

## **ENGLISH TEACHERS' MASTERY OF THE ENGLISH ASPIRATION AND STRESS RULES**

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### **Abstract**

This paper tries to observe the English teachers' awareness and representation of the English aspiration and stress rules. The research purposes to find out whether or not the teachers are aware of the English aspiration and stress rules, and to find out how the teachers represent the English aspiration and stress rules. Based on the analysis, it can be concluded that the teachers' awareness of the English aspiration and stress rules is very low. It is indicated with the percentage which equals to 44% and 48% for English aspiration and stress rules. In representing the English aspiration and stress rules, the teachers face the problems in producing aspiration in the pronunciation, placing the right stress and pronouncing three and four X in the coda position. There are two reasons affecting the teachers' awareness of the English aspiration and stress rules namely exposure and L1 influence.

Artikel ini bertujuan untuk meneliti kesadaran dan representasi aturan aspirasi dan tekanan oleh guru bahasa Inggris. Penelitian ini bertujuan untuk menjelaskan apakah guru bahasa Inggris mempunyai kesadaran atas aturan aspirasi dan tekanan dalam bahasa Inggris, dan untuk menunjukkan bagaimana guru Bahasa Inggris mewujudkan aturan aspirasi dan tekanan dalam pelafalan mereka. Berdasarkan analisis yang dilakukan, dapat disimpulkan bahwa kesadaran guru Bahasa Inggris atas aturan aspirasi dan tekanan dalam Bahasa Inggris masih sangat rendah. Hal tersebut ditunjukkan oleh rendahnya prosentase dalam perwujudan aturan aspirasi dan tekanan: 44% dan 48%. Dalam mewujudkan aturan aspirasi dan tekanan, guru Bahasa Inggris menemui masalah dalam menghasilkan aspirasi dalam pelafalan, meletakkan tekanan pada suku kata yang tepat dan pada posisi X yang berada pada posisi ketiga atau keempat. Terdapat dua alasan yang memengaruhi kesadaran partisipan atas aturan aspirasi dan tekanan, yaitu pajakan dan pengaruh bahasa pertama.

**Key words** : aspiration, stress, competence, performance

## INTRODUCTION

Collin and Mees (2003) say that phonology is a part of linguistic fields which studies the selection and patterns of sound in a single language. This kind of study is different from phonetics, which describes the language sounds. The knowledge of phonology is important since English pronunciation is the representation of sounds physically and mentally. It is said so because English carries the systems for carrying the meaning. The sound is processed in the mind and understood mentally by the language users when utterance occurs. Knowing phonological rules is included into linguistic competence, meaning the language user's knowledge of a language. When the knowledge is realized in the actual speech communication, it is called linguistic performance. The language user's linguistic performance is affected by his or her linguistic competence. In relation to this paper, the linguistic competence refers to the participants' knowledge of the English aspiration and stress rules. The realization of the English aspiration and stress rules in the pronunciation is glossed as the linguistic performance.

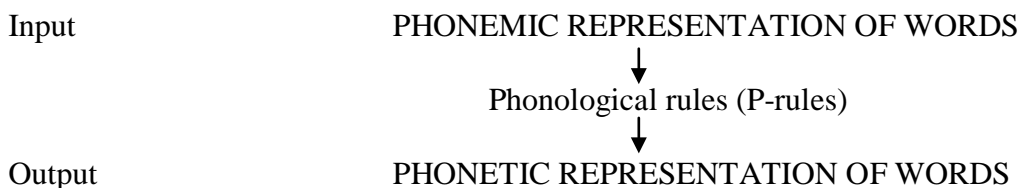
This paper aims at analyzing the Indonesian speakers' mastery of the representations of the English aspiration and stress rules in the pronunciation. The answers of the following questions will be the tools to determine their mastery.

1. Are the English teachers aware of the English aspiration and stress rules?
2. How do they represent the English aspiration and stress rules?

In the pronunciation, English deals with aspiration. Aspiration is an optional process since not all consonants can be aspirated. Only voiceless stop /p, t, k/ can be aspirated. Aspiration takes place in the initial stressed syllable of voiceless stop consonants. As the example in the word *take*, the phonetic level or realization of the phonemes is [t<sup>h</sup>eIk]. The realization of the aspiration can be observed obviously. Aspiration can be defined as a period of voiceless after the stop articulation and before the start of the voicing for the vowel (Ladefoged, 1993). We can feel the burst of air that comes out during the period of voicelessness after the release of the stop. When the participant can pronounce the aspiration of the word given, he or she is aware of the English aspiration rules. On the other hand, when the realization of aspiration is absent, the participants are not aware of the English aspiration rules.

