

## Designing Phonetic Alphabet for *Bahasa Indonesia* (PABI) for the teaching of intelligible English pronunciation in Indonesia

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### ABSTRACT

The sociolinguistic development of English has placed a greater emphasis on intelligibility as the ultimate goal of pronunciation instruction. However, various studies have indicated that English pronunciation of Indonesian English learners was not satisfactory due to difficulties in learning English pronunciation and lack of emphasis given to the teaching of English pronunciation in English classrooms in Indonesia. In this paper, we propose the development of *Phonetic Alphabets for Bahasa Indonesia* (PABI). This practical instrument allows English teachers and students in Indonesia to transcribe the pronunciations of English words into phonetic transcription with locally-appropriate readability and accessibility without compromising the pronunciation intelligibility. The development of PABI started with a contrastive analysis of common phonemes in the two languages, i.e., English and *Bahasa Indonesia* (BI). Next, we identified the English phonemes missing in *Bahasa Indonesia* which English learners in Indonesia have to conceptualise. We then located those English sound 'pairs' which seem identical to Indonesians and are thus used interchangeably in BI. A corpus of 30,000 commonly used English words was transcribed in PABI using a computer software IPA to LIPA developed by Rahman and Bhattacharya (2020). Proposals to modify the IPA to suit the BI sound system entailed the adjustments in the consonant phonemes, vowel phonemes, and cluster sounds. These adjustments are expected to improve the readability and accessibility of the conventional IPA in facilitating the teaching and learning of intelligible English pronunciation in Indonesia. Practical uses of the PABI guidelines are drawn to improve its utility. Implications for the development of context-sensitive and locally-appropriate pronunciation teaching and learning are drawn based on the findings.

**Keywords:** *Bahasa Indonesia*; English; intelligibility; phonetics; pronunciation

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### INTRODUCTION

Indonesia is a country with an intriguingly complex linguistic ecology. With *Bahasa Indonesia* (BI) as the official national language, more than 700 local languages and several foreign languages simultaneously exist in the society (Lamb & Coleman, 2008). However, English has steadily gained its position as the first and preferred foreign language in Indonesia since early independence days in 1945 due to its role as the international language (Hamied, 2012; Manara, 2014). English is given a gatekeeping role in society, especially in education and economics (Lamb & Coleman, 2008). In the school setting, English is positioned as one of the

most important subjects in the schooling system since elementary school. However, as the language skills tested in the national examinations are only reading and listening skills, it results in a washback that makes schools diverge their attention from the teaching of productive English skills, including speaking skill (Furaidah, Saukah, & Widiati, 2015; Sukyadi & Mardiani, 2011).

In developing speaking skills, pronunciation is one of the most important elements for successful oral communication amongst English speakers (Jenkins, 2005). This has reappraised the importance of teaching and learning English pronunciation in the English

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classroom in Indonesia (Abrar, Mukminin, Habibi, Asyraf, & Makmur, 2018; Suwartono, 2014). However, various studies have indicated that English pronunciation of Indonesian English learners was not satisfactory due to difficulties in learning English pronunciation and lack of emphasis given to the teaching of English pronunciation in Indonesian English classrooms (Abrar et al., 2018; Moedjito, 2008).

Difficulties in learning English pronunciation encountered by English learners in Indonesia are not unique from those prevalent among speakers of other LOTE (languages other than English) and can be attributed to the stark difference between the phonetic alphabets used in English and Indonesian (Abrar et al., 2018). Unlike English, *Bahasa Indonesia* is a phonetic language, that is a language with a direct relationship between spelling and pronunciation. One can look at a written Indonesian word and know how to pronounce it, or we can hear an Indonesian word and know how to spell it. In Indonesia, although there are about 700 dialects, and speakers of all these dialects may not be able to speak BI fluently, people from different regions of Indonesia can read the BI script and decipher the correct pronunciation of a word from BI writings. This is true for both *Bahasa Indonesia* (Appendix A1.1) and Arabic language (Appendix A1.2).

