance, the second factor accounts for 18.677% of the total variance, the third factor accounts for 15.944% of the total variance, the fourth factor accounts for 10.474% of the total variance, the fifth factor accounts for 9.096% of the total variance, and the sixth factor accounted for 4.077% of the total variance. The cumulative variance value for the eigenvalues shows several 79.502% of the total variance. This value is in the very strong category because values between 40% and 60% are included in the strong category (Tavşancil, 2002).

Correlation values are measured to determine the factor distribution of the scale items. The strongest correlation value is determined by varimax analysis. The results of the correlation factor value of each item are in table 5.

The next step is naming the factor based on the load factor value. The items included in the first factor are items 26, 23, 24, 27, 29, 25, 28, 22, 21, 19, 17, and 37. The first factor is called phonological awareness. Items 13, 9, 15, 11, 8, 16, 7, and 14 are included in the second factor called morphological awareness. The third factor includes items 39, 1, 38, 30, 42, and 34. The third factor is called syntactic awareness. Items 3, 2, 6, 5, 40, 20, 12, and 10 are included in the fourth factor called semantic awareness. Items included in the fifth factor are items 36, 35, 41, 31, and 33, called communicative awareness. Items 32, 4, and 18 are included in the sixth factor called Javanese cultural awareness.
| Component | Initial Eigenvalues | | Extraction Sums of Squared Loadings | | Rotation Sums of Squared Loadings | |
|-----------|---------------------|---|-----------------|---|-----------------|---|
|           | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1         | 25.948 | 61.782 | 61.782 | 25.948 | 61.782 | 61.782 | 8.918 | 21.233 | 21.233 |
| 2         | 2.492  | 5.934  | 67.716  | 2.492  | 5.934  | 67.716  | 7.844  | 18.677  | 39.911  |
| 3         | 1.708  | 4.068  | 71.784  | 1.708  | 4.068  | 71.784  | 6.697  | 15.944  | 55.855  |
| 4         | 1.259  | 2.998  | 74.782  | 1.259  | 2.998  | 74.782  | 4.399  | 10.474  | 66.329  |
| 5         | 1.007  | 2.397  | 77.179  | 1.007  | 2.397  | 77.179  | 3.820  | 9.096   | 75.425  |
| 6         | .976   | 2.323  | 79.502  | .976   | 2.323  | 79.502  | 1.712  | 4.077   | 79.502  |
| 7         | .865   | 2.060  | 81.562  |         |         |         |         |         |         |
| 8         | .766   | 1.823  | 83.385  |         |         |         |         |         |         |
| 9         | .683   | 1.627  | 85.012  |         |         |         |         |         |         |
| 10        | .583   | 1.388  | 86.400  |         |         |         |         |         |         |
| 11        | .551   | 1.313  | 87.713  |         |         |         |         |         |         |
| 12        | .471   | 1.122  | 88.835  |         |         |         |         |         |         |
| 13        | .428   | 1.020  | 89.855  |         |         |         |         |         |         |
| 14        | .398   | .947   | 90.802  |         |         |         |         |         |         |
| 15        | .356   | .848   | 91.650  |         |         |         |         |         |         |
| 16        | .342   | .815   | 92.465  |         |         |         |         |         |         |
| 17        | .294   | .699   | 93.163  |         |         |         |         |         |         |
| 18        | .285   | .678   | 93.841  |         |         |         |         |         |         |
| 19        | .264   | .628   | 94.469  |         |         |         |         |         |         |
| 20        | .242   | .577   | 95.046  |         |         |         |         |         |         |
| 21        | .232   | .552   | 95.597  |         |         |         |         |         |         |
| 22        | .216   | .513   | 96.111  |         |         |         |         |         |         |

(Continued)
Table 4. (Continued)

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings | Rotation Sums of Squared Loadings |
|-----------|---------------------|------------------------------------|----------------------------------|
|           | Total   | % of Variance | Cumulative % | Total   | % of Variance | Cumulative % | Total   | % of Variance | Cumulative % |
| 23        | .188    | 96.582        | 24        | .167    | 96.980        |
| 25        | .162    | 97.365        | 26        | .146    | 97.712        |
| 27        | .142    | 98.049        | 28        | .128    | 98.354        |
| 29        | .102    | 98.597        | 30        | .094    | 98.822        |
| 31        | .076    | 99.003        | 32        | .071    | 99.172        |
| 33        | .061    | 99.317        | 34        | .056    | 99.450        |
| 35        | .052    | 99.573        | 36        | .040    | 99.669        |
| 37        | .037    | 99.757        | 38        | .033    | 99.834        |
| 39        | .025    | 99.895        | 40        | .018    | 99.938        |
| 41        | .009    | 100.000       |