Finch (2005) proposes that phonological rules are part of every speaker's linguistic competence which operates unconsciously, but systematically, as we speak. The speakers' mastery of phonological rules influences their pronunciation. The figure below shows that the input to the P-rules is the phonemic or abstract representation. When the P-rules apply or operate on the phonemic strings, they produce output as the phonetic representation.

**Figure 1 How phonological rules operate (Finch, 2005)**



Aitchison (2003) says, “Anyone working on an unwritten language must not only make a list of the phonemes of that language. They must also discover their variant forms or allophones (47).” Since the participants use English in the teaching learning activity, they should know the allophones of certain phonemes which occur in different and predictable sets of environment (in complementary distribution). The allophones which are involved in this research are [p<sup>h</sup>], [t<sup>h</sup>] and [k<sup>h</sup>]. The rule of aspiration is stated below.

[voiceless stop] → [aspirated] / initially in a stressed syllable

(Taken from Rogers, 2000: 46)

The meaning of an English utterance is based on the number of stress. The different stress placement can determine the class of word, such as *'record* (n) and *re'cord* (v). Consequently, the meaning of previous words are also dissimilar one another. Stress placement can also distinguish compound noun from noun phrase, for example *Whitehouse* and *white house*. As a compound noun, *∇Whitehouse*, the stress falls in the adjective, while as a noun phrase stress falls in the noun, *white ∇house*.

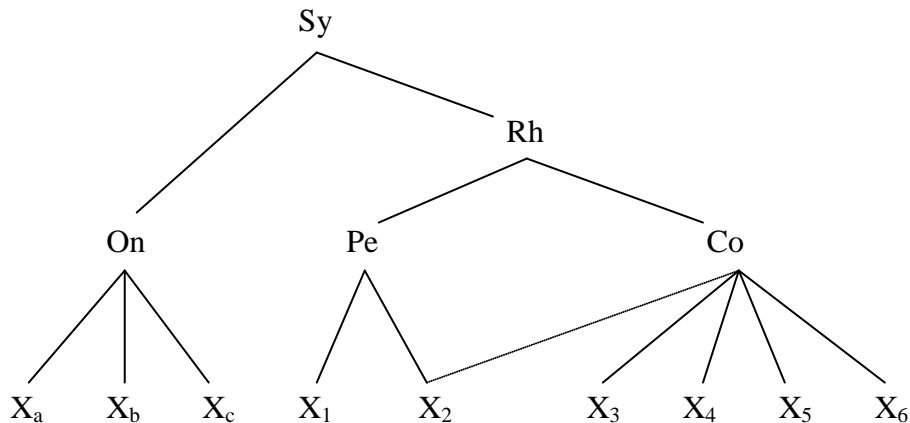
The way we read an English sentence is based on the stress. We do not read it based on the number of syllable, as what Indonesians do. That is, why English is called as a stress-timed language. When the Indonesian speakers of English are not aware of the stress rules, their English will be assumed as poor. The example can be found in elementary school English teachers' pronunciation. The English sounds they produce are the same as syllable-timed language as Indonesian. The length of utterance in Indonesian depends on the numbers of syllables.

In speaking, stress can be identified by giving greater loudness, higher pitch, and greater length (Rogers, 2000). Those markers are absent in Indonesian. People can speak Indonesian with the same pitch in a sentence. In English, we cannot use the same pitch in a sentence. In content words, we must put a stress. Thus, we can easily identify what syllable or words receive stress in a sentence. This difference makes Indonesian speakers of English face difficulty to produce stress in speaking.

Giegerich (1992) asserts that stressed syllable must be heavy, that is a rhyme containing at least two X-positions, whether it is a monosyllable or part of a polysyllabic word. To be a rhyme, a syllable should include at least a nucleus, which can be a vowel, liquid, or nasal. When a rhyme contains at least a peak and a coda, it is stressed. The participants' awareness of the previous rule can be measured in their pronunciation. Accordingly, this paper selects words which contain heavy syllable.

To put a stress in a word, English speakers should consider the syllabification, which is the rules that govern the way in which strings are divided into syllables (Giegerich, 1992). The English syllabification rule is shown in figure 2 below.