On the contrary, English is a non-phonetic language which implies no direct correspondence between the letters and the related sounds. There are 26 letters in English (a non-phonetic language) while the number of the sounds is 36 (excluding diphthongs). EFL learners, therefore, must also focus a great deal of attention on spelling and pronunciation in addition to grammar and vocabulary. The learner, in predicting the correct pronunciation of most English words, cannot rely on the spelling of a word. One of the main reasons for that is because the spellings of English words come to reflect a word's morphophonemic (sound changes that take place in morphemes) structure rather than its purely phonemic structure (for example, the English regular past tense morpheme is consistently spelled -ed in spite of its different pronunciations in various words, i.e. /d/, /t/ and /Id/ and /əd/).

The consequence of the phonetic characteristics of *Bahasa Indonesia* which is in contrast with the relatively less phonetic pronunciation of English words has further complicated pronunciation teaching and learning in Indonesian EFL classrooms (Jannah, Hidayati, & Setiawan, 2018; Mathew, 1997). Indonesian EFL students who are used to a *Bahasa Indonesia* system where there are 26 phonemes represented by 26 letters are often confused when they try to pronounce English words, as a total of 36 phonemes are represented by 26 letters. Contrastive analysis studies often point out that the more differences exist between two systems (languages), the more problems the learners will encounter (Khalilzadeh, 2014; Mathew, 1997). As a result, this factor contributes to the problems in the learning of English pronunciation by Indonesian EFL learners.

In general, Indonesian English learners struggle to correctly pronounce phonetically complicated words such as *rough*, *dough*, *hiccough*, and *psalm* (Jannah et al., 2018). Consequently, one needs to consult an English dictionary which has transcriptions of pronunciations of the words in the international phonetic alphabet symbols or IPA (see Jones, 2011; Wells, 2008 for examples of IPA transcriptions). However, IPA has the following shortcomings: (a) It is a very large and difficult language to learn and master; (b) It is not feasible to teach IPA to all English learners in an NNS country because of shortage of expertise and the cost involved; (c) IPA is suitable for academics and researchers of phonetics and phonology— not for ordinary English learners (Rahman, 2016).

We argue that the above-mentioned problems associated with the accessibility and readability of IPA could be addressed by developing a phonetic transcription guideline which is sensitive to Indonesian English students and teachers' linguistic repertoire. This is the case particularly in a resource-poor environment in rural and remote areas in Indonesia where access to the internet and the digital media as well as a dictionary is scarce.

To complicate the issue further, pronunciation learning is a practical (Roach, 1998), rather than theoretical activity. Just like driving a car, swimming, or singing or playing a musical instrument, ample opportunities to practice different pronunciation learning activities is compulsory for successful pronunciation learning. However, the curriculum structure and national examination of English subject in Indonesian school facilitate more emphasis on reading and listening skills (Furaidah et al., 2015). Limited time and resources allocated for the teaching of pronunciation call for practical and authentic innovations to help Indonesian EFL learners improve their English pronunciation (Hamied, 2012). Although it is not possible to provide practical lessons on such topics in a book, easy-to-learn and accessible-to-use tools and techniques, along with self-learning guide books, CDs and software, could be provided to support students' self-learning and pronunciation practice on their own.

Supporting EFL learners in Indonesia to learn English pronunciation independently with the provision of practical resources becomes an important aspect if the improvement of pronunciation skill is desired. In the context of Bangladesh, for instance, Rahman (2016a) compiled the *English Pronunciation Dictionary for Bangalis* (EPDB) as introductory/guidance materials for users to learn the Bengali Phonetic Alphabet (BPA) on their own. Similar practical guidance may be provided in *Bahasa Indonesia*, either in a separate guide book or they may be included in the English Pronunciation Dictionary for *Bahasa Indonesia* (EPDBI) for English learners in Indonesia.

In this paper, we propose the development of an easy-to-use Phonetic Alphabet of *Bahasa Indonesia* (PABI), which we will then use to transcribe the

pronunciations of English words. The development of Phonetic Alphabet of *Bahasa Indonesia* (PABI) similar to BI for transcribing the pronunciations (RP or GA or any other standard) of English words is expected to assist Indonesian EFL learners with their English pronunciation learning. Indonesians from all regions of the country will easily be able to get the correct pronunciations of English words from the PABI transcriptions. In the long run, PABI can also be used to develop an English Pronunciation Dictionary for *Bahasa Indonesia* (EPDBI) which will serve a very useful purpose for the teaching and learning of English pronunciation in the Indonesian context.

