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Exploring the Impact of Age and Proficiency: English Word Stress Placement in Indonesian EFL Learners

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ABSTRACT

This study explores the impact of age and English proficiency on English word stress placement among eight Indonesian EFL learners (ages 10-20). Conducted through Zoom, the research reveals that children under 12 excel in word stress application, while teenagers struggle due to the influence of native language rules. Notably, children demonstrate superior tonal and stress distinctions compared to adults. Intermediate learners perform well, applying correct stress regardless of language background, while elementary-level learners face challenges, often applying Indonesian language tones to English stress patterns. These findings highlight the crucial role of early exposure and proficiency in shaping the acquisition of English word stress among Indonesian learners.

INTRODUCTION

In the international communication, English stands as a pivotal element, binding speakers across the globe. As emphasized by Crystal (2003), the significance of English in fostering effective communication cannot be overstated. Within this linguistic realm, the subtleties of word stress come to the forefront, exerting a profound impact on intelligibility, comprehensibility, and the intricate syntax that molds the essence of words. In the study of phonology, word stress influences intelligibility and comprehensibility (Field, 2005). Raphael et al. (2007) stated that lexical and sentence stress are very important in English. In addition, Underhill (1994) said that words with correct word stress are easier to understand, even if the pronunciation is incorrect. In other words, word stress influences the syntax, which

can change the meaning of words. Thus, incorrect stress on words causes misunderstanding in intercultural communication.

There are a number of studies that report that stressed and unstressed syllables are distinguished by vowel duration, vowel intensity, and fundamental frequency (F0). Chen et al. (2001) relied on a study about the production of English sentence stress in Mandarin speakers. They found that Mandarin speakers produce higher F0, longer duration of vowels, and greater vowel intensity on stressed English words than unstressed ones. Archibald (1992) found that English learners transferred their L1 word stress to the target language. He then continued the study of English word stress on Chinese and Japanese students in 1997 and stated that they stored English lexical stress. Similarly, Heidi (2006) also found that the competence of ESL Chinese, Korean, Arabic, French, Spanish, and Japanese learners was low in the placement of English word stress. Paradis, J. (2001) also found that English-French bilingual children preserved a trochaic pattern while French-English preserved an iambic pattern. On the contrary, Rose and Champdoizeau (2008) found that there was no trochaic pattern in English-French bilingual children. In recent studies, Zhang (2010) stated that Mandarin learners could not assign stress to disyllabic non-words. In addition, Amer & Amer (2011) stated that the form of L1 phonology created difficulty in English stress placement for ESL Arabian learners. Furthermore, Cheng (2017) studied ESL advanced students toward English stress placement in China. He found that Chinese learners could assign English stress in both two and three-syllable words correctly. In similar results, Weda (2012) found that Indonesian English learners were not competent in placing English word stress.

Several studies above indicate that there might be a possibility of word stress competence in students who have no stress rule in their native language. However, these previous studies did not mention the age and level of proficiency of students as considerations. Nevertheless, there is still no published research that has investigated whether different ages and levels of English learners will show different results in English word stress. Therefore, this study is designed to fill this

gap by investigating the ability of English stress placement in Indonesian English learners of different proficiency levels.

Literature Review

Stress in English

In English, the characteristics of stress are long, loud, and high-pitched sounds. The features of stress extend over the syllable, word, and phrase. Additionally, English stress is categorized into two types, namely word and sentence stress. According to Couper-Kuhlen (1986), the syllable is the domain of word stress, whereas the word is the domain of sentence stress. Roach (2000:63) stated that word stress refers to syllable prominence. Furthermore, he elaborated on the criteria of stress as follows:

1. Loudness defines the syllables received loud stress
2. Length refers to the stress syllable is longer then unstress one
3. Pitch refers to vocal fold vibration frequency and high pitch sound
4. Quality is when the old syllable changes to the new one while the others remain, the old one is identified as stress.

There are numerous studies on word stress in American English (Beckman, 1986; Sluijter and Van Heuven, 1996; Campbell and Beckman, 1997). These studies focused on word stress in disyllabic words to determine whether it functions as a noun or a verb. As a result, they found that English has a close relation with frequency (F0), greater intensity, longer duration, and the quality of the vowel.

Basically, English words have no two stresses and fall into the vowel because it does not depend on the condition of morphological structure. Roach (2000) identified English stress into four categories as follows:

1. Lexeme, morpheme, complex or compound word
2. The class of word such as verb, noun, and so on
3. Number of syllables
4. Phonological structure of syllable

O'Connor (1973) stated that the patterns of stress are based on the number of syllables, whereas Roach (2000) argued that it depends on the category of lexeme, namely verbs, nouns, and adjectives. Verb stress in a two-syllable word is located on the second syllable if it contains a long vowel or double consonants at the end, while the location of stress falls on the first syllable if the verb has a short vowel. Meanwhile, the stress will be placed on the last syllable of a three-syllable verb if the last syllable consists of a diphthong or paired consonants. In the case of a two-syllable noun, it has stress on the first syllable when there is a short vowel in the second syllable. If there is a long vowel or diphthong, or it ends with double consonants, the stress is placed on the penultimate syllable of the noun. In addition, there will be no stress if there is a short vowel at the last syllable of the noun. Lastly, adjectives have second-syllable stress when there is a diphthong or more than one consonant in the second syllable. Yet, the stress is placed at the beginning of the syllable if there is a short vowel or no consonant included. In three-syllable words of adjectives, it has identical stress rules to nouns.