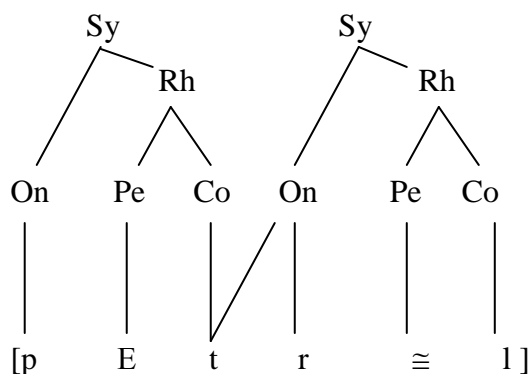
**Figure 2. Syllable template (Giegerich, 1992: 150)**



- Conditions:
- (1)  $X_{1-2}$  are obligatory
  - (2)  $X_{b-3}$  are associated with a single sonority peak, the maximum being  $X_1$
  - (3)  $X_2$  is associated with either peak or coda
- $X_4$ : [-son] [+cor],  $X_5$ : [-son] [+cor],  $X_6$ : [-son] [+cor]

To put phonemes into onset, peak, or coda, we should refer to phonotactics. English speakers have to take into account that only certain clusters are permissible in onset, peak, or coda position. English permits three Xs in the Onset position when the first phoneme is /s/ followed by voiceless stop and liquid/glide. As the example, /spral/ is a permissible word in English since it has a meaning and /spr/ as its onset. On the other hand, /prsu/ is not permissible word in English since it is meaningless and its onset does not obey the phonotactics in the onset position.

English also has ambisyllabic consonant when it is (part of) a permissible onset (cluster) and immediately follow a stressed lax vowel (Giegerich, 1992). The example of ambisyllabic consonant is shown in tree diagram below.



(Taken from Giegerich, 1992: 172)

The diagram above gives us information where we can cut a word into its syllable. A speaker of English can pronounce the word as *pe-trol*, *pet-rol*, or *pet-trol*. The knowledge of the previous rule also affects where we put the stress.

Whether the peak of a syllable is tense or lax also determines the stress. Since the second syllable has lax peak, it is unstressed. As a foreign language which has many rules, English is seen as a difficult language by its learners.

Motivated by the different characteristics of English and Indonesia as above illustrated, the present study attempts to measure English teachers' mastery of the English aspiration and stress rules. Their pronunciation of certain words will be the parameter to determine their mastery.

## METHODS

There were five participants involved in this research. All of them are undergraduate teachers from English department who teach all levels, from kids to adults. Therefore, the participants have the linguistic background from their study. Even though they have background in linguistics, they require an investigation to see whether they are still aware of the English aspiration and stress rules or not. The words provided are those which are potentially aspirated and variously stressed. Word numbers 1 to 10 were analyzed in the angle of aspiration, whereas, the words number 11 to 20 were analyzed in their stress. The participants were given a list of twenty words and their voice was recorded. The recording of their voice was analyzed and observed in the representation of the English aspiration and stress rules of the given words. Below is the list of words which the participants must pronounce.

**Table 1 List of Words**

1.	Potato	[pə <sup>h</sup> t'eɪ.təʊ]	11.	Establishment	[ɪ'stæ'blɪʃmənt]
2.	Take	[t <sup>h</sup> eɪk]	12.	Nationalism	['næʃənəlɪzəm]
3.	Cap	[k <sup>h</sup> æp]	13.	Publication	[pʌblɪ'keɪʃən]
4.	Paper	[p <sup>h</sup> eɪpə]	14.	Explanation	[eksplə'neɪʃn]
5.	Come	[k <sup>h</sup> ʌm]	15.	Vernacular	[və'nekjələ]
6.	Texts	[t <sup>h</sup> eksts]	16.	Nightingale	['naɪtɪŋgeɪl]
7.	Pot	[p <sup>h</sup> ɒt]	17.	Pronunciation	[prənʌnsi'eɪʃn]
8.	Test	[t <sup>h</sup> est]	18.	Accumulate	[ə'kjumjuleɪt]
9.	Kick	[k <sup>h</sup> ɪk]	19.	Discipline	['dɪsəplɪn]
10.	Pill	[p <sup>h</sup> ɪl]	20.	Think	['θɪŋk]

The analysis was on the participants' pronunciation which was transcribed and compared to the correct transcription. From the analysis, whether the participants pronounced the words in the correct aspiration and stress rules or not can be seen.

