

Mean Length of Utterance of Children at the Trihita Alam Eco School

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Abstract

The aim of the study is mainly at testing the theory of Brown on the Mean Length of Utterance (MLU). Methods applied in this study were observation and audio recording technique. The data in this study were the utterances produced by students of Trihita Alam Eco School. There were sixteen children ranging from 4 to 6 years participating in this study (M=5.4). The children observed in this study are healthy children both physically and psychologically. The written permission from the school has been obtained to conduct the study. The results show that the sentence structures produced by children are quite well-organized and are able to place language functions clearly. The calculation of the MLU value in the research subjects show that Brown's theory which states that children at age 47 months have the MLU of 4.5 are mostly correct. The assumption that children who have the same ages doesn't imply that they have the same MLU is proven right.

INTRODUCTION

Language is used to communicate and interact with other people. However, people are not born with full of words, mastering grammatical order or other linguistic components. They all have to acquire them from their parents, social life, or environment. The process of acquiring those linguistic components called language acquisition (Kemuning, 2017).

One of the most well-known measures of language acquisition is the Mean Length of Utterances (MLU) used in order to measure the morphemes. This measurement was proposed by Brown (1973). The measurement Mean Length of Utterance has been shown to be a useful index of grammatical development among normal children. Brown (1973),

divides the stages of children language acquisition based on the children MLU to 5 stages, which are:

1. Stage I, MLU: 1.0-2.0, age: 12-26 months
2. Stage II, MLU: 2.0-2.5, age: 27-30 months
3. Stage III, MLU: 2.5-3.0, age: 31-34 months
4. Stage IV, MLU: 3.0-3.75, age: 35-40 months
5. Stage V, MLU: 3.75-4.5, age: 41-46 months
6. Stage V+, MLU: 4.5+, age: 47+ months

In this study, the Mean Length of Utterance (MLU) values of preschool students is examined. The same stimuli are also given to the students. The data

was taken at Trihita Alam Eco School. The subject of this study are the preschool and primary school students at the age range from 4 to 6 years old. However, it is assumed that eventhough they have the same ages, it does not mean they have the same MLU. Therefore, it is really challenging in conducting this research to analyze utterances produced by preschool and primary school students in order to know the ability of preschool and primary school students in acquiring their first language (English).

The result of this study may provide an understanding of the relationship between activity in preschool, primary school and morphemes that can be acquired by the children. This study also examines the ways in which children's mean length of utterance at various activities which relate to the given stimuli. Therefore, the results of this study are expected to help the reader who needs information about Mean Length of Utterance to pinpoint in what areas of language development could be increased, and what activities could be used in measuring it.

METHOD AND THEORY

Data Source

Subjects participating in the current study were sixteen children from Trihita Alam Eco School (M=5.4). The children observed in this study are healthy children both physically and psychologically. Data targeted for this study were utterances produced by the subjects. Specifically, the length of the utterances was measured in the context of Brown's (1973) Five Stages of Grammatical Development. Written permission from the school has been obtained.

Data Collection

The data was collected by observation method and audio recording

technique. The data was collected in two meetings, Tuesday, March 2, 2021 and Tuesday, March 23, 2021. These audio recordings were transcribed and calculated with mean length of utterance formula. The procedures of the experiment are as follows:

1. Sixteen children with the basic of English native speakers and mix-marriage parents in preschool and primary school of Trihita Alam Eco School have been chosen to be the subject of this research and they vary from 4 to 6 years old. Three children are 4 years old, three more children are 5 years old and ten more children are 6 years old. The relation to the Brown's (1973) Five Stages of Grammatical Development is the consideration in choosing this range of age.

2. The subjects were observed during the break time by having some conversations with subjects. The first given stimuli was the picture of birds which is the current subject of learning at the school. Afterwards, another two stimuli shown were pictures of superheroes and quotes about dream in order to encourage these children to express themselves.

3. The utterances of the children were recorded then transcribed to a written form and measured by using MLU formula.

Data Analysis

The method used in this study was quantitative method in analyzing the data. The data was analyzed using Brown's formula on counting MLU.

In order to count the MLU, Brown proposed the formula as follows:

$$MLU = \frac{\text{Number of morphemes}}{\text{Number of utterances}}$$

For example, in Mauka's MLU Measurement Result, Mauka got 448

morphemes in 66 utterances, therefore, the step on calculating the MLU will be:

$$MLU = \frac{448}{66} = 6.8$$

Data Presentation

The data were presented by using formal method. Specifically, the data were presented by using table based on the theory.

Literature Review

The first study is *Mean Length of Utterance in Cypriot Greek-speaking Children* by Louiza Voniaty. The study explained that Several scholars have recommended the utilization of word counts rather than morpheme for scoring MLU. The methodology in the study are participants, data gathering, transcription, and scoring reliability. For the participants, it consists of 36 monolingual CYG-speaking children, they are 18 girls and 18 boys. In the study, elicitation method was used for collecting the data.

The second study is *The Use of MLU for Identifying Language Impairment in Preschool Children* by Sarita L. Eisenberg, Tara McGovern Fersko and Cheryl Lundgren. Here, the speech-language pathologists are frequently asked to determine whether or not a child has a language problem and the article only focused only on the aim of identifying a language impairment. This article discussed about MLU. Elicitation method was used in this study to collect the data. In analyzing the data, this study used Standard Error of the Mean (SEM) to determine if there is any evidence that MLU can be used for identifying a language disorder.