Extraction Method: Principal Component Analysis.
| Item | Factors |
|------|---------|
|      | 1       | 2       | 3       | 4       | 5       | 6       |
| 26   | .769    |         |         |         |         |         |
| 23   | .725    |         |         |         |         |         |
| 24   | .706    |         |         |         |         |         |
| 27   | .705    |         |         |         |         |         |
| 29   | .645    |         |         |         |         |         |
| 25   | .644    |         |         |         |         |         |
| 28   | .603    |         |         |         |         |         |
| 22   | .600    |         |         |         |         |         |
| 21   | .591    |         |         |         |         |         |
| 19   | .567    |         |         |         |         |         |
| 17   | .547    |         |         |         |         |         |
| 37   | .528    |         |         |         |         |         |
| 13   |         | .778    |         |         |         |         |
| 9    |         | .736    |         |         |         |         |
| 15   |         | .706    |         |         |         |         |
| 11   |         | .702    |         |         |         |         |
| 8    |         | .650    |         |         |         |         |
| 16   |         | .631    |         |         |         |         |
| 7    |         | .609    |         |         |         |         |
| 14   |         | .571    |         |         |         |         |
| 39   |         |         | .833    |         |         |         |
| 1    |         |         | .788    |         |         |         |
| 38   |         |         | .743    |         |         |         |
| 30   |         |         | .693    |         |         |         |
| 42   |         |         | .661    |         |         |         |
| 34   |         |         | .647    |         |         |         |
| 3    |         |         |         | .705    |         |         |
| 2    |         |         |         | .599    |         |         |
| 6    |         |         |         | .533    |         |         |
| 5    |         |         |         | .508    |         |         |
| 40   |         |         |         |         | .473    |         |
| 20   |         |         |         |         | .460    |         |
| 12   |         |         |         |         | .435    |         |
| 10   |         |         |         |         | .427    |         |
| 36   |         |         |         |         |         | .725    |
| 35   |         |         |         |         |         | .678    |
| 41   |         |         |         |         |         | .570    |
| 31   |         |         |         |         |         | .485    |
| 33   |         |         |         |         |         | .404    |
| 32   |         |         |         |         |         | .484    |
| 4    |         |         |         |         |         | .440    |
| 18   |         |         |         |         |         | .369    |
(c) Reliability Analysis

The last step in the construct validity test is the reliability test as seen in table 6.

A closer inspection of the table shows the reliability test result obtained an alpha score of 0.984. According to Köklü et al. (2007), a scale reliability value of more than 0.70 is reliable. Based on this scale, the reliability value obtained in the study falls into the category of “very reliable”.

4. Discussion
An excellent measuring instrument is one with good validity and reliability test scores. In developing a measuring tool for critical awareness of the Javanese language, exploratory factor analysis techniques are used to develop a valid and reliable measuring tool. This instrument measures university students’ critical awareness of the Javanese language level. This instrument contains 42 items in the form of statements and is divided into six aspects: phonological awareness, morphological awareness, syntactic awareness, semantic awareness, communicative awareness, and Javanese cultural awareness.

The phonological awareness aspect describes individual knowledge and actions about sounds in Javanese. This type of awareness measures the individual’s level of knowledge about the sounds used in spoken Javanese, which are different from the sounds used in written Javanese (Sasangka, 2011). In addition, the pronunciation of sounds in Javanese is also different from what is written. For example, in the word /macal/, which is read /mcgl/. There are also sound changes in Javanese words that are difficult to recognize. For example, the word /macane/, which means “how to read” is almost the same as /macane/, which means “that tiger”.

The morphological awareness aspect is the knowledge of word structure. In Javanese, word structures are formed from various root words and essential words (Shiyan, 2017). The existence of different affixes on the same basic word can form different types of words. For example, the word /mlaku/ which means walking. Many classify this word as a basic word.

Meanwhile, the syntactic awareness aspect is an individual's knowledge of sentences. This aspect is shown through the individual’s ability to analyze a sentence based on its constituent structure (Tsang & Stokes, 2001). Semantic awareness refers to the individual's ability to find connotative and denotative meanings in a sentence (Iv, 2007). In addition, it is also the ability to understand both the implicit and explicit meaning of Javanese sentences.