## FINDINGS

The findings of this study consist of how the participants produce aspiration and stress in the given words. The analysis of the findings is put in separate part of this paper.

### The Realization of Aspiration by the Participants

Words which should receive aspiration can easily be found. In the classroom situation, English teachers often face those words such as *pen, paper, take, come, cap, call*, and so on. In order to see whether the participants realize the English aspiration in their pronunciation or not, the table below shows the participants' representation of English aspiration in the given words. The participants were assigned to read words number one to ten. Since there are five participants, the names of the participants are named alphabetically from A to E. In the table, the symbol negative (-) indicates that the participants do not pronounce the aspirated sounds, whereas, the symbol positive (+) indicates that the participants pronounce the aspirated sounds of the given words.

**Table 2 The Presence and Absence of Aspiration Rules**

No	Words	Participants					No of occurrence
		A	B	C	D	E	
1	Potato	-	+	-	-	+	2
2	Take	-	+	-	-	-	1
3	Cap	-	+	+	+	+	4
4	Paper	-	+	-	+	+	3
5	Come	-	-	+	+	+	3
6	Texts	-	-	-	-	-	0
7	Pot	-	+	+	+	+	4
8	Test	-	-	-	-	-	0
9	Kick	-	-	-	+	+	2
10	Pill	-	+	+	-	+	3
<b>Total occurrence of aspirated sounds</b>							<b>22</b>

From the table above, it can be concluded that the representation of the English aspiration rules pronounced by all participants equals 44%. The percentage is derived from the total numbers of aspiration produced by the participants (22) divided by the total numbers of words pronounced (50). The percentage is said very low because the participants are only aware of the English aspiration rules in few words.

Table 2 above can be summarized into table 3 below. The table shows the percentage of correct aspiration by the participants based on each consonant. Since there are five participants, the total number is from the number of participants times the number of words. The summary is below.

**Table 3 Percentage of Participants' Representation of Aspiration Rules**

Consonant	Number of Aspiration	Total number	Percentage (%)
/p/	10	15	67
/t/	3	20	15
/k/	9	15	60

Table 3 shows that the participants' awareness of the aspiration rules which occurs in the consonant /p/ is medium-low. It is represented as 67%. In the consonant /t/, the participants only represent the aspiration as 15% which can be said as poor. In the consonant /k/, the participants show their awareness of the aspiration rules as 60% which is medium-low.

**The Realization of Stress by the Participants**

As a stress-timed language, English must be pronounced in the right way at stressing. The analysis of the participants' awareness of the English stress rules also considers whether the segments are correctly represented in the pronunciation or not. The table below shows the participants' awareness of the English stress rules. The symbol negative (-) indicates that the participants pronounced the wrong stress placement of the words, while the symbol positive (+) indicates that the participants pronounce the correct stress placement of the words.

**Table 4 The Participants' Awareness of the English Stress Rules**

No	Words	Participants					No. of occurrence
		A	B	C	D	E	
1	Establishment	-	-	-	-	-	0
2	Nationalism	-	-	-	-	-	0
3	Publication	+	+	+	+	+	5
4	Explanation	-	+	+	-	+	3
5	Vernacular	-	-	+	+	-	2
6	Nightingale	-	-	-	+	+	2
7	Pronunciation	-	+	-	+	+	3
8	Accumulate	+	-	+	-	+	3
9	Discipline	-	+	+	+	+	4
10	Think	-	-	+	-	+	2
<b>The occurrence of stress</b>							24

Based on the table shown above, the participants' awareness of the English stress rules is also very low. In percentage, the representation of stress rules only equals 48%. The percentage is derived from the number of correct stress placement divided by the total number of words which should be stressed. In other words, 24 is divided by 50 times 100%.

Table 5 below shows the participants' representation of the aspiration, stress placement, and segmental features.

