

INDONESIAN AND ENGLISH
A CONTRASTIVE PHONEMIC ANALYSIS

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INTRODUCTION

There are many definitions of language given by linguists. Here we choose one, namely that of Edward Sapir. He says: "Language is purely human and non instinctive methods of communicating ideas, emotions and desires by means of a system of voluntarily produced symbols". 1) Let us elaborate what is meant by this definition. "Human" means that language belongs to human beings; it does not belong to animals. We can point to a door to mean "get out" to a dog and it may know what we mean and it gets out. But the dog cannot do the same thing to us or to another dog. Only a human being can do it. "Non instinctive" means that language is not inborn. A child will know nothing about a certain language if we remove it from its social environment since its birth. This is contrary to walking. Walking is instinctive. Though we remove the child from its social environment, it will develop its art of walking. Of course there is a little variance but the variance is only within circumscribed limits. Even if we do not remove it, it will show a little variance. "System" means that language is arranged in a certain order. That is why it can be analyzed and studied. "Voluntarily" means that language is controlled by the will. We may not make symbols as we like as they are not understandable for other people. The symbols should be understood both by us and by the person we are speaking to. "Symbols" means something that points or stands for something else. In other words it should be meaningful. e.i. it should create an image when it is produced. Symbols in language

1) Edward Sapir, Language (A Harvest Book, Harcourt, Brace and Company, New York) page 8.

are basically produced by something that we call "organs of speech".

From the definition of language mentioned above, it is clear that the function of language is to convey ideas, emotions and desires of a human being to another. In conveying them, he uses signals made by anything that can be received by the five senses. In this case the sense of hearing is the most important one, so that most of the signals are in the form of sounds. The greatest part of learning a language is, therefore, learning the sound system. The sounds of language are not just like series of sounds produced by animals but they have a system in combining them into a certain form so that they have a special meaning. The science dealing with the sounds of language is called phonology, the one dealing with the form of language is morphology-syntax, and the one dealing with the meaning of language is semantics.

Since the writer believes that the greatest part of mastering a language is mastering the sound system, based on his observation as a teacher of English and on a little experiment, the writer tries to find some causes of difficulties for Indonesians learning the English sound system but he limits himself to the segmental phonemic difficulties. By knowing the trouble spots, a learner may pay greater attention to the greater difficulties and he may overcome them more easily. The method he uses is a contrastive analysis of English and Indonesian and it will be illustrated in this thesis too. This method is consistent with the fundamental assumption for the preparation of English teaching materials for the students whose native language is not English. Fries says: "The

most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner". x)

The same assumption is also held by Robert Lado: ".....in the comparison between native and foreign language lies the key to ease or difficulty in foreign language learning.....".xx)

The difficulties that the writer finds in analyzing Indonesian is that Indonesian is very variable. The reason is that Indonesia is a country that consists of many islands and many cultural regions. Each island or each cultural region has its own dialect or language. The Indonesian that the people use is, therefore, much influenced by their dialectical differences or their differences of language. Let's take Sumatera as an example. Some races such as Atjehese, Batakese, Minangkabau, Malayan and Lampungese live there. If they meet each other and they speak in their own language, they will not understand each other. The situation becomes more difficult as up to now there is no authoritative standard of Indonesian. Because of this, the writer has decided to take his own dialect for his Indonesian analysis.

As for the English analysis the writer has the same problem as that of the Indonesian one, namely it is influenced by the dialectical differences. Besides there are many different interpretations of the English segmental phonemes especially the vowels. The writer has chosen as his basic system a dialect that is given by Daniel Jones, i.e. British

x) : Charles C. Fries: Teaching and Learning English as a Foreign Language (Ann Arbor: Univ. Mich. Press, 1945)

xx). Robert Lado: Measurement in English as a Foreign Language with Special Reference to Spanish Speaking Adults (Doctoral Dissertation, University of Michigan, 1951).

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English. The actual way in which the writer reported on this data has been influenced by the system of analyzing given by some American linguists for instance H.A. Gleason Jr, Nelson Francis and Kenneth L. Pike; the approach of these later linguists is scientifically more advanced than that of Daniel Jones. Some further minor changes in detail have been added by the writer himself for the sake of economy and convenience.