The communicative awareness aspect is an individual's ability to communicate in a Javanese context (Farias, 2005). In addition, it is also the ability to pay attention to politeness when communicating in a Javanese (Borris & Zecho, 2018). The sociocultural identity of the participants, namely the speaker and the speech partner in a speech seen from the speaker’s side of the speech partner.

This sociocultural identity can be seen in terms of age where the speaker is older than the speech partner, the speaker is younger than the speech partner, or speakers and speech partners are of the same age. The age factor of the speaker and the speech partner, for example, will influence the choice of language that is considered appropriate, polite, and courteous. Speakers

| Table 6. Reliability of the Java language critical awareness scale |
|-------------------|-------------------|
| **Reliability Statistics** | **N of Items** |
| Cronbach’s Alpha | 42 |
| 0.984 | |
who are older in age will generally use the strategy of apologizing directly. On the other hand, if the speaker is younger than the interlocutor, the speaker will use language choices and strategies in such a way that his apology can be accepted. The sociocultural identity of speakers and speech partners can be seen from the level of economy, education, kinship, position, or position in social institutions. The last aspect is Javanese cultural awareness, which is the willingness to protect the Javanese language to maintain the existence of the Javanese people and the next generation (Kidwell et al., 2021).

Based on the description above, it can be concluded that language knowledge and language awareness are almost the same, especially the understanding of language usage according to experts (James, 1996). In this study, critical awareness of language refers to introspection, namely self-awareness of the language itself. This self-awareness is associated with the process of sensitivity and reflectivity. The process of sensitivity is the ability to respond to language apart from the functional-communicative aspect and the “feeling” aspect. Furthermore, reflectivity enhances sensitivity, which refers to the shift of attention from content to the form of interaction.

5. Conclusion
This study aims to develop a scale to measure the level of critical awareness of the Javanese language in university students. Based on the results of validity and reliability, the scale developed is appropriate to measure students’ critical awareness of the Javanese language as future Javanese language teachers. The scale developed is divided into six aspects: phonological awareness, morphological awareness, syntactic awareness, semantic awareness, communicative awareness, and Javanese cultural awareness. In accordance with the results of the tests that have been carried out, it can be said that the scale mentioned above is a valid and reliable scale to measure critical awareness of the Javanese language level in university students.

The results of our study highlight important things that may hinder the successful implementation of local language learning in a country where local languages are being abandoned such as Indonesia at the micro level (classroom). What are the implications of our study results for the future development of regional or mother tongue education in multilingual countries including Indonesia, in particular?

This study has provided clear empirical evidence to education policy makers at any level that developing a bilingual education should take into account several important elements (e.g., students’ Javanese language skills, teachers’ Javanese language skills, curriculum, and assessment) that will support the effective implementation of this approach. something like that. program at the grade level. In terms of curriculum and teaching materials, our research findings suggest that teachers should make extra efforts to adapt local content teaching materials to the national curriculum for certain subjects. If possible, it would be better if the schools in this study or other schools only used teaching materials that were produced and written in Javanese in the Indonesian context. So, it will be much easier for teachers to use these teaching materials.

Regarding teacher awareness of Javanese language, education policy makers must ensure that they have qualified Javanese language teachers to communicate in Javanese in and outside the classroom. Teachers are very important to school improvement efforts and very important to improve the quality of learning for all students. The results of measuring the level of critical awareness of the Javanese language in teachers are important to follow up considering that the teacher’s Javanese awareness affects the level of mastery of other language materials, and can certainly also have an effect on students’ learning outcomes of Javanese.

Our findings should be considered in light of several limitations. While our findings potentially offer some kind of tool for measuring Javanese language awareness in primary school teachers, our small sample size may not be representative of all Javanese teachers in Indonesia and schools.
across the country. Also due to our small sample size, the generalizability of our findings to Javanese language teachers and other Javanese schools in Indonesia should be considered. Future quantitative or qualitative or mixed methods research could include a larger sample of Indonesian bilingual teachers and schools from different regions.

Funding
The authors received no direct funding for this research.

Author details
Endang Sri Maruti
E-mail: endang.19011@mhs.unesco.ac.id
ORCID ID: http://orcid.org/0000-0001-6911-8857
Bambang Yulianto
Suhartono Suhartonio
Budinuryanta Yohanes

1 Department of Educational Language and Literature, Universitas Negeri Surabaya, Surabaya, Indonesia.
2 Faculty of Teacher Training and Education, Universitas PGRI Madiun, Madiun, Indonesia.