**Table 5 The Participants' Representation of the English Aspiration and Stress Rules**

No	Participants				
	A	B	C	D	E
1	[pəteɪtəʊ]	[pə't <sup>h</sup> eɪtəʊ]	['pəteɪtəʊ]	[pə'teɪtəʊ]	[pə't <sup>h</sup> eɪtəʊ]
2	[teɪk]	['t <sup>h</sup> eɪk]	['teɪk]	['teɪk]	['teɪk]
3	[kæp]	['k <sup>h</sup> æp]	['k <sup>h</sup> æp]	['k <sup>h</sup> æp]	['k <sup>h</sup> æp]
4	[peɪpə]	['p <sup>h</sup> eɪpə]	['peɪpə]	['p <sup>h</sup> eɪpə]	['p <sup>h</sup> eɪpə]

5	[kʌm]	['kʌm]	['kʰʌm]	['kʰʌm]	['kʰʌm]
6	[teks]	['tʰeks]	['teksts]	['tʰekst]	['teksts]
7	[pɒt]	['pʰɒt]	['pʰɒt]	['pʰɒt]	['pʰɒt]
8	['test]	['test]	['test]	['test]	['test]
9	['kɪk]	['kɪk]	['kɪk]	['kʰɪk]	['kʰɪk]
10	['pɪl]	['pʰɪl]	['pʰɪl]	['pɪl]	['pʰɪl]
11	[ɪstœ'blɪʃmən]	[ɪstœ'blɪʃmən]	[ɪstœ'blɪʃmən]	[ɪstœ'blɪʃmən]	[ɪstœ'blɪʃmən]
12	[nœʃə'nœlɪzm]	[nœʃə'nœlɪzm]	[nœʃə'nœlɪzm]	[nœʃə'nœlɪzm]	[nœʃə'nœlɪzm]
13	[pʌblɪ'keɪʃən]	[pʌblɪ'keɪʃən]	[pʌblɪ'keɪʃən]	[pʌblɪ'keɪʃən]	[pʌblɪ'keɪʃən]
14	[ɪk'spleneɪʃən]	[eksplə'neɪʃən]	[eksplə'neɪʃən]	[ɪk'spleneɪʃən]	[eksplə'neɪʃən]
15	[vənœkʃjʊlə]	[vənœ'kjʊlə]	[və'nœkʃjʊlə]	[və'nœkʃjʊlə]	[vənœ'kjʊlə]
16	[naɪtɪ'ŋgeɪl]	[naɪtɪŋgeɪl]	[naɪtɪ'nɔʒeɪl]	['naɪtɪŋgeɪl]	['naɪtɪŋgeɪl]
17	[prə'nʌnsieɪʃən]	[prənʌnsi'eɪʃən]	[prə'nʌnsieɪʃən]	[prənʌnsi'eɪʃən]	[prənʌnsi'eɪʃən]
18	[ə'kju:mjʊleɪt]	[əku:'mʊleɪt]	[ə'kju:mjʊleɪt]	[ə'kju:'mjʊleɪt]	[ə'kju:mjʊleɪt]
19	[dɪsəplɪn]	['dɪsəplɪn]	['dɪsəplɪn]	['dɪsəplɪn]	['dɪsəplɪn]
20	[θɪŋ]	['θɪŋ]	['θɪŋk]	['θɪŋ]	['θɪŋk]

Based on the table above, there are some general mistakes which are made by the participants: incorrect stress placement, the absence of segmental features and the absence of aspiration.

The table below shows the participants' representation of stress placement in the polysyllabic words. The monosyllabic word *think* is not included in the analysis because the participants do not have the serious problem on it.

**Table 6 Percentage of Participants' Representation of Stress Placement in Polysyllabic Words**

Stress placement	Number of correct placement	Total Number	Percentage (%)
Ultimate	2	5	40
Penultimate	11	15	73
Antepenultimate	11	25	44
Pre-antepenultimate	0	5	0

The table above displays that the participants represent the penultimate syllable stress in 73%. It seems the Indonesian speakers are familiar with the penultimate syllable stress.

## DISCUSSION

As above mentioned that in representing the aspiration of consonant /p/, the participants represent [pʰ] in 67%. The percentage is medium low, meaning that the participants are not fully aware of the aspiration rules toward the consonant /p/. The possible reason is because of the influence of L1, Indonesian. Lapoliwa (1977) says that in Indonesian, the consonant /p/ is phonetically realized as [p]



regardless where the syllable is. The phoneme /p/ is produced with lower lip and upper lip as active and passive articulators respectively and without the vibration of the vocal cords. It explains that Indonesian does not recognize aspiration rules.

In the words *texts* and *test*, there are no participants who pronounce them as [t<sup>h</sup>eksts] and [t<sup>h</sup>est]. The phoneme /t/ in the initial stress syllable should be aspirated as [t<sup>h</sup>]. However, the participants do not realize that the sound [t] is one of the English consonants which receive aspiration. Lapoliwa (1977) asserts that in Indonesian, the underlying phoneme /t/ is basically realized as [t] on the phonetic level. This consonant is a voiceless unaspirated apico-dental (or apico-denti alveolar) sound. The phenomenon is straightly different from the native speakers' because they are aware of the underlying forms operated on by a set of phonological rules that derive phonetic representation. The rules are coupled with instructions for how to produce and recognize the represented sound sequence (<http://language-theory.info/language670.html>). In other words, the participants are not familiar enough with the aspiration rule.