Since this thesis is an attempt to make a segmental phonemic comparison between Indonesian and English, it is essential to analyze the segmental phonemes of Indonesian first and then of English. Next the comparison between Indonesian and English is given. The analysis of each language will contain the following steps.

1. the finding of the segmental phonemes.
2. the description of each phoneme with its respective variants.
3. the description of the distribution of each phoneme with its variants.

This is worked out in detail for Indonesian as the writer believes that this has not been tackled before. The analysis of English, however, is not given in the same way as this has repeatedly been done. The writer, therefore, felt justified in not attempting a new analysis of his own. In the chapter comparing the two language systems he has described the English he uses as the chapter itself gradually develops.

The chapter following the analysis of Indonesian gives the principles of comparing two systems. This is then worked out in greater detail. A following chapter attempts to summarize the possible problems of learning as seen after

the comparison has been made. This chapter was necessarily of a theoretical nature; it was therefore thought wise to check the results in some small way. A very simple test was set up in which a number of students were tested on both recognition and production levels. The writer admits that the tests he carried out were of a very simple and limited nature, the results of which are to be taken for what they are worth.

The nature of the work attempted here has necessitated the collecting and recording of a lot of materials in the form of charts and lists of words. The accompanying explanation had to be kept to a certain minimum. In order not to actually overload the body of the thesis, a number of appendices have been added. They consist of a number of lists, which were set up and used as tools in the compiling of the thesis, and have therefore been inserted both as proof for the conclusions reached as also a description of methods used.

The writer hopes that his work, though seemingly far from the classroom situation, will be of some value to his fellow teachers, who believe as he does that the teaching of a foreign language would be more effective, economical and complete if it were based on some sound theory of language teaching. The thesis is only a minor contribution to the more efficient teaching of English in Indonesia. It is an attempt to apply general principles to a very concrete problem. This is also an attempt to apply some of the findings of linguistics.

CHAPTER I

INDONESIAN SEGMENTAL PHONEMIC ANALYSIS.

A. CONSTANTS

Our analysis begins by finding the segmental phonemes of Indonesian. It is said that two sounds are two different phonemes if they contrast in identical or similar environments. Therefore we can find the consonantal phonemes of Indonesian by giving pairs of Indonesian words which have a minimal contrast in sound and a difference in meaning.

From the pairs:

/padaŋ/ (same) - /padaŋ/ (body).

we can tell that the two words differ in form and content by the initial consonants /p/ and /b/.

The pairs:

/paŋaŋ/ (high tide) - /paŋaŋ/ (field).

gives two words which differ in form and content by the medial consonants /a/ and /d/.

Again: /ulaŋ/ (snake) - /ulat/ (caterpillar):

these two words differ in form and content by the final consonant /r/ and /t/. From the pairs above we can say that /p/, /b/, /t/, /d/, /a/ and /r/ appear to be separate phonemes in Indonesian. The phonemic inventory can be extended by giving as many as possible pairs of words which contrast only in one sound. The following words are those which differ only in one sound from /pada/:

/nada/ (tune)

/lada/ (red pepper)

/gada/ (stick).

From the sets of words above we can add 3 more Indonesian phonemes. They are /n/, /ɲ/, /ɟ/.

Then:

- /nara/ (danger)
- /hara/ (rebellion)
- /cara/ (manner)
- /kara/ (k.o. bean)

These words differ from /bara/ in the initial consonants.

So we have 4 more Indonesian phonemes namely /n/, /h/, /c/ and /k/.

The words:

- /bawar/ (onion)
- /bayar/ (shadow)

differ from the word /barar/ in medial consonants.

Again /w/ and /y/ are Indonesian phonemes.

Next:

- /baja/ (steel) - /bača/ (read)
- /maniru/ (imitate) - /māniru/ (winnow)
- /asin/ (salty) - /asiŋ/ (strange).

From these pairs we have 3 further Indonesian phonemes namely /j/, /ñ/ and /ç/. So far we have found 18 Indonesian phonemes.

There are still 3 phonemes namely /f/, /z/ and /s/. These sounds are Arabic in origin but they are now established in Indonesian speech habits: e.g.

- /f/ /fasih/ (fluent)
- /nafsu/ (passion)
- /arif/ (wise)
- /z/ /zaman/ (age)
- /lezat/ (delicious)
- /aziz/ (proper name)

/ǎ/ /ǎir/ (poem)
 /inǎf/ (realize).