## **METHOD**

This study employed corpus research methods (Cobb & Boulton, 2015; Paquot, 2018). Corpus refers to “a collection of naturally occurring spoken or written data in electronic format, selected according to external criteria to represent a language, a language variety, or a specific domain of language use” (Paquot, 2018, p. 359). The similar method was employed by other researchers such as Rahman, 2016a, 2016b; Rahman & Chowdhury, 2019 as described below.

The development of PABI started with the contrastive analysis of common phonemes in the two languages, i.e., English and *Bahasa Indonesia* (BI). While developing the prototype of PABI, first we tried to find the common phonemes in the two languages, i.e., English and *Bahasa Indonesia*. First, the phonemic system of *Bahasa Indonesia* was compared with the phonemic system of the English language (Rahman, 2013). Our goal was to differentiate the two phonemic systems at the very lowest level. For instance, for PABI, for the reasons cited by Rahman & Chowdhury (2019, p. 57), we did not think it necessary to find the BI equivalent of the different forms of the English phonemes /l/ (laterals) and /r/ (rhotics), and the aspiration sounds of the English phonemes /t,p,k/ (Rahman & Chowdhury, 2019). The aim, instead, was to match each English primary phoneme with a corresponding BI phoneme which, when used in English speech, would be intelligible and hence understood by native and non-native English speakers who are not Indonesians.

Next, we tried to identify the English phonemes missing in *Bahasa Indonesia* (BI) which English learners in Indonesia have to “conceptualise” (Fraser, 2006). Then we tried to locate those English sound ‘pairs’ which seem identical to Indonesians and are thus used interchangeably in BI. These phonemes needed to be “reconceptualised” (Fraser, 2006) by some BI English learners. Through the EPDBI, we try to introduce the English learners to the different components of English pronunciation – i.e. (a) the English consonant and vowel phonemes known as the segmental features of pronunciation and (b) some basics of suprasegmental features or prosody (Roach, 1998).

In PABI, we use graphemes from the *Bahasa Indonesia* (BI) alphabet for representing phonemes

which are common in English and *Bahasa Indonesia*. It also uses three IPA symbols ‘x’, ‘θ’, and ‘ð’ to represent English consonant phonemes present in the Arabic language, which most Indonesians know and/or learn, plus one IPA symbol “ʒ” to represent the English sound as in “pleasure”, “measure” etc which is not present in BI. The five new graphemes used to represent five distinct English vowel phonemes are “ə, ʌ, æ, ɒ, ɜ:”, none of which are present in BI. As we said earlier if Indonesians hear English words containing these eight sounds /x, θ, ð, ə, ʌ, æ, ɒ, ɜ:/ in them they may not be able to pick up the exact English sounds and replace them conveniently with sounds they know. For example, they may interpret the pronunciation of “three” as either /fri:/ or /sri:/, which can be rectified by referring to the EPDBI.

For designing the prototype PABI and EPDBI presented here, first, we had to learn about the BI phonemes. We did this by listening very carefully to (a) Indonesian folk songs (different dialects) with lyrics (Appendix B) on YouTube; (b) recitations from the Holy Quran by competitors and judges at *Qirat* competitions in Indonesia, and prayers on YouTube and Ammara TV. Additionally, we got help from two Indonesian students from Monash University. Both were from Makassar, Sulawesi Province. One spoke the Makassar dialect and the other spoke the Buginese dialect.

Using a corpus of 30,000 English words that we previously generated and used for other similar studies (Rahman, 2016a; Rahman & Bhattacharya, 2020), we transcribed the corpus into IPA transcriptions. Based on these transcriptions, we generated the PABI transcriptions from all the 30,000 IPA transcriptions using a phonetics transcription software IPA to LIPA.

## **FINDINGS AND DISCUSSIONS**

This section contains the technicalities and procedures that have theoretically and practically informed the development of PABI and the EPDBI. Firstly, we will analyse the comparison between English sounds and Indonesian sounds. Drawing on the analysis, we will propose how the English IPA could be modified based on the sound system in *Bahasa Indonesia* to make it easier for EFL learners to use the PABI. In addition, we will provide practical strategies and instruments that EFL learners can use in English pronunciation learning using the PABI guidelines that we have proposed.