The number of participants who pronounce the aspiration of the phone [k] shows that the participants' awareness of the English aspiration rules is still low. Some participants are aware that [k] is a consonant which is aspirated in the initial stress syllable. Being compared to consonant [t] which is poorly pronounced in aspirated sound, [k] is pronounced in aspirated sound even though it is not fully represented by the participants. Since the consonants [t] and [k] are aspirated in the given words, the participants do not represent the aspiration rules in their pronunciation correctly. It seems that Indonesians are not familiar with aspiration sound. Lapoliwa (1977) argues that in Indonesia, the underlying consonant [k] is basically realized as a voiceless velar stop [k]. Therefore, [k] is understood by the participants as a consonant which does not receive aspiration due to the fact that Indonesian does not recognize aspirated sounds.

The problem made by the Indonesian speakers is the absence of aspiration in English words. This result is in line with Collins' and Mees' survey of errors in a selection of languages. Based on the survey, aspiration and stress are the features which are significant sources for errors in *Indonesian* (2003:189). Indonesian does not recognize the aspiration [p<sup>h</sup>], [t<sup>h</sup>] and [k<sup>h</sup>]. It can be seen in the word *bapak* (father) pronounced as [bapak] and *tidak* (no) as [tɪdak]. Yong (2001) says, "/p,t,k/ are always unaspirated, which can make them sound like /b,d,g/ to an English ear; in initial position this can lead into confusion between, for instance *cot* and *got*" (<https://netfiles.uiuc.edu>).

Related to another rule in English, stress, English teachers also face great difficulty to produce it. It can be seen from the findings shown above. In the word *establishment*, the stronger stress is in the antepenultimate syllable. The consonant [b] is ambisyllabic since it is a permissible onset with [l]. However, the stress rules as mentioned before do not appear in the participants' pronunciation. They pronounce *establishment* as [ɪstə'blɪʃmənt]. The stress is in the penultimate syllable due to the fact that the participants' knowledge on the syllabification and stress rules is low. They are not aware that the consonants [s] and [t] are permissible to join in an onset. Therefore, they put the stress in the penultimate syllable.

The similar analysis takes place in the word *nationalism*. That word should be stressed as in [ˈnæʃənəlɪzəm]. However, the participants pronounce as [næʃəˈnælɪzəm]. The first mistake is the wrong stress placement. The participants do not have understanding that in stressing the words, syllable which must be stronger stressed is the one which has two Xs. In the word *nationalism*, the segment [ʃ] is ambisyllabic because it is followed by an unstressed lax vowel. In contrary, the participants tend to stress the penultimate syllable because it is easily pronounced by them. What they understand is that the stress syllable has an onset, peak, and coda. The second mistake is the segment [æ] which should be [ə]. They generalize that 'nal' is pronounced as [næl].

Carr (1993) argues that in some languages, the location of main stress in polysyllabic words is fairly straightforward matter, which requires merely general statement of which syllable position the main stress falls on. In the word *nationalism* which is stressed in the penultimate syllable by the participants, they try to make generalization that the polysyllabic words are stressed in the penultimate syllable. This phenomenon can be compared to the words *publication*, *explanation*, and *pronunciation*. It is obviously seen that the participants' awareness of the English stress rules are not satisfying.

The number of the correct stress placement in the given words is still low compared to their competence in English. Even though they have learnt English in university, their performance in pronouncing English words in the correct stress placement does not appear as they should. This result is also in line with Finch's figure 1 that the P-rules do not apply in the participants' performance. Stress pattern is not understood as the P-rules which must be applied in the English pronunciation. Poedjosoedarmo (2003) says that the stress in one word may be different from the stress in other words and it seems that the English stress within words is unpredictable. Due to that reason, Indonesia speakers find difficulty at stressing the syllables. Besides the low linguistic competence, English stress rules are also complicated.