Some Indonesian speakers especially uneducated people do, however, pronounce the /j/, /a/ and /p/ instead of the /z/, /ǎ/ and /f/ respectively; we take them as being distinct sounds, therefore there are 21 consonantal phonemes all together in Indonesian.

To check whether the phonemes hypothetically established above are indeed distinct phonemes, we can take a second step, namely by listing those which might be suspicious (possibly allophones of one phoneme because of similar phonetic shape) and then seeing if they are in contrast. The following pairs are suspected to be the same phonemes:

/p/ - /t/	/p/ - /b/	/p/ - /f/
/t/ - /k/	/t/ - /a/	/t/ - /č/
/k/ - /g/	/k/ - /n/	/b/ - /a/
/b/ - /w/	/a/ - /g/	/a/ - /j/
/č/ - /j/	/j/ - /z/	/a/ - /f/
/a/ - /c/	/a/ - /z/	/ǎ/ - /b/
/n/ - /n/	/n/ - /ñ/	/ñ/ - /n/
/l/ - /r/	/w/ - /y/	-

But from the following sets of words

/para/ (all)
 /bara/ (ember)
 /dara/ (girl)
 /tara/ (degree)
 /kara/ (bean)
 /hara/ (rebellion)
 /gara/ (event)
 /čara/ (manner)

we know that /p/, /b/, /c/, /t/, /k/, /h/, /g/ and /č/ are distinct one from the other.

Again:

/čari/ (look for)

/jari/ (finger)

/tari/ (dance)

/dari/ (from)

/sari/ (kernel)

/hari/ (day)

we know that /č/, /j/, /t/, /d/, /s/ and /h/ are similarly distinct.

The pairs:

/baru/ (new) - /waru/ (name of a tree)

/sana/ (there) - /fana/ (earthly)

/saman/ (M.O. magician) - /zaman/ (age)

/kɔnari/ (come here) - /kɔnari/ (nut)

/kɔnan/ (long for) - /kɔnan/ (fed up)

/mɔnatakan/ (declare) - /mɔnatakan/ (say)

/jalan/ (wild) - /jalan/ (rare)

/bawan/ (onion) - /bayan/ (shadow)

From the sets of words and pairs above, it is clear that the suspicious pairs that have been mentioned are distinct one from the other, except for the pairs /p/ - /f/, /j/ - /z/, /s/ - /š/ and /č/ - /h/. Since the sounds /f/, /z/ and /š/ are Arabic in origin and some Indonesian speakers pronounce them as /p/, /j/ and /s/, it is very difficult for the writer to find minimal pairs /p/ - /f/, /j/ - /z/, /s/ - /š/ and /č/ - /h/ which are different in content and meaning. It is, however, very uncommon to say:

/gɔnap/ (complete) → /gɔnaf/

/neja/ (table) → /neza/

/nasi/ (rice) → /naʃi/
 /sarət/ (condition)→ /harət/

If we put the suspicious pairs in the same phoneme, it is very difficult to state their distribution. Therefore the writer has decided to take them as separate phonemes.

These 21 consonantal phonemes of Indonesian can be classified according to the:

1. Place of articulation.
2. Manner of articulation

The classification according to the place of articulation may be termed: bilabial, labio dental, dental, alveolar, palato-alveolar, palatal, velar and glottal, while the classification according to the manner of articulation may be termed: plosives, affricates, fricatives, nasals, lateral, rolled and semivowels. Besides these two ways of classification, they can be classified according to whether they are produced with or without the vibration of the vocal chords. This way of classification may be termed voiced and voiceless. The 21 consonantal phonemes of Indonesian can be put into the following charts

MANNER OF ARTICULATION	PLACE OF ARTICULATION							
	LABIAL		DENTAL	ALVEOLAR	PALATO-ALVEOLAR	PALMATAL	VELAR	GLOTTAL
	labial	labio-dental						
PLOSIVES	p		t				k	q
	b			d			g	
AFFRICATES								
FRICATIVES								h
NASALS	m							
LATERAL								
ROLLED								
SEMIVOWELS								

z). foreign origin but established.

We next describe each phoneme with its variants and study the distributions of these latter.