Contrastive Test

Firth (1975) believes that there is a relationship between the types of syntagmatic and syllable prosodies, such as stress, tone, quantity, or quality. Although stress on syllables is identical with grammatical function, some studies believe that the use of stress is not only to encode the speakers' utterances but also as a device to contrast information (Chafe, 1970; Solon, 1980). Contrastive stress has a significant influence on conversation in terms of conversational implicature (Grice, 1978, cited in Levinson, 1983). Usually, contrastive sentence stress, which involves pitch prominence, is used when speakers want to emphasize an important word for the listeners by performing reductions, such as "I am" becomes "I'm" or "do not" becomes "don't". There are major types of contrastive stress which encompass:

1. ***Not*-contraction** : e.g.: *didn't, wouldn't, don't*
2. **Auxiliary verb contraction** : e.g.: *I'm, you've, they're, we'll, she's, there's, you'd*
3. **Personal pronoun contraction of *us*** in *let's*

RESEARCH METHOD

Participants

The total participants in this study were 8 Indonesian EFL learners. There were 4 students in the 4th grade of elementary school with ages ranging from 10 to 11 years old. Two of them had been exposed to English since kindergarten, while the others started learning English in the 2nd grade. This research compared them with 4 university students, whose ages ranged from 19 to 20 years old. They were from elementary and intermediate English classes. All participants were Indonesian native speakers.

Materials

The experiment was designed to test the ability of Indonesian students in placing the word stress. The materials were the chosen English words in which those words were Indonesian borrowing vocabularies. They are as follow:

1. Police
2. Network
3. Topic
4. Milk
5. Paste
6. Briefing
7. Snack
8. Symbol
9. Request
10. Commitment
11. Theory
12. University
13. Conference
14. Seminar

Then, the selected words were grouped based on the place of stress. Meanwhile, the stimuli of those words were taken from online Oxford Learners' Dictionaries.

Actions

The test was conducted through the Zoom application due to the Corona Pandemic, lasting about 40 minutes, recorded during the task. Before it started, participants filled out a Google form about their background. Next, participants were given instructions before being asked to listen to 14 words. Each sample of word pronunciation was listened to, and the participants directly pronounced each word

based on the position of English word stress from the listened audio. This process was repeated until the last set of English words. Then, the participants' pronunciation was analyzed to identify the location of English word stress.

FINDING AND DISCUSSION

Findings

The result and discussion are showed into two parts: word stress based on the age and level of English proficiency. There are 8 respondents who had different language background namely Indonesian – English, Indonesian – Sundanese, Indonesian – Javanese, Indonesian -cirebonese, and Indonesian. The range of age was 10 – 20. The first investigation shows that each of them has different result in positioning the stress of English words. It is clearly seen from the table below:

Table 1. the Example of Table Writing

No.	Background of Language	Age	Number of Correct Stress Position
1.	Indonesian - English	10	14
2.	Indonesian – Sundanese	10	10
3.	Indonesian	10	12
4.	Indonesian - Sundanese	11	10
5.	Indonesian – Javanese	19	5
6.	Indonesian – Sundanese	20	6
7.	Indonesian	19	10
8.	Indonesian – Cirebonese	20	9

The table above shows that children performed better than teenagers in those selected English words. Of students under aged 12, 1 student applied English word stress perfectly because English is her second language at home. It means that long exposure of English increases her competence in both L1 and L2 rules. Meanwhile, the other children were able to stress English words correctly at around 80 %. Young learners develop the pattern of English lexical stress by contrasting stressed and unstressed syllables before 2 years old (Pollock, Bammer, & Hageman, 1993).

On the contrary, the teenagers did poorly in placing English lexical stress under 11 words. Some of them tend to unstress the target words while the others placed the stress on the initial of two syllables. Bian (2013) also found that Chinese English students put their stress of two syllable in the beginning. It indicates that the influence of mother tongue rules has played the significant impact on Indonesian adult learners. In this respect, there is no stress rule in Indonesian language.

It is interesting to know that children ability to differ between tones and stress is better than adult learners. Tao and Lucas (2012) also argued that children have good perform in language production. Moreover, Archibald (1997) stated that ages factor involves in the English word stress assignment. In short, early exposure to the second language enhance the production of L2 stress pattern.