Stress placement is a typical rule in English. This rule does not appear in Indonesian. Goedemans and Zanten (2010) say that Indonesian does not have word stress because the stress syllables are not prominent at the word level. Therefore, the Indonesian speakers of English face the difficulty in stressing the syllables. Giegerich (1992) proposes that some kinds of the stressed syllable based on their position in words are ultimate, penultimate, and antepenultimate. The ultimate stress is a stress that is on the last syllable of words as in *think*. The penultimate stress is a stress on the second syllable from the last as in *publication*. The antepenultimate stress is a stress on the third syllable from the last as in *establishment*. Pre-antepenultimate stress is a stress on the fourth syllable from the last as in *nationalism*.

Based on the data, all participants can place the correct stress on the word *publication* as [pʌblɪˈkeɪʃən]. It is understandable that they are aware of the penultimate stress syllable in four syllable words since the rules are also found in Indonesian as mentioned in the previous paragraph. However, in the five syllables word as in *pronunciation*, there are two participants who place the wrong stress. They pronounce the ante-penultimate syllable stress. The reason is that they are

not familiar with five syllable words in Indonesian. Therefore, when they are assigned to pronounce the word *pronunciation*, they tend to generalize that it should be in antepenultimate syllable stress. Lapoliwa (1977) summarizes stress rules in Indonesian. However, he does not show the stress rules in the five syllable words because they do not appear in Indonesian. Therefore, the participants are influenced by the rules in their first language. Since the participants know that English is a stress-timed language, they try to stress the word even though the place is incorrect.

In the antepenultimate syllable stress, the participants only represent the stress in 44%. The number is very low. In the word *vernacular*, three participants do not pronounce it as [və'nækjʊlə], but they tend to pronounce as [vənæ'kjʊlə]. Indonesian speakers tend to stress the penultimate syllable in the polysyllabic words. In the word *nightingale*, the participants pronounce it as [naɪtɪ'ŋgeɪl] and [naɪtɪn'dʒeɪl]. In the three-syllable words, they tend to stress the ultimate syllable. That statement is in line with Lapoliwa's (1977) idea that Indonesian recognizes stress in the penultimate syllable as in *masya'rakat* and *sandi'wara*. Therefore, they are not familiar to stress the three-syllable words.

Pre-antepenultimate syllable stress as in the word *nationalism* is the difficulty faced by Indonesian speakers. There are no participants who pronounce it as [næʃənəlɪzəm]. They tend to pronounce as [næʃə'nælɪzəm] which has penultimate syllable stress. The participants tend to generalize that the polysyllabic words should receive the penultimate syllable such as in *publication* and *explanation*. Another reason is their understanding in types of syllable stress is limited. The participants do not put the correct stress placement due to the fact that English stress rules are not an easy matters. Collins and Mees (2003) say, "Stress is furthermore of great importance for the phonetic structure of the word and cannot as a rule be shifted in connected speech (111)." Since Indonesian speakers do not represent stress in the phonetic level correctly, they do not really master the stress rules. Therefore, their linguistic performance is not really good.

In order to place the stress, the knowledge of syllabification is necessary. Stress is put in the heavy syllable, meaning the syllable which has at least two X in the rhyme position. In the word *explanation*, two participants pronounce as [ɪk'spleneɪʃən]. In that transcription, the stress is put in the light syllable since the rhyme is [e] which only has one X. The onset of that stress syllable consists of [s,p,l]. It can be argued that what participants understand about stress rules is not in the rhyme composition, but in the onset composition. When the onset has more than one X, they tend to stress the syllable. This phenomenon is understandable when it occurs in Indonesian speakers' utterance. Recent investigation by Zenten & Heuven (2004) suggests that Indonesian speakers also tend to stress the antepenultimate syllable in longer words (Goedemans and Zanten: 2010).

Another problem faced by Indonesian speaker is the segment deletion. It means that some segments of the words are deleted. Ruijgrog (2008) states that Indonesian prefers CV (C) syllable structure. The empty slot could well be filled by a consonant. Therefore, Indonesian speakers are familiar with a single X in coda position. The syllable is also recognized as having one X in onset, rhyme and coda. When the participants are assigned to produce two or more X in coda

position, they face difficulty. It can be seen in the word *establishment*. There are no participants who realize the segment /t/ in the final segment of the word. Therefore, they just pronounce as [ɪstəʊbɪʃmən].