1. PLOSIVES.

Plosive consonants are formed by completely blocking the air passage, then pressing the air from the lungs and suddenly opening the passage so that an explosive sound is heard. There is a series of plosives at bilabial, dental, alveolar and velar places of articulation in Indonesian. They are /p, t, k/ and their voiced counterparts /b, d, g/

/p/

The Indonesian /p/ phoneme is a voiceless bilabial plosive consonant. It is made by closing the lips and blocking the nasal passage with the velum, then compressing the air and suddenly opening the mouth passage so that the air escapes making an explosive /p/ sound. The vocal cords are not made to vibrate.

The Indonesian /p/ can occur in initial, medial and final positions as in

Initial	Medial	Final
/pasar/ (market)	/apa/ (what)	/g ^a nap/ (complete)
/panah/ (arrow)	/lupa/ (forget)	/asap/ (smoke)
/putih/ (white)	/lapar/ (hungry)	/g ^a lap/ (dark)

The Indonesian /p/ phoneme has two subsidiary members x)

x). In describing a phoneme + its allophones, we take one member as being the principle one, the phonetic + phonemic transcription being transcribed similarly if this does not hinder the comparison with English. If, however, ^{mis} understanding might arise, the phonemic symbol is then general while the phonetic one is specialized. Other allophones we call subsidiary members.

namely the unreleased $[p^-]$ and the lip rounded $[p^v]$. The Indonesian unreleased $[p^-]$ occurs in a syllable final such as in $/sa/p^-/ta/$, $/gona/p^-//$, $/hara/p^-//$ etc. and the Indonesian lip rounded $[p^v]$ occurs before a rounded vowel as in $//p^v/utih/$, $//p^v/utus/$, $/ha/p^v/ua/$. The other member $[p]$ occurs elsewhere.

/t/

The Indonesian /t/ phoneme is a voiceless, dental plosive consonant. It is formed by raising the velum and raising the tip of the tongue to touch the upper teeth so that the air is completely blocked; the air is compressed by pressure from the lungs, and when the tongue is removed from the upper teeth, the air suddenly escapes through the mouth, and in doing so the /t/ sound is heard. The vocal cords are not made to vibrate.

The Indonesian /t/ can occur in word-initial, medial and final positions. e.g.

Initial	Medial	Final
/taman/ (park)	/ratu/ (queen)	/barat/ (west)
/tali/ (rope)	/satu/ (one)	/sañat/ (very)
/taruh/ (put)	/hati/ (liver)	/surat/ (letter)

The Indonesian /t/ is pronounced without any plosion $[t^d]$ when it occurs in a syllable final such as in $/ra/t^d/na/$, $/sabu/t^d//$, $/rambu/t^d//$. When it occurs before a rounded vowel, it is pronounced with the lip rounding as in $/səu/t^dv/uh/$, $//t^dv/umbuh/$, $//t^dv/olan/$.

/k/

The Indonesian /k/ is produced by raising the velum to close the nasal passage and raising the back of the tongue to touch the fore part of the hard palate, the air is

compressed by pressure from the lungs and when the tongue is lowered, the air suddenly escapes through the mouth and the /k/ sound is heard. The vocal cords are not made to vibrate. The formation of the principle member of the /k/ phoneme may, therefore, be expressed shortly by defining it as a voiceless, velar, plosive consonant.

The Indonesian /k/ can occur initially, medially and finally. e.g.

Initial	Medial	Final
/kamar/ (room)	/nakan/ (eat)	/bapak/ (father)
/kita/ (we)	/akar/ (root)	/lunak/ (soft)
/kabar/ (news)	/suka/ (like)	/baik/ (good)

A subsidiary member of the Indonesian /k/ phoneme with lip rounding is used when it occurs before a rounded vowel, as in //k̠ota/, //k̠osong/, //i/k̠ut/. A more retracted /k̠/ than the principle member /k/ of the Indonesian /k/ is used before a back vowel as in //k̠urung/, //k̠urang/, //k̠olam/. A more forward /k̠/ occurs before a front vowel as in //k̠ita/, //k̠iri/, //k̠irin/. Another subsidiary member of this phoneme is the glottal plosive /ʔ/. /baleʔ/, /raʔsasa/, /raʔyat/.