Disclosure statement
No potential conflict of interest was reported by the author(s).

Citation information
Cite this article as: Scale development as a measuring tool of critical Javanese language awareness for pre-service Javanese teachers, Endang Sri Maruti, Bambang Yulianto, Suhartono Suhartonio, Budinuryanta Yohanes & Bambang Eko Hari Cahyono, Cogent Arts & Humanities (2022), 9: 2127987.

References
Ali, S. (2011). Critical language awareness in pedagogical context. English Language Teaching, 4(4), 28–35. https://doi.org/10.5539/elt.v4n4p28
Alim, H. S. (2005). Critical language awareness in the United States: Revisiting issues and revising pedagogies in a resegmented society. Educational Researcher, 34(7), 24–31. https://doi.org/10.3102/0013189X0507024
Azwar, S. (1999). Pemecahan soal psikologi. Pustaka pelajar.
Boltho, R., Carter, R., Hughes, R., Ivanic, R., Mesuhrar, H., & Tomlinson, B. (2003). Ten questions about language awareness. ELT Journal, 57(3), 251–259. https://doi.org/10.1093/elt/57.3.251
Borris, D., & Zecho, C. (2018). The linguistic politeness having seen on the current study issue. Linguistics and Culture Review, 2(1), 32–44. https://doi.org/10.21744/lingculture.v2n1.10
Diemer, M. A., Frisby, M. B., Pinedo, A., Bordelli, E., Elliot, E., Harris, E., McAlister, S., & Voight, A. M. (2020). Development of the short critical consciousness scale (ShoCCS). Applied Developmental Science, 1–17. https://doi.org/10.1080/10888691.2020.1834394
Diemer, M. A., Ropo, L. J., Park, C. J., & Perry, J. C. (2017). Development and validation of the critical consciousness scale. Youth and Society, 49(4), 461–483. https://doi.org/10.1177/0044118X14538289
Fairclough, N. (2014). Critical language awareness. Routledge.
Farias, M. (2005). Critical language awareness in foreign language learning. Literatura y Lingüística, 16. https://doi.org/10.4067/s0716-58112005000100012
Freire, P. (2021). Education for critical consciousness. Bloomsbury Publishing.
Iv, B. W. F. (2001). An approach to semantic change. 1–13. The Handbook of Historical Linguistics : Blackwell Reference Online.
James, C. (1996). A cross-linguistic approach to language awareness. Language Awareness, 5(3–4), 138–146. https://doi.org/10.1080/09658416.1996.9959903
James, C. (1999). Language awareness: Implications for the language curriculum. Language Culture and Curriculum, 12(1), 94–115. https://doi.org/10.1080/07908319908666571
John, O. P., & Benet-Martinez, V. (2014). Measurement: Reliability, construct validation, and scale construction (Cambridge University Press).
Kidwell, T., Triyoko, H., & Kidwell, T. (2021). Language awareness as a resource for multilingual individuals ‘ learning about culture: A case study in the Javanese context learning about culture: A case study in the Javanese context. Journal of Multilingual and Multicultural Development, 1–13 doi: 10.1080/ 01434632.2021.1922421.
Köküllü, N., Büyüköztürk, Ş., & Çokluk-Bökeoğlu, Ö. (2007). Sosyal bilimler için istatistik. Pegem A Yayımcılık.
Sasangka, S. T. W. (2011). Bunyi-bunyi distingif bahasa Jawa. Elmatoria Publishing.
Şeker, H., Deniz, S., & Görgen, L. (2004). Öğretmen yeterlikleri ölçümü. Milli Eğitim Dergisi, 164, 105–118 https://dergipark.org.tr/en/pub/kuey/iissue/10355/ 126793.
Şerefi, I., & Varşoğlu, B. (2020). The investigation into prospective teachers’ Turkish metalinguistic awareness. Dil ve Dili Bilirleri Çalışmalar Dergisi, 16(2), 959–977 https://doi.org/10.17263/ils.759351.
Shiyani, K. (2017). Analisis Morfolaji Bahasa Jawa dalam Wacan Bocah pada Majalah Djakarta Lodang Tahun 2015. PBSJ-KFIP.
Tavşancıl, E. (2003). Tutumların ölçülmesi ve SPSS ile veri analizi. Nobel Yayıncılık.
Tebbasaran, A. A. (1997). Likert tipi ölçek geliştirme kılavuzu. Türk Psikolojiler Derneği Yayınları.
Tsang, K. K. S., & Stokes, S. F. (2001). Synchronous awareness of Cantonese-speaking children. Journal of Child Language, 28(3), 703–740. https://doi.org/10.1017/ S030500090100422
Varşoğlu, B. (2018). Turkish metalinguistic awareness scale: A validity and reliability study. Universal Journal of Educational Research, 6(4), 691–700. https://doi.org/10.13189/ujer.2018.060142
Watts, R. J. (2003). Politeness. Cambridge University Press.
# Appendix
Critical Awareness Scale of Prospective Javanese Language Teachers in Elementary School