### **Development of PABI and EPDBI: Segmental analysis**

Proposal to modify the IPA should be done by considering the sound system of *Bahasa Indonesia*. In this section, we will explain the possible adjustments that can be made to make PABI more accessible and readable for EFL learners in Indonesia in order for them to learn English pronunciation more easily.

#### **Consonant phonemes**

English consonant phonemes which are present in BI and/or Arabic are

/b,c,d,f,g,h,j,k,l,m,n,ng,p,q,r,s,sy,t,w,y,x,z,θ,ð/  
(set 1)

The IPA equivalent of the above set of phonemes are shown in set 2 below

/b, tʃ, d, f, g, h, dʒ, k,l,m, n, ŋ,p, kw, r, s, ʃ, t,w,j,ch,z, θ,ð/(set 2)

For English consonant phonemes, not present in *Bahasa Indonesia*, new graphemes are required. This applies to three consonant phonemes only – i.e., /θ,ð,ʒ/. Most Indonesians who read and/or speak Arabic can make the two very unique English consonant phonemes /θ,ð/, but as there are no graphemes in BI to represent these three phonemes, we recommend the use of the two corresponding IPA symbols in PABI so that Indonesians know when and how to pronounce English words when either of these two new graphemes appear in PABI transcriptions. The /ʒ/ sound is not present in BI but appears in English loan words like “visage”, “vision” etc. We shall add this symbol “ʒ” in the BI alphabet to be able to transcribe words containing this sound.

Note the phoneme /q/ in the above list which we come across in words like “queen”, “quote” etc. In English, when this phoneme is at the word-initial position, as in these two words, the /q/ is treated as a cluster sound consisting of the /k/ and /w/ sounds. In IPA, these two words are transcribed as /kwɪn/ and /kwəʊt/ respectively. But as BI speakers who read and speak Arabic can pronounce this cluster sound as an Arabic /q/ sound, we use “q” to represent the English /kw/ phoneme. Similarly, as BIs can pronounce the rarely used English phoneme as found in the word “loch” because of their knowledge of Arabic, we will use “x” to represent that phoneme. Incidentally, in the *Cambridge English Pronunciation Dictionary* (Jones, 2011), the IPA transcription for “loch” is given as /lɒk/ which may not be the best representation of its pronunciation. As this sound occurs rarely in English, we shall not include it in the BI alphabet. The English consonant phoneme /ʃ/ is represented in BI as /{sy}/.

### **Vowel phonemes**

RP English has 20 vowel phonemes whereas BI has ten monophthong and three diphthong sounds (Goddard, 2005; Andy-Pallawo, 2013). The other English diphthong phonemes can be represented by using multiple BI vowel graphemes like “o” followed by “i” for the /oi/, “o” followed by “u” as /ou/ and “ə” followed by “u” as /əu/. See examples in Table 1.

For English vowel phonemes / ə, ʌ, æ, ɒ, ɜ:/, the BI script does not have specific characters in its alphabet. In BI these sounds are written with existing vowel symbols like “e” and “a” and pronounced by Indonesians according to the context from their knowledge of their regional language (Andy-Pallawo, 2013; Dardjowidjojo, 1978) and BI. Indonesian English learners must be made aware that these five vowel phonemes have different “vowel quality”, and hence

should be pronounced differently so that they can be distinguished from one another. Each of these vowel phonemes also has specified “vowel quantity” meaning how long a particular vowel phoneme is to be pronounced. It is hoped that by using these five IPA graphemes in PABI, Indonesian English speakers will slowly become familiar with the “vowel quality” and “vowel quantity” of these vowel phonemes and pronounce them sufficiently intelligibly so that listeners, NS and NNS, will understand them. Instructions on how to pronounce and differentiate these vowel phonemes (vowel quality) can be found in the excellent video by Underhill (Underhill, 2011).

In English “vowel quantity” is considered very important which one must adhere to when pronouncing English words. More details can be found in classical textbooks on pronunciation, and phonetics and phonology (Roach, 1998; Shockey, 2003; Walker, 2010; Rahman, 2016a). After such familiarisation, an Indonesian English learner will be able to determine the correct vowel quality and vowel quantity in English words from PABI transcriptions in the EPDBI. More importantly, they will not have to consult a pronunciation teacher/expert each time they come across new English words. If they want, they can consult an audio dictionary to learn the exact correspondence between the phoneme and phonemic characters used in PABI.