/b/

The Indonesian /b/ phoneme is made like the Indonesian /p/ but in making the Indonesian /b/ the vocal cords are made to vibrate. The quality of vibration in producing the Indonesian /b/ is, however, not the same as that of English. It may be said to be only partially voiced /b/. The Indonesian /b/ can, therefore, be defined briefly as a partially voiced, bilabial, plosive consonant.

The Indonesian /b/ can occur in word-initial, medial

and final positions. e.g.

Initial	Medial	Final
/baru/ (new)	/tiba/ (arrive)	/sabah/ (because)
/bumi/ (earth)	/sabun/ (soap)	/lambah/ (wet)
/biru/ (blue)	/ibu/ (mother)	/karib/ (intimate)

When the Indonesian /b/ phoneme occurs in a word or syllable final, the glottalized /p^ʔ/ is used as in /sabahp^ʔ/, /bahp^ʔ/, /lambahp^ʔ/.

/d/

The Indonesian /d/ is a partially, voiced, alveolar, plosive consonant. It is formed by raising the velum and the tip of the tongue to touch the teeth ridge so that the air is completely blocked; the air is compressed by pressure from the lungs and when the tongue is removed from the teeth-ridge, the air suddenly escapes through the mouth, and the vocal cords are made to vibrate; in doing so the /d/ sound is heard. The quality of voicing of the Indonesian /d/ is not as full as that of English. It can be said that it is only partially voiced.

The Indonesian /d/ can occur initially, medially and finally. e.g.

Initial	Medial	Final
/dari/ (from)	/ladang/ (field)	/abad/ (age)
/datang/ (come)	/dada/ (chest)	/jasad/ (corpse)
/dasar/ (basis)	/muda/ (young)	/maksud/ (meaning)

The glottalized /t^ʔ/ subsidiary member of the Indonesian /d/ phoneme occurs in a word or syllable final as in /bat^ʔ/ninton/, /abat^ʔ/, /jibat^ʔ/.

/g/

The Indonesian /g/ phoneme is made like the Indonesian /k/. In making the Indonesian /g/, however, the vocal cords are made to vibrate. The quality of voicing of the Indonesian /g/ is different from that of English. It is the same as the English partially voiced one. It can, therefore, be expressed shortly as a partially voiced, velar, plosive consonant.

The Indonesian /g/ phoneme can occur in word initial and medial but never in final positions. e.g.

Initial	Medial	Final
/gila/ (mad)	/lagi/ (again)	-
/gambar/ (picture)	/lagu/ (song)	-
/garis/ (line)	/ragu/ (doubt)	-

A more forward /g'/ variant than the principle member /g/ occurs before a front vowel as in //g'/ila/, //g'/iran/, //g'/i/g'/i/. The back /g''/ and rounded /g'''/ occur respectively before a back and a rounded vowel as in //g''/awa/, //g''/olan/, //g''/osan/ and //g'''/ores/, //g'''/otan/, //g'''/ubuk/.

2. AFFRICATES:

Affricate consonants are produced by closing the air passage, then compressing the air from the lungs and opening the passage slowly so that a combination between a plosive and a fricative sound is heard. There are only two affricates in Indonesian, namely the /č/ and its voiced counterpart the /j/. Unlike the English /č/ and /j/ the Indonesian /č/ and /j/ are produced without the protrusion of the lips.

/č/

The Indonesian /č/ phoneme is a voiceless, palate-alveolar, affricate consonant. It is made by raising the velum and raising the tip and the blade of the tongue against the teeth-ridge to block the air passage, while the stop is being held; air is compressed by pressure from the lungs; when the tongue is removed slowly from the teeth-ridge, the air escapes through the mouth producing the /č/ sound. The vocal cords are not made to vibrate.

The Indonesian /č/ can occur in initial and medial positions but never in final position e.g.

Initial		Medial		Final
/čara/	(way)	/arča/	(status)	-
/čaban/	(branch)	/bača/	(read)	-
/čari/	(look for)	/kača/	(glass)	-

The Indonesian /č/ has only one allophone.

/j/

The Indonesian /j/ is made like the Indonesian /č/ but in making the Indonesian /j/ the vocal cords are made to vibrate. The quality of vibration is not as full as that of English. It can be said that it is only partially voiced. It can, therefore, be expressed shortly by defining it as a partially voiced, palate-alveolar, affricate, consonant.

The Indonesian /j/ phoneme can occur initially, medially but never finally. e.g.