Theory

The main theory of this study is Language Acquisition. According to

Brown (2008: 28) (in Marsis and Annisa, 2018) there are at least three different views regarding the language acquisition approach, namely the behavioristic approach, the nativist approach, and the functional approach.

The behavioristic approach argues that language behavior is a form of appropriate responses to stimuli.

The nativist approach pioneered by Chomsky (Brown, 2008: 31) argues that language acquisition is obtained from the innate language acquisition device in the brain called Language Acquisition Device (LAD).

The functional approach argues that language is a collection of cognitive and affective abilities of humans with themselves and their environment.

In order to make the study more detailed, this study used the theory of Stages of Acquisition proposed by Stern (1924), Nice (1925) and Brown (1973).

Stern varies between the terms 'stage' and 'period'. He sees development as scanning five time periods.

In 1925 Margaret Nice also added the name to each stage, typically that for the new behavior which occurs (Ingram, 1989). The stages divided into *Single word stage*, *Early sentence stage*, *Short sentence stage*, *The transition stage*, and *Complete sentence age*.

This study uses Brown's theory to count the number of morphemes instead of words in order to get exact and more sensitive measure in counting the MLU. According to Brown (in Dardjowidjojo, 2010: 241) the calculation of MLU can be done in several steps, firstly taking a sample of the utterances. Second, counting the number of morphemes. Third, Brown also stated the formula of counting the MLU (Dardjowidjojo: 2005: 246)

$$MLU = \frac{\text{Number of morphemes}}{\text{Number of utterances}}$$

RESULT AND DISCUSSION

Research Subject	Age	MLU Result	The Suitability to The Stages of Acquisition Proposed by Brown
Mauka	4	6.8	Suitable
Benji	4	7.6	Suitable
Shion	4	3.6	Unsuitable
Nadia	5	5.7	Suitable
Nala	5	3.2	Unsuitable
Carlton	5	5.9	Suitable
Julia	6	11	Suitable
Dylan	6	8.2	Suitable
Nathan	6	7.5	Suitable
Ryo	6	4.3	Unsuitable
Nacha	6	6.9	Suitable
Mikaela	6	9.1	Suitable
Sushma	6	3.7	Unsuitable
Lucky	6	4.9	Suitable
Noah	6	3.8	Unsuitable
Kenzo	6	3.8	Unsuitable

According to the table, it can be described that Subject 1, 2, 3, 4, 5 and 6 are preschool students. The other subjects are primary school students. Subject 1, Mauka (4 years) acquire the MLU result 6.8. According to Brown, Mauka is ideally on Stage V+. The result shows that the current finding of Mauka's MLU result is match to the stage proposed by Brown. Subject 2, Benji (4 years) could acquire the MLU result 7.6. According to

Brown, Benji is ideally on Stage V+ and could acquire MLU above 4.5. The result shows that the current finding of Benji's MLU result is suitable to the stage proposed by Brown. According to Brown's theory on Five Stages of Grammatical Development, it is named "*Coordination of simple sentences and propositional relations*".

On the other hand, subject 3, Shion (4 years) who has the same age as Mauka and Benji didn't produce the same MLU as they did. Shion could acquire the MLU result of 3.6. According to Brown, Shion is on Stage IV which is not suitable for Shion's age. According to Brown's theory on Five Stages of Grammatical Development, the stage named "*Embedding one sentence within another.*" Other children who are in the same stage as Shion are Nala (5 years) and Sushma (6 years). Nala could acquire the MLU result 3.2 and Sushma 3.7.

For the primary school students, Ryo, Noah and Kenzo (6 years) didn't acquire the MLU 4.5 or above as they are categorized on stage V+ based on their age. Ryo could acquire 4.3. Noah and Kenzo could acquire the MLU result 3.8. According to Brown's theory, they are on Stage V, however they are supposedly on Stage V+.

For other children such as Nathan, Dylan, Julia, Nadia, Carlton, Nacha, Mikaela, and Lucky they are ideally on the Stage V+ and reach the "*Coordination of simple sentences and propositional relations*" stage. The average MLU of all children is as follows:

$$\frac{\text{Total MLU result}}{\text{Total subject}} = \frac{96}{16} = 6$$

According to Brown's acquisition stage, the average MLU of all children is on Stage V+ which is suitable with their age. The stage named "*Coordination of*

simple sentences and propositional relations.” It is the active development of sentence, noun phrase, and verb phrase coordination with the utilization of conjunctions. The implication of the current finding related to the theory proposed by Brown is mostly suitable. There are some discrepancies found regarding the results (i.e. Shion, Nala, Ryo, Sushma, Noah and Kenzo).

CONCLUSION

Based on the analysis, the results of the calculation of the MLU value in the research subjects show that Brown's theory stating that children in the age ranging from 4 to 6 years have the MLU result of 4.5+ are mostly correct with some exception. Children from mix-marriage parents (i.e. Nala, Shion, Ryo, Sushma, Noah and Kenzo) don't match Brown's theory. The assumption that children with the same age having different MLU result is proven right.

The implication of the current finding related to the theory proposed by Brown is mostly suitable. The children acquiring the suitable MLU as Brown's theory are the ones who speak English as their first language. Therefore, they are used to speak English in their daily life.

The discrepancy in the MLU results is influenced by a factor which is children who didn't reach the suitable MLU result as Brown's stages are from mix-marriage parents. According to the study, these children speak in Bahasa more often than they speak English with their local friends. However, for the next study, this assumption needs further testing on the factor which causes the discrepancy in the MLU result in contradiction to the theory proposed by Brown.

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