In this trial design of PABI we have used “:” as the vowel lengthening symbol. If this symbol appears after any vowel grapheme, the user must pronounce that particular vowel sound a little longer than usual. Again, in the final design, Indonesians may decide whether to take this approach or continue using a grapheme symbol twice, one after another, to signify lengthening of a vowel. They may decide whether to transcribe the pronunciation of the word “car” as /kaar/ or /ka:r/. However, it is noteworthy that consistency is the key to success and users must try to be consistent in pronouncing each English sound in different English words.

### **Cluster sounds**

For the English consonant phoneme [ŋ], which is present in BI, we have used the grapheme {ng}. For example, in PABI we shall transcribe the pronunciation of the word “sing” as /si{ng}/. We took this approach to avoid using yet another new symbol. The curly bracket on two sides of the letters “n” and “g” have been employed to indicate to the reader that this is a single cluster sound, which is to be formed by combining the two phonemes /n/ and /g/ and uttered as a single composite sound. They are not to be articulated as two separate sounds and not to be pronounced one after the other. Similarly, we represent all other English cluster sounds by putting a curly bracket on top of two or more symbols which are to form a single cluster sound. For example, we transcribe English words “stick” and “try” as /{st}ik/ and /{tr}ai/ respectively. This way there is less confusion and people should not

pronounce them something like [satick] and [tarai] as some do (Rahman & Chowdhury, 2019a).

**Notes on the supra-segmental (prosody) of English Pronunciation**

It is not possible to adequately explain all the features of English Pronunciation to an NNS, such as word stress in sentences, stress timing, intonation etc. through a phonetic alphabet like PABI used in a dictionary-like EPDBI. It is also not necessary to introduce all these complicated features of English Pronunciation to new learners of English right at the outset (Jenkins, 2000). In the EPDBI, besides helping users to get the correct pronunciations of English words from the graphemes used in PABI, we have suggested introducing Indonesian English learners to the basics of English prosody by providing some easy cues on which syllables to stress in the transcriptions of poly-syllabic words. We used the same technique twice before in Bangladesh (Rahman, 2016b) and India (Rahman & Chowdhury, 2019b) and the users accepted it without any concern. In fact, we observed that it does have some very positive effect.

We suggest separating the syllables in multi-syllabic words in the PABI transcriptions, which helps learners become familiar with the phonemic and syllabic structure of an English word, which is a combination of different speech sound elements (Messum, 2016). This guides them on how a polysyllabic word is to be pronounced – i.e., the speech sound elements are to be pronounced separately, one after another, but in quick succession, without actually pausing in between successive syllables. For a poly-syllabic English word, the stressed syllables are highlighted in red to help users remember where to put stress(es). This is considered very important in English Pronunciation as a stress in the wrong syllable may change the meaning of a word. Again, while showing the stressed syllables in an English word, we do not distinguish between primary and secondary stressed syllable(s). We consider this too difficult to introduce to new English learners. Indeed, even English pronunciation dictionaries are not consistent with this.

**The design of PABI and EPDBI**

In this paper, we are proposing the use of the above-mentioned graphemes as English phonemic orthography for BI. We refer to it here as PABI. PABI can be used to transcribe the pronunciations of all English words following any pronunciation standard. This will allow the building of an English Pronunciation Dictionary for *Bahasa Indonesia* Speakers (EPDBI), similar to the EPDB (Rahman, 2016a) that one of the authors has developed for the English learners who are native Bengali speakers in Bangladesh. In EPDB all the pronunciations are given in BPA. We have taken the above-mentioned approach only for this prototype design of PABI. We argue that this development is in line with an emerging trend of appropriating the English language with a consideration to students’ identity and

immediate context to improve their attitude in learning a new language (Jenkins, 2005).

Once the design of PABI has been agreed upon and finalised by Indonesian pronunciation experts, work can start on the development of an EPDBI. Preparing the EPDBI will require some time and effort to transcribe into PABI the pronunciations (RP and/or GA) of all the English words which are to be included in the dictionary. This task is not to be taken lightly as it can be tedious and monotonous. There is always the possibility of some errors remaining in the final product, even after several proofreadings. It would help to get the services of good and conscientious proofreaders for this activity.