Initial		Medial		Final
/jagung/	(corn)	/rajin/	(deligent)	-
/jarum/	(needle)	/raja/	(king)	-

Initial	Medial	Final
/juga/ (also)	/tinju/ (fist)	-

The Indonesian /j/ has only one allophone.

3. FRICATIVES.

Fricative consonants are formed by narrowing the air passage at some place so that the air in escaping makes a kind of hissing sound. There is a series of fricatives at labio-dental, alveolar, palato-alveolar, fricative + glottal positions. There are 5 fricative consonants in Indonesian but three of them are foreign in origin. (see page 7)

/f/

The Indonesian /f/ phoneme is a voiceless labio-dental, fricative consonant. It is made by pressing the lower lip against the upper teeth and allowing the air to force its way out between them and the openings between the teeth. Since the Indonesian /f/ phoneme is foreign in origin some Indonesians pronounce the Indonesian /p/ instead of the Indonesian /f/. e.g.

/fajar/ (dawn) → /pajar/ (dawn)
 /fakir/ (the poor) → /pakir/ (the poor).
 /fasih/ (fluent) → /pasih/ (fluent).

The Indonesian /f/ phoneme can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/fajar/ (dawn)	/hafal/ (remember)	/huruf/ (letter)
/fakir/ (the poor)	/sifat/ (character)	/arif/ (wise)
/fahan/ (know)	/vafat/ (die)	/naaf/ (sorry)

The Indonesian /f/ has only one allophone.

/s/

The Indonesian /s/ phoneme is made by raising the tip of the tongue against the teeth-ridge, the front of the tongue is being at the same time somewhat raised in the direction of the hard palate. The teeth are closed together; the space between the blade of the tongue and the teeth ridge is extremely narrow. The velum is raised to close the nasal cavity and the vocal cords are not made to vibrate. It is shortly expressed as a voiceless alveolar fricative.

The Indonesian /s/ can occur initially, medially and finally. e.g.

Initial		Medial		Final
/saya/	(I)	/usan/	(worn out)	/panas/ (hot)
/susah/	(sad)	/basuh/	(wet)	/bagus/ (good)
/sabun/	(soap)	/rasa/	(feeling)	/Kamis/ (Thursday)

The Indonesian /s/ has only one allophone.

/z/

The Indonesian /z/ phoneme is a partially voiced alveolar, fricative, consonant. It is made like the Indonesian /s/ but in making the Indonesian /z/ the vocal cords are made to vibrate. The quality of vibration of the Indonesian /z/ is different from that of English. It is the same as the English partially voiced /z/. Since the Indonesian /z/ is foreign in origin, some Indonesians pronounce it as the Indonesian /j/. e.g.

/zaman/ (age) → /jaman/ (age)
 /zakat/ (religious tax) → /jakat/ (religious tax)
 /zambrot/ (jewel) → /janbrut/ (jewel).

The Indonesian /z/ can occur in initial and medial word positions but never in final position as in:

Initial	Medial	Final
/zanan/ (age)	/lezat/ (delicious)	-
/zakat/ (religious tax)	/noziz/ (dirty)	-
/zanbrut/ (jewel)	/asah/ (punishment)	-

The Indonesian /z/ has only one allophone.

/ə/

The Indonesian /ə/ is made by raising the tip and the blade of the tongue against the back part of the teeth-ridge; the whole of the main body of the tongue is raised. The teeth are closed together. The space between the blade of the tongue and the teeth-ridge is narrow. There is no protrusion of the lips. The velum is raised to close the nasal cavity and the vocal cords are not made to vibrate. Since the Indonesian /ə/ is foreign in origin, some Indonesians, therefore, pronounce the Indonesian /ə/ instead of the Indonesian /a/ e.g.

/əair/ (poem) → /sair/ (poem)
 /əarat/ (condition) → /sarat/ (condition)
 /əah/ (emperor) → /sah/ (emperor).

The Indonesian /ə/ phoneme can occur initially, medially but never finally. e.g.

Initial	Medial	Final
/əak/ (prejudice)	/naəhur/ (famous)	-
/əahdan/ (once)	/naəarakat/ (society)	-
/əukur/ (thank God)	/inaəf/ (realize)	-

The Indonesian /ə/ has only one allophone.