Table 2. the Example of Table Writing

No.	Background of Language	Level	Number of Correct Stress Position
1.	Indonesian - English	Intermediate	14
2.	Indonesian – Sundanese	Elementary	10
3.	Indonesian	Intermediate	12
4.	Indonesian - Sundanese	Elementary	10
5.	Indonesian – Javanese	Elementary	5
6.	Indonesian – Sundanese	Elementary	6
7.	Indonesian	Intermediate	10
8.	Indonesian – Cirebonese	Intermediate	9

Table 2 above provides the high number of the correct position of English word stress for Intermediate English learners. From the data, intermediate students were able to apply English word stress correctly although their backgrounds were from monolingual and bilingual competence. They are able to place the stress above a half of total English vocabularies with avarage 11,25. Cheng (1973) found that advanced learners place English word stress accurately. Similar finding on the English stress of Thai learners. Jaiprasong & Pongpairoj (2020) argued that Thai

students of High level L2 proficiency applied more English stress-assignment words than low level of English proficiency.

In contrast, the students of elementary level were difficult to place the English stress. The average number of elementary English level is just at 7,75. It is supported the previous research finding on Chinese students on the place of English stress. The result has similar finding with Porzuczek (2014) in which English learners of low proficiency level could not perfom better than advanced learners. It can be said that the students still bring the rule of their mother tongue into the target language. This research also found that Indonesian learners of basic level tend to assign English word stress with Indonesian language tones. Therefore, the duration of English exposure also can cause the participants displace L2 stress pattern.

Discussion

The findings of this study reveal interesting insights into the placement of English word stress based on age and English proficiency levels. The participants, with diverse language backgrounds including Indonesian-English, Indonesian-Sundanese, Indonesian-Javanese, Indonesian-Cirebonese, and Indonesian, were in the age range of 10 to 20.

The initial investigation indicates notable differences in the ability of participants to position the stress of English words. Notably, children outperformed teenagers in the selected English words. Among students under the age of 12, one student demonstrated a perfect application of English word stress, attributing it to English being her second language at home. This suggests that prolonged exposure to English enhances competence in both first language (L1) and second language (L2) rules. The other children also demonstrated an ability to stress English words correctly at around 80%, showcasing the development of English lexical stress patterns in young learners before the age of 2 (Pollock, Bammer, & Hageman, 1993).

Conversely, teenagers struggled in placing English lexical stress, with some tending to unstress the target words and others placing stress on the initial syllables. This aligns with findings by Bian (2013) regarding Chinese English students, suggesting a significant impact of mother tongue rules on Indonesian adult learners, particularly considering the absence of stress rules in the Indonesian language.

An intriguing observation is that children showed a better ability to differentiate between tones and stress compared to adult learners. Tao and Lucas (2012) supported this by asserting that children generally perform well in language production. Additionally, Archibald (1997) highlighted the influence of age on English word stress assignment, suggesting that early exposure to a second language enhances the production of L2 stress patterns.

Intermediate English learners demonstrated a high number of correct English word stress positions, showcasing their ability to apply stress accurately despite having monolingual and bilingual backgrounds. This aligns with Cheng's (1973) findings regarding advanced learners accurately placing English word stress. Similar findings were observed in Thai learners of high L2 proficiency by Jaiprasong and Pongpairoj (2020), indicating a correlation between proficiency levels and the accurate application of English word stress.

On the contrary, students at the elementary level encountered difficulties in placing English stress, with an average number lower than intermediate and advanced levels. This aligns with Porzuczek's (2014) findings that learners of low proficiency struggle compared to advanced learners. It appears that students at the basic level tend to apply English word stress with Indonesian language tones, emphasizing the influence of the mother tongue on the target language. The duration of English exposure also emerged as a factor, as participants displaced L2 stress patterns.

CONCLUSION

In conclusion, this study delved into the nuanced dynamics of English word stress placement among Indonesian EFL learners, considering the variables of age and

proficiency levels. The findings underscored the pivotal role of early exposure to English, with children under 12 demonstrating superior proficiency in applying word stress, suggesting a developmental advantage in lexical stress acquisition before the age of 2. Contrastingly, teenagers faced challenges, often influenced by native language rules, emphasizing the need for targeted intervention in adult language acquisition. Notably, children exhibited a heightened ability to differentiate between tones and stress, highlighting their linguistic perceptiveness. Intermediate English learners showcased proficiency in accurate word stress placement, irrespective of language backgrounds, while elementary-level learners encountered difficulties, frequently transferring Indonesian language tones to English stress patterns. These insights underscore the intricate interplay between age, language proficiency, and the acquisition of English word stress in the Indonesian EFL context, providing valuable considerations for language education strategies. Future research could explore targeted interventions to enhance word stress acquisition among adult learners and further investigate the impact of extended English exposure on stress pattern displacement among learners at different proficiency levels.

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