

Morphological Awareness of Kindergarten Children: A Case of Reduplication

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Abstract: This study aims to investigate the morphological awareness of Indonesian children between the ages of 5 and 6 in two kindergartens. Morphological awareness measures covered children's ability in identifying and producing both inflectional and derivational reduplication morphemes. Participants in this study were 45 children of two kindergartens in North Bandung. This study employs a descriptive quantitative method because the collected data is quantitative information which is presented in numerical data in form of scores on two different types of test. The results showed that kindergarten children's morphological awareness is just beginning. Their inflectional reduplication morphemes awareness was also better than that of derivational reduplication morphemes awareness. In addition, children performed better at identifying and producing full reduplication morphemes than affixation reduplication, partial reduplication, and vocalic reduplication morphemes.

1 INTRODUCTION

One of the basic areas of development in early childhood is language development. The time from two and half to five years, children's language is more similar with that produced by adults although sometimes the sentences are still grammatically incorrect (Rahman, 2009). Concerning this matter, the Ministry of Education and Culture of Indonesia No. 137 of 2014 regarding the National Education Standard of Early Childhood Education has emphasized the significance of language learning in early childhood education. Thus, the learning processes in early childhood education should be oriented to support each stage of their language development because these abilities are strongly related to the next level of language competency, particularly reading ability. In order to have a good reading skill or literacy development, children also need to have good language awareness because "readers of alphabets must have an awareness of phonemes, readers of syllabaries must have an awareness of syllables, and readers of logographies must have an awareness of morphemes" (Singson, Mahony, & Mann, 2000, p. 191). Later, these skills will lead to the comprehension of text which relates

to morpheme awareness as an essential type of awareness in literacy development.

Being one of the essential aspects of literacy development, morphological awareness can be defined as conscious knowledge in using morpheme based on its form and function. Several studies have been conducted to examine the great influence of morphological awareness towards literacy abilities such as word-level reading, reading comprehension, vocabulary skills, and spelling development (e.g., Apel, Wilson-Fowler, Brimo, & Perrin, 2012; McCutchen, Green, & Abbott, 2008; Nagy, Berninger, Abbott, Vaughan, & Vermeulen, 2003; Ramirez, Walton, & Roberts, 2013; Roman, Kirby, Parrila, Wade-Woolley, & Deacon, 2009; Tabatabaei & Yakhabi, 2011). Therefore, for kindergarten children themselves, morphological awareness can be the next predictor of their level of reading comprehension, spelling, and vocabulary knowledge.

Examination of language awareness has received little attention, particularly in early childhood age for native speakers of Bahasa Indonesia. Compared to phonological awareness, there are only very few studies assessing morphological awareness of children in Indonesian context which merely focus on investigating children's abilities in identifying and manipulating affixes (e.g., Kurniawan, Solehuddin, & Gunawan, 2015; Nurdiansyah, 2016; Silviany, 2017).

In this article, we seek to examine the ability of kindergarten children in identifying and producing both inflectional and derivational reduplication morphemes.

2 REVIEW OF LITERATURE

Morphological awareness refers to the ability to consciously consider or identify and manipulate morphemes, the smallest units of meaning in language (Apel & Diehm, 2013; Ramirez, Walton, & Roberts, 2013). This kind of language awareness comprises mainly knowledge about the pairing of sound and meaning in a language and the word formation rules that guide the possible combination of morphemes (Kuo & Anderson, 2006). Since morphological awareness includes the conversion of sounds onto semantic information, it gives major contribution towards text comprehension ability as it has been demonstrated in several studies (eg., Carlisle, 2000; Kirby, Deacon, Bowers, Izenberg, Wade-Woolley, & Parrila, 2012; McCutchen, Green, & Abbott, 2008; Roman, Kirby, Parrila, Wade-Woolley, & Deacon, 2009; Rothou & Padeliadu, 2014).

There are three types of morphological processes which have become the focus of a number of studies concerning the assessment of morphological awareness: inflections, derivations, and compounds (Kuo & Anderson, 2006). Inflectional morphemes are used to indicate aspects of the grammatical function of a word (Yule, 2006). The example of inflectional morphemes in Bahasa Indonesia is prefix *meN-*. When this prefix is affixed to verbal bases, it will construct a well-formed verb without changing the meaning of the base word, as in *melihat* (to see) and *membuka* (to open) (Djenar, 2003). Derivational morphemes are used to make new words or to make words of a different grammatical category from the stem (Yule, 2006). For instance, in Bahasa Indonesia, the prefix *ter-* is able to give a new meaning of an adjective. Compound is the process by which two or more words are joined to create a new term (Ramirez, Walton, & Roberts, 2013), for example *rumah sakit* (hospital) in Bahasa Indonesia which consists of two unrelated words, *rumah* (house) and *sakit* (ill).