/h/

The Indonesian /h/ phoneme is a voiceless, glottal, fricative, consonant. It is formed by holding the mouth in a vowel position and letting the air from the lungs pass out through the wide open glottis. The velum is raised to close the nasal cavity and the vocal cords are not made to vibrate.

The Indonesian /h/ phoneme can occur initially, medially and finally as in:

Initial	Medial	Final
/harus/ (must)	/bahan/ (material)	/tujuh/ (seven)
/harum/ (good smell)	/bahas/ (discuss)	/murah/ (cheap)
/halan/ (prevent)	/tahun/ (year)	/pecah/ (broken)

When the Indonesian /h/ phoneme occurs in word initial position, it is pronounced with an aspiration as in /h^h/utan/, /h^h/akin/, /h^h/ari/. This variant is also used in an intervocalic position of the same vowels as in /da/h^h/an/, /la/h^h/er/, /bo/h^h/on/. When it occurs in an intervocalic position of the two different vowels, it is omitted or the principle member /h/ is used, as in /liat/ ~ /li/h/at/, /tahn/ ~ /ta/h/un/, /pait/ ~ /pa/h/it/ except for words derive from a foreign language, the /h^h/ variant is used as in /se/h^h/at/, /la/h^h/ir/, /ta/h^h/u/. When it occurs in a final position it is omitted or the principle member of the phoneme, /h/ is used as in /kasi/ ~ /kasi/h/, /tuju/ ~ /tuju/h/, /ane/ ~ /ane/h/.

4. NASALS:

Nasal consonants are formed by closing the mouth at some place of articulation, the velum remaining lowered so that the air is free to pass out through the nose.

There is a series of nasal consonants at bilabial,

alveolar, palate-alveolar, and velar places of articulation in Indonesian.

/ɲ/

The Indonesian /ɲ/ phoneme is made by closing the lips to block the mouth-passage and lowering the velum to let the air from the lungs pass through the nose; the tongue is held in a neutral position and the vocal cords are made to vibrate. The quality of vibration of the Indonesian /ɲ/ is different from that of the English voice. It is only the same as the English partially voiced /ɲ/. The Indonesian /ɲ/ phoneme can, therefore, be expressed shortly by defining it as a partially voiced, bilabial, nasal consonant.

The Indonesian /ɲ/ phoneme can occur in initial, medial and final position. e.g.

Initial	Medial	Final
/ɲati/ (die)	/sɲaɲ/ (same)	/ɲalan/ (night)
/ɲakan/ (eat)	/sɲan/ (peace)	/paɲan/ (expire)
/ɲalu/ (ashamed)	/ɲamar/ (propose)	/salam/ (greeting)

The Indonesian /ɲ/ has only one allophone.

/n/

The Indonesian /n/ phoneme is a partially voiced, alveolar, nasal, consonant. It is formed by raising the tip of the tongue to touch the teeth-ridge to block the mouth-passage and lowering the velum to let the air pass through the nose. The vocal cords are made to vibrate. The quality of voicing of the Indonesian /n/ is different from that of English. It is the same as the English partially voiced /n/.

The Indonesian /n/ can occur in all three positions e.g.

Initial	Medial	Final
/nasi/ (rice)	/kənən/ (remember)	/ənan/ (peace)
/nama/ (name)	/bənər/ (true)	/kawan/ (friend)
/nenek/ (grand-na)	/tənər/ (famous)	/awan/ (cloud)

The Indonesian /n/ has only one allophone.

/ñ/

The Indonesian /ñ/ phoneme is a partially voiced, palato-alveolar, nasal, consonant. It is formed by raising the tip and the blade of the tongue against the hinder part of the teeth-ridge to block the mouth-passage and lowering the velum to let the air pass through the nasal cavity. The vocal cords are made to vibrate. The quality of voicing of the Indonesian /ñ/ is not full. It is only partially voiced /ñ/.

The Indonesian /ñ/ can occur in initial + medial positions but never in final position e.g.

Initial	Medial	Final
/ñata/ (real)	/taña/ (ask)	-
/ñarin/ (sonorous)	/haña/ (only)	-
/ñaman/ (comfortable)	/puña/ (have)	-

The Indonesian /ñ/ phoneme does not have any important subsidiary member.