In this section, we will present examples comprising PABI transcriptions of different types of English words (a) mono-syllabic, (b) multi-syllabic with stressed syllables highlighted, and (c) words containing cluster sounds.

Table 1. PABI transcriptions of some mono-syllabic English words

Word	PABI (RP)	Word	PABI (RP/GA)
hit	hit	like	laik
lot	l ɒ t	bake	beik
sheep	{sy}ip	loin	loin
cat	kæt	cow	kau
had	hæ:d	hoe	həu/hou
bet	bet	bird	bɜ:d
port	pɔ:t	go	gəu/gou
part	pɑ:t	put	put
mood	mu:d	but	bʌt

Table 1 shows the PABI transcriptions of the pronunciations of some random mono-syllabic English words. The English words appear in columns 1 and 3 and the corresponding pronunciations of the words are provided in columns 2 and 4 respectively using PABI. One very important and powerful point comes out here that PABI can be used to transcribe the pronunciations of English words following any standard. In the examples, we employed the Received Pronunciation (RP), which is the British standard. However, in two cases, i.e., for words, (a) Hoe and (Go), we also gave the alternative General American (GA) pronunciations. In future, if there is ever an Asian or Indonesian standard, PABI can be used for that as well. As we have mentioned above we have compiled about 30,000 commonly used English words and arranged them alphabetically. We have also the IPA transcriptions of the pronunciations of all the 30,000 English words. Generating the PABI transcriptions can be done in a matter of minutes, if not seconds, with the help of our IPA to LIPA converter program (Rahman & Bhattacharya, 2020, upcoming).

Columns 2 and 4 in Table 2 contain the PABI transcriptions of the RP pronunciations of randomly selected English words which are polysyllabic. Here an important feature of English pronunciation is included, that is, the stressed syllables in multi-syllabic words (Roach, 1998). We highlight the syllable in a

polysyllabic English word that is to be stressed in red colour. For example, when pronouncing the word “fabric”, the speaker needs to first put stress on the first syllable /fæb/. For pronouncing the word “vindictive”, the stress is to be made on the second syllable, /dik/.

Table 2. PABI transcriptions of some multi-syllabic English words

Word	PABI (RP)	Word	PABI (RP)
fabric	fæb rik	footlight	fut lait
abscess	æb ses	acclimate	æk li meit
village	vil ij	vindictive	vin dik tiv
visit	viz it	verify	ver i fai
asia	ei zə	wallet	wəl it
waiting	wei ti{ng}	wasabi	wə sa: bi:
watchdog	wɔc dɔg	wigwam	wig wæm
capsize	kæp saiz	dizzy	diz i:
razing	rei zi{ng}	zany	zei ni:
lazy	lei zi:	veggy	vej i:
valid	væl lid	vestige	ves tij

Table 3. PABI transcriptions of some words containing cluster sounds

Word	PABI (RP)	Word	PABI (RP)
eggs	{eg}z	afflict	ə {fl}i{kt}
twin	{tw}in	lymph	li{mf}
dwel	{dw}el	resolve	ri zɔ{lv}
three	{θr}i:	sphere	{sf}iər
anguish	æ {ng}{gw}i{sy}	square	{skw}eə
alms	a:{mz}	bread	{br}ed
self	se{lf}	star	{st}a:
sweet	{sw}i:t	school	{sk}u:l
laughed	la:{ft}	bring	{br}i{ng}

In table 3 we show another very important feature in English Pronunciation, i.e., the pronunciation of cluster sounds. This feature is not available in IPA for which people in some countries pronounce successive consonant sounds separately – i.e. the word “product” as [prɒdʌktɒtə] in Japan, and the word “school” as [səku:lə] in Punjab in Pakistan (Rahman & Chowdhury, 2019, p. 58). In PABI when two or more successive English consonant sounds are to be pronounced together, we place a curly bracket on two sides of the PABI characters which are to form one cluster sound. For example, while pronouncing the English word “afflict”, the two consonant sounds /f/ and /l/ are to be pronounced as a single composite sound /fl/ which is shown in PABI transcription as {fl}. Similarly, {kt} signifies that it is a single cluster sound.