In the morphology of Bahasa Indonesia, derivation and inflection are still rarely discussed. As one of the features in Bahasa Indonesia, researchers have gained their interest in classifying the inflectional and derivational forms of reduplication (R). Reduplication itself can be defined as a morphological process which involves the repetition of

base words either wholly, partially, or by sound change (Chaer, 2007; H. P. & Abdullah, 2012). The classification of reduplication in Indonesian language formed by researchers is varied. One of the classifications is proposed by Chaer (2006). He proposes 4 categories of reduplication which are full, affix, partial, and vocalic reduplication. Full reduplication involves repeating an entire word just like in *rumah-rumah* (houses), *pohon-pohon* (trees), and *pencuri-pencuri* (thieves). Affix reduplication involves affixes in the process of the doubling of the base word, for example, *berlari-lari* (run continuously) and *kemerah-merahan* (reddish). Partial reduplication occurs when the first syllable of a word is doubled. The example of partial reduplication is *tetangga* (neighborhood) and *lelaki* (man). Vocalic reduplication involves vocal or consonant change in the doubling process, for example, the words *gerak-gerak* (movement) and *sayur-mayur* (vegetables).

Ermanto (2008) has categorized Indonesian reduplication morphemes in terms of their morphological processes. He asserts that reduplication verbs are formed by a hierarchical morphological process which is further categorized into two subclasses: morphological hierarchy of transitive reduplication verbs and morphological hierarchy of intransitive reduplication verbs. Morphological hierarchy of transitive reduplication verbs can be formulated with pattern I: base word + derivational R (1) + inflectional affix (2). The example of the words can be seen in the verb *panggil* (call), *panggil* → *panggil-panggil* → *memanggil-manggil*. On the other hand, morphological hierarchy of intransitive reduplication verbs can be formulated with three different patterns: pattern II, pattern III, and pattern IV. Pattern II consists of base word + (R+affix (derivational process)). The example of the word which applies this pattern is *pukul* (hit), *pukul* → *pukul-memukul* and *hormat* (respect), *hormat* → *hormat-menghormati*. Morphological hierarchy of intransitive reduplication verb with pattern III: base word + derivational R is shown on *makan* (eat), *makan* → *makan-makan*. Pattern IV, however, contains of base word + derivational R + inflectional affix. It can be seen on the word *lari* (run), *lari* → *berlari-lari* and *jalan* (walk), *jalan* → *berjalan-jalan*.

In terms of reduplication types in Bahasa Indonesia, its classification is varied since there is no exact classification formed by researchers. One of the classifications is made by Chaer (2006). He proposes 4 categories of reduplication which are full, affix, partial, and vocalic reduplication. Full reduplication involves repeating an entire word just like in *rumah-*

rumah (houses), *pohon-pohon* (trees), and *pencuri-pencuri* (thieves). Affix reduplication involves affixes in the process of the doubling of the base word, for example, *berlari-lari* (run continuously) and *kemerah-merahan* (reddish). Partial reduplication occurs when the first syllable of a word is doubled. The example of partial reduplication is *tetangga* (neighborhood) and *lelaki* (man). Vocalic reduplication involves vocal or consonant change in the doubling process, for example, the words *gerak-gerak* (movement) and *sayur-mayur* (vegetables).

3 METHODS

The present study employs a descriptive quantitative method for collecting and analyzing the data. Quantitative research method involves numbers which later can be systematically measured (Blackstone, 2012; Creswell, 2014; & Perumal, 2014). Consequently, the data of the presents study are in form of students' scores on their morphological awareness tasks. Moreover, a descriptive approach can be explained as an approach that is functioned as a tool to organize data into patterns that emerge during the process of analyzing data (Knupfer & McLellan, 1996). Therefore, the quantitative descriptive method has been considered relevant to be employed in this present study because the data collection process also involved some numerical data which are collected from students' assessment results. To describe the findings, the collected students' scores were calculated by using statistical descriptive calculation by using percentage, mean, and also standard deviation.

3.1 Participants and procedure

Participants of the study were 45 kindergartners aged 5 to 6 from two schools in northern Bandung City. In school A, there were 21 children who participated in this study which consists of 10 female children and 11 male children. Meanwhile, there were 24 children in school B which consists of 10 female children and 14 male children. The study's only inclusion criteria were teachers' consent, students' assent, and the ability to understand task instructions. The assessment took place on August in 2017. The tasks were administered individually by the researchers in a quiet area of the chosen school.