| No | Items |
|----|-------|
| 1  | **Phonological Awareness** |
| a  | I know the sounds used in spoken Javanese language differ from those used in written Javanese language. |
| b  | I could easily pronounce all the sounds that sound according to the pronunciation of sounds in the Javanese language. |
| c  | I can fluently pronounce all the sounds that create words in the Javanese language. |
| d  | I could understand the syllable structure and syllable division of Javanese words correctly |
| e  | I could easily recognize sound changes in Javanese words. |
| f  | I can get new words from the many sounds found in the Javanese language. |
| g  | I can easily recognize the sound change in word repetition in the Javanese language. |
| 2  | **Morphological Awareness** |
| a  | I could break down Javanese words based on root and affix |
| b  | I could classify the types of affixes and roots based on their form |
| c  | I have an idea about the Javanese language affix function. |
| d  | I could easily distinguish the types of derived words in the Javanese language |
| e  | I could determine derived words in the Javanese language based on word structure. |
| f  | I could determine the types of words in the Javanese language based on their structure |
| 3  | **Syntactic Awareness** |
| a  | I could analyze long and complex Javanese sentences based on their constituent elements |
| b  | I could classify phrases in Javanese sentences correctly |
| c  | I have never had difficulty analyzing Javanese sentences based on their constituent elements |
| d  | I can understand the meaning of Javanese sentences correctly |
| e  | I can use Javanese sentences according to the standard Javanese grammar |
| f  | When compiling sentences in the Javanese language, I could choose words that are appropriate to the meaning of the sentence correctly |
| g  | I could analyze long and complex Javanese sentences based on their constituent elements |

(Continued)
### Semantic Awareness

| No | Items |
|----|-------|
| 4a | I could understand and interpret guritan (Javanese poetry) full of figurative meanings. |
| 4b | I could find the opposite meaning of the word in Javanese (kosokbalen “antonym”). |
| 4c | I could distinguish the meaning of connotation and denotation in the Javanese language |
| 4d | I could use expressions in the Javanese language according to the meaning contained correctly. |
| 4e | I could find the word’s meaning in the adjacent Javanese language (dasanama “synonym”). |
| 4f | I could use words with more than one meaning (homonyms) in sentences according to the context |
| 4g | I could understand the meaning of Javanese sentences, both implicitly and explicitly. |

### Communicative Awareness

| No | Items |
|----|-------|
| 5a | I could communicate in the Javanese language appropriate to the context. |
| 5b | I could find out the communication strategies someone uses when speaking in Javanese. |
| 5c | I pay attention to the politeness and courtesy of a person when communicating in Javanese |
| 5d | I can understand the various purposes and ideas implied in Javanese communication easily. |
| 5e | I can easily read the feelings, thoughts, and behaviour of someone I communicate with using the Javanese language. |
| 5f | I can quickly respond to the feelings, thoughts, and behaviour of someone I communicate with using the Javanese language. |

### Cultural Awareness

| No | Items |
|----|-------|
| 6a | I know that I need to protect the local language (Javanese) to maintain the existence of the Javanese people and the next generation, and I have done that too. |
| 6b | I could analyze and interpret the rich history, literature, and culture of Java |
| 6c | I could recognize the noble values, beliefs, attitudes, and character of the Javanese community |
| 6d | I understand the Javanese language’s sentence (expression) message correctly. |
| 6e | As an individual, I am aware of the appropriate use of the Javanese language in the culture. |
| 6f | I am aware that the Javanese language is the pillar of Javanese culture |
| 6g | I know what message to reject in the Javanese text I read. |
| 6h | I understand the ideas and opinions implied in readings using the Javanese language. |
| 6i | I know that I need to protect the local language (Javanese) to maintain the existence of the Javanese people and the next generation, and I have done that too. |