At first glance, the PABI transcriptions may look very similar to the IPA transcriptions. But there are marked differences which have been included specifically for Indonesians. First, the very short IPA /l/ sound has not been used. So instead of having three-point sounds in IPA in PABI, we are suggesting the use of two-point /i/ sound – i.e. /i/ and /i:/ thus making pronunciation of this vowel sound simple without losing intelligibility. The other three differences are the use of “c” for the IPA symbol / tʃ/, and “j” for / dʒ/ and “y” for the IPA symbol /j/. Less learning for the learners of

PABI. Another important symbol we have imported from BI is {sy} for the IPA phoneme / ʃ/. The reviewer has suggested the use of {sh} instead. We leave this decision to the academics and researchers in Indonesia.

**Practical use of PABI and EPDBI**

In the previous section, we have presented the proposal and procedure to develop PABI and EPDBI. In order to effectively incorporate PABI in pronunciation teaching and learning, we will propose several additional strategies and tools, i.e. vocal instruments and audio/video clips.

**Vocal (Musical) Instrument**

Any self-training or training conducted in a classroom on pronunciation must provide instructions for learners to get familiar with their personal vocal instrument (Fig. 1), which they will be using for making speech sounds. Learners must be made familiar with the following basic anatomical and physiological characteristics of the human vocal system as follows (see Husler & Rodd-Marling, 1976; Roach. 2013; Rahman, 2016)

- a. all the parts of the vocal instrument used for making different speech sounds called the speech articulators,
- b. what the different types of speech sounds are called, and
- c. how to use different speech articulators to make English phonemes.

**Audio/video clips**

A self-learning PABI guide-book or EPDBI may include audio/video clips (Rahman, 2016a) which learners can use on their own to conceptualise new English phonemes and re-conceptualise (Fraser, 2006) those sound pairs that Indonesian English learners may be using interchangeably, i.e., /z,s/, /f,p/, /v,f/, /s,ʃ/ and /j,y/ (Andy-Pallawo & Alam, 2003; Dardjowidjojo, 1978). After reconceptualising /z,s,v,p,f,ʃ,j,y/ as distinct unique phonemes English learners in Indonesia must learn to use each of them when they appear at initial, medial and terminal positions in English words.

If someone uses these tools repeatedly, either alone using a mirror and a recorder, or with an interlocutor, their knowledge and skills in English pronunciation will most certainly improve. The experience will be similar to singers and musical instrument players - the more they get to know their musical instrument, its different parts, the functions and use of the parts, and practice, either alone or in a jamming session, the faster they are likely to learn, and the more skilled they will become with their singing or playing of their instrument.

**Digital application**

Once the EPDBI has been published, the next step may be to develop a digital application which will run on all electronic devices like smartphones and tablets. Due to the geographical features of the Indonesian archipelago, transporting the physical copy of the dictionary might be a challenge. Therefore, having it in the form of a

digital app will ease the transportation and distribution issues. This will allow users in remote islands of Indonesia with wi-fi facility and smartphones to access the English pronunciation dictionary for BI to find the pronunciation of an English word using a smartphone.

The hand-held devices with users will serve as English pronunciation experts, which are currently few and far between in Indonesia.

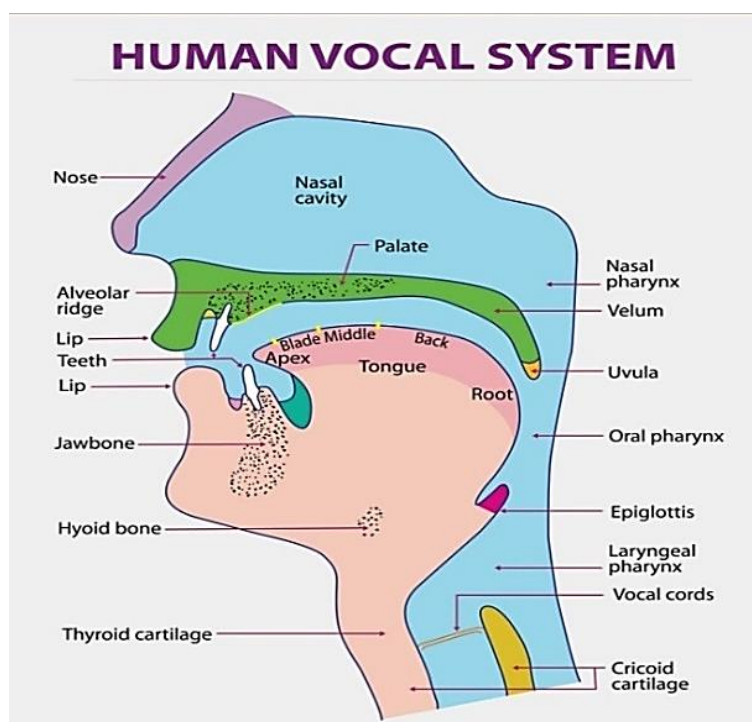


Figure 1. The human sound making instrument (Roach, 2013, p.21)