3.2 Measures

All students were administered two morphological awareness tasks, reduplication identification task and reduplication word analogy task. The identification task is adapted from the instrument named 'suffix choice test' by Nagy et al. (2003). The identification task was performed orally by using laptop. There are 12 presentation slides which include a picture in GIF format, a sentence with a blank space, and three different words. The participants need to identify the correct reduplication form to fill the blank space in the sentence which best described the picture provided. Meanwhile, the word analogy task is inspired by Kirby et al. (2012). This task, which was also conducted orally, followed the form A:B::C:D. Children were asked to make the same kind of change to the given words (D) as were made in the original pair (A:B). The participants' correct choice is scored by 1 and the incorrect choice is scored 0. The collected scores were calculated and analyzed by carrying out descriptive statistics method.

4 RESULTS

In general, kindergarten children have shown their awareness of morphology to some extent. The results of the assessment of reduplication identification task and reduplication word analogy task are shown as follows.

Table 1: General findings of the study.

Number of participants	Test items	Number of answers	Correct answers	Percentage of correct answers
45	25	1125	514	46%

The table above shows the number of correct answers achieved by children is 514 out of 1125, which is only 46% of the total expected answers. By taking account of the percentage of children achievement, it can be assumed that their development of morphological awareness is just beginning.

Table 2: Findings according to morphological process.

Morphological process	Number of answers	Correct answers	Percentage of correct answers
Inflection	405	198	49%
Derivation	720	316	44%

Regarding the findings on morphological process, children get higher percentage of correct answers on inflectional morphemes (49%) than derivational morphemes (44%). On inflectional morphemes, there are 198 correct answers from the total of 405 expected answers. In contrast, it is found that there are 316 correct answers from 720 total answers of derivational morphemes. Hence, from the study, it can be said that children are more aware of inflectional reduplication morphemes than derivational reduplication morphemes.

Table 3: Findings according to reduplication types.

Reduplication type	Number of answers	Correct answers	Percentage of correct answers
Full	360	240	67%
Affix	405	166	41%
Partial	180	45	25%
Vocalic	180	63	35%

The table above demonstrates the number of answers and the percentage of each item. There are four types of reduplication morphemes administered on the test which are full, affix, partial, and vocalic reduplication. From the table, it appears that children perform better on identifying and manipulating full reduplication morphemes than others. There are 240 correct answers on full reduplication from the total 360 answers. In contrast, partial reduplication is the least answered by children for there are only 45 correct answers from the total 180 answers (25%). From the findings above, it can be concluded that children have higher awareness level of full reduplication morphemes than the other types of reduplication.

5 DISCUSSION

The purpose of this study is to present description of Indonesian kindergarten children morphological awareness especially their abilities in identifying and manipulating both inflectional and derivational reduplication morphemes. The findings generally show that Indonesian kindergarten children just begin to gain their morphological awareness. This result is in line with Nurdiansyah (2016) which shows that morphological awareness of Indonesian kindergarten children in terms of the ability of to identify inflectional morphemes in verbs is not completed. Regarding children's results according to morphological process, it shows that they have higher

awareness of inflectional reduplication morphemes than derivational reduplication morphemes. Kuo and Anderson (2006) have stated that research has consistently shows that children are able to manipulate the functional aspect of inflectional morphology by the early elementary grades. The authors also say that inflectional and compound morphology appears to develop earlier than derivational morphology. This research also considers types of reduplication as a variable for analyzing the data. From the findings, it can be seen that kindergarten children perform better at identifying and manipulating full reduplication morphemes than the other types of reduplication. Full reduplication morphemes merely include the doubling of base words or stems. On the contrary, the form of affix, partial and vocalic reduplication morphemes is relatively more complex since the addition or omission of syllables is also required. Therefore, kindergarten children may consider identifying and producing affix, partial and vocalic reduplication morphemes as a more challenging task than identifying and producing full reduplication morphemes.

6 CONCLUSIONS

By looking at the findings and discussion, it can be said that the morphological awareness of Indonesian kindergarten children in terms of the ability of to identify and manipulate both inflectional and derivational reduplication morphemes is just beginning. This can be seen by the percentage of correct answers that only reach 46%. Kindergarten children also seem to have a higher awareness level of inflectional reduplication morphemes than derivational reduplication morphemes. For further studies related to morphological awareness of children in the future, it is important to specify the variables, the aspect of morphology, and also the proportion of each aspect of morphology that is going to be assessed. By doing this, the instrument or task can be more easily designed and can be expectedly measured morphological awareness accurately. In addition, it is necessary for researchers to conduct future studies with a larger sample and an ideal method. By having a larger sample, a more general result for future studies and stronger claims related to the research may be achieved. Future researchers can also attempt to conduct correlational research in Indonesian context between morphological awareness and various literacy aspects such as

reading ability, spelling development, vocabulary knowledge as well as other metalinguistic awareness aspects. Associating morphological awareness with some factors is also recommended to be investigated. Lastly, this study suggests that home and classroom learning activities might include language or morphological awareness skill as one of the language development aspects that need to be developed. Many longitudinal studies have suggested that morphological knowledge learned by children in their early childhood stage will be beneficial for them in preparing the next level of education.

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