Goedemons and Zanten (2010) argue that Indonesian recognizes stress in penultimate syllable in four or more syllable words. They propose that penultimate syllable in Indonesian is not overtly stress, but that is metrically strong since it serves as the docking site for phrase-level prominence. The examples in Indonesian are *solida'ritas* (solidarity), *paskasar'jana* (post-graduate), *masya'rakat* (society) and *sandi'wara* (drama). Giegerich (1992) argues that stressed syllable must have a complex rhyme, meaning at least to X in the rhyme. In the word *establishment*, there are no participants who put the stress in the correct place as in [ɪ'stəʊbɪʃmənt]. The participants tend to pronounce as [ɪstəʊbɪʃmənt].

Phonetic representation deals with the English aspiration and stress rules. When the language users pronounce the segmental features, the pronunciation of the words involves all segments that must be there. As the example, in the word *texts*, there are six segments [teksts]. Those segments must be appeared in the pronunciation. In the suprasegmental features, the words must be pronounced in the correct stress placement. Since this paper also observes the aspiration rules, therefore the aspiration of the words given should also be pronounced.

Giegerich (1992) says, "Segments, syllable and feet are not only phonetic units but also phonological units. They form (part of) the phonological structure of the language, which as whole serves as a framework for the expression of phonological generalizations (131)." In pronouncing English words, we do not only concern aspiration and stress but also the segments. The possible cluster in the onset or coda position must be accounted for. In English, it is possible to have four segment in the coda position such as in the word *glimpsed* [glɪmpst]. This cluster is absent in Indonesian.

In the word *texts*, there are four X in the coda position. This rule is permissible in English since the last four segments are [-son] [+cor]. However, there are no participants who pronounce all segments of that word. They tend to pronounce as [ʌt<sup>h</sup>ekst]. Actually, the word is phonetically transcribed as [ʌt<sup>h</sup>eksts]. Pronouncing four X in the coda position in monosyllabic word is difficult for the Indonesian speakers. It happens because Indonesian does not have syllable template as shown in Figure 2 above. Even, some participants pronounce the word *texts* as [ʌt<sup>h</sup>eks]. They omit the last two segments which actually must be represented. Indonesian only has one X in the coda position, so, it will be easily pronounced as [tek]. In the word *think*, some participants pronounce it as [ˈθɪŋ]. They do not pronounce the last segment [k]. The participants recognize [N] as two X as happens in Indonesian [ny]. Therefore the occurrence of final segment [k] does not appear. Since the participants speak English, they already recognize two X in the coda position. However, in the monosyllabic words which have three or four X in the coda position, the Indonesian speakers still find difficulty in representing the segments.

The elaboration above reveals that English teachers are not fully aware of aspiration and stress rules in English. This happens due to their L1 influence.

Indonesian does not have aspiration rule in voiceless stops. They do not have allophones. Some of them do not recognize all voiceless stops which should receive stress. The inconsistency in pronunciation containing aspiration and stress uncovers that English teachers have knowledge about aspiration and stress rules, but their knowledge of them is not put in their performance when pronouncing the given words. They produce aspiration and stress to prove that they can speak English better than those who do not have linguistic knowledge they acquired in university. This fact should be followed up by their practice during teaching learning activity.

It can be concluded that the absence of aspiration and stress in Indonesian influences the Indonesian speakers' representation of English aspiration rules. Furthermore, Collin and Mees (2003) say that if the teachers are based in a non-English-speaking country and the students all have the same L1, they will probably have a large number of pronunciation problems in common (188). Since the participants are teachers, their linguistic performance influences the students' competence in English. What the students listen from the teachers become the examples for them.

## CONCLUSION

English phonological rules become common problems for Indonesian speakers. In the English aspiration and stress rules, the participants' awareness of the rules is very low due to the fact that they do not represent the rules in their pronunciation. In the representation of aspiration rules, the participants are not aware that the consonant [t] receives stress when it is in the initial stress syllable. In the stress rules, the participants tend to place the stress in penultimate syllable in the polysyllabic words. They generalize that polysyllabic words are stressed in the penultimate syllable since Indonesian permits the stress in the penultimate syllable. In the segmental representation, the participants tend to delete three or more segments in the coda position. In relation to the linguistic competence and performance, based on the data, the Indonesian speakers do not have high English linguistic competence. Therefore, their English linguistic performance is not really good, which can be observed through pronunciation. The participants' pronunciation is influenced by the rules in their L1, Indonesian. When they produce aspiration and stress, exposure is the motivation. They recall the aspiration and stress rules in English, but they are not fully aware of them. They attempt to show that they can produce aspiration and stress, as the rules they acquired in university, even though some are absent.

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