This proposal to develop the Phonetic Alphabet of *Bahasa Indonesia* as guidelines for supporting pronunciation teaching is in line with several studies in the field of Applied Linguistics. Rajab (2013), for instance, examined that the development of EFL students' phonetic skills in the context of Saudi Arabia is paramount in improving students' English proficiency. This is an aspect that is often overlooked when students rely solely on electronic dictionaries to learn English pronunciation. It is expected that the development of PABI and the subsequent EPDBI will help support English learners and teachers in Indonesia to foster their phonetic awareness using an accessible instrument. Additionally, in line with Domokos, Buza, and Todorean (2015) who developed Romanian phonetic transcription dictionary in Romania, we expect that the PABI guidelines and EPDBI will assist pronunciation learning without the presence of expert linguistic knowledge.

## CONCLUSION

The development PABI as a practical tool will benefit English learners in Indonesia in both the teaching and learning of English pronunciation. Similar resources have proven to be useful tools in pronunciation teaching and learning in the Bangladeshi context (Rahman, 2016). The design of PABI can support EFL learners in Indonesia to learn English pronunciation independently

with the provision of practical, feasible, and accessible learning resources. The approach presented here for teaching English Pronunciation is in alignment with Carey's (2015) L1 point of reference approach (LIPOR). LIPOR involves "initially developing the learner's awareness of their own L1 phonology as a scaffold towards developing an acceptable approximation of the target speech sounds." (Carey, 2015).

Finally, we could recommend PABI to be considered as an approach and instrument in teaching and learning how to pronounce English sounds intelligibly in the context of Indonesia.

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## APPENDICES

### Appendix A

#### A1.1 An Indonesian folk song written using the BI script

Bila mana bulan bucahja Menerange bumi alam  
 Suasana terang cuwaca Memimbulkan rasa dendam  
 Pohon Nyiur melambai lambai Berbisik meraju raju  
 Tanah indah elok dan permai Terkenang tanah airku  
 Hamba manyayi dari dasarniya hati  
 Indah suara berbuji alam tantran and suji  
 Sandau gurau ombak berbalau Laksama irama lagu  
 Tanah indah elok dan permai Tentrاملah tanah airku

#### A1.2 A quranic verse written in BI

*Bismillaahir Rahmaanir Raheem*  
 Qul hu wal laahu ahad  
 Allah hus samad  
 Lam yalid wa lam yoolad  
 Wa lam yakul lahu kufuwam ahad

#### A1.3 An English song written in PABI

hau meni: rɔ:ds mʌ{st} ə mæn wɔ:k daun  
 bifo: yu co:l him ə mæn  
 hau meni si:z mʌ{st} ə wait dʌv seil  
 bifo: she sli:{ps} in ðə sæ{nd}  
 yes, en hau meni tai{mz} mʌ{st} ðə kænən bo:{lz}  
 {fl}ai  
 bifo: ðeər fərevə bæ{nd}  
 ðə ansə, mai fre{nd}, iz {bl}oin in ðə wi{nd}  
 ðə ansə iz {bl}oin in ðə wi{nd}

### Appendix B

Dayang Sampan  
 Bangawan Solo  
 Katong Samua satu dara  
 Maluka tanah pusaka  
 Sanectangan  
 Malukah /Parcuma - butet  
 Sarinade  
 Peta mari rasa  
 Manise Manise  
 Paruma beta susah du rantasu  
 Sayang e  
 Sio mama  
 Hati Memuji  
 Aer susee mama  
 Saputangan  
 Satu Tetes Air Susu mama  
 Salendang Sutra  
 Maluku/ Ale rasa beta rasa  
 Sepsang mata bola  
 Hidup orang basudara  
 Keroncong Sepasang Mata Bola