/ŋ/

The Indonesian /ŋ/ is formed by raising the back of the tongue to touch the fore part of the soft palate to close the mouth-passage, and by lowering the velum to let the air pass through the nasal cavity. The vocal cords are made to vibrate but the quality of vibration is not full. It is only partially voiced /ŋ/. Therefore it can be defined briefly as

a partially voiced, velar, nasal consonant.

The Indonesian /ŋ/ phoneme can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/ŋarai/ (valley)	/māŋira/ (think)	/taraŋ/ (clear)
/ŋari/ (terrible)	/māŋapa/ (why)	/tulaŋ/ (bone)
/ŋaŋa/ (gaping)	/māŋubah/ (change)	/baraŋ/ (thing).

The Indonesian /ŋ/ phoneme has two variants namely the retracted [ŋ̠] and the fronted [ŋ̟]. The [ŋ̠] occurs after a back vowel as in /saru[ŋ̠]/, /loro[ŋ̠]/, /tolo[ŋ̠]/ and the [ŋ̟] occurs after a front vowel as in /bisi[ŋ̟]/, /kale[ŋ̟]/, /pusi[ŋ̟]/.

5. LATERAL.

A lateral consonant is formed by an obstacle placed in the middle of the mouth, the air from the lungs is permitted to pass out along one or both sides.

/l/

The Indonesian /l/ phoneme is a partially voiced, alveolar, lateral, consonant. It is formed by placing the tip of the tongue against the upper gum, and permitting the air from the lungs to pass through one or both sides of the tongue. The velum is raised to close the nasal cavity and the vocal cords are made to vibrate. (The quality of vibration is equal to that of the English partially voiced /l/).

The Indonesian /l/ phoneme can occur in all three positions as in:

Initial	Medial	Final
/lari/ (run)	/səkali/ (once)	/kəkal/ (eternal)
/lain/ (different)	/kəmbali/ (be back)	/asal/ (origin)
/lagi/ (again)	/tərali/ (cage)	/ambil/ (take)

The Indonesian /l/ does not have any subsidiary member.

6. ROLLED.

A rolled consonant is made by a rapid succession of taps of some elastic organ.

/r/.

The Indonesian /r/ phoneme is a partially voiced, alveolar, rolled consonant. It is made by placing the tip of the tongue against the back part of the teeth-ridge, the main body of the tongue is kept low. When the air from the lungs passes out, the tip of the tongue flutters against the teeth-ridge, allowing the air to escape intermittently. The velum is raised to close the nasal cavity and the vocal cords are made to vibrate. The quality of vibration of the Indonesian /r/ is equal to that of the English partially voiced /r/.

The Indonesian /r/ phoneme can occur initially, medially and finally.e.g.

Initial	Medial	Final
/raja/ (king)	/karan/ (rock)	/akar/ (root)
/raya/ (great)	/kuran/ (less)	/sabar/ (patient)
/ruza/ (deer)	/taran/ (clear)	/sukar/ (difficult)

The Indonesian /r/ phoneme does not have any subsidiary member.

7. SEMIVOWELS.

Semivowels are made by a movement starting from high or fairly high vowel position towards another sound of equal or greater prominence.

/y/

The Indonesian /y/ phoneme is a partially voiced, palatal, semivowel. It is made by raising the front part of the tongue



in the direction of the hard palate, closing the velum and expelling the partially voiced breath as the speech organs move away from the position just described towards whatever vowel follows. The Indonesian /y/ is considered to be a semivowel because it has some vowel and consonantal characteristics. This sound can be regarded as a consonant because of:

1. Being shorter than an ordinary vowel.
2. Being incapable of forming a syllable.

and it can be regarded as a vowel because in producing the sound there is not any obstacle in the mouth passage so that the air from the lungs passes out freely as it occurs in producing a vowel.

The Indonesian /y/ can occur in initial and medial positions but never in final position e.g.

Initial	Medial	Final
/ya/ (yes)	/bayar/ (shadow)	-
/yar/ (that)	/bayar/ (pay)	-
/yakin/ (sure)	/bayi/ (baby)	-

The Indonesian /y/ phoneme has two members namely the tense /y/ occurring in an extra stressed position and the relax /j/ occurring elsewhere.

/w/

The Indonesian /w/ phoneme is a partially voiced, velar, semivowel. It is made by raising the back of the tongue towards the soft palate, closing the velum and expelling the partially voiced breath as the speech organs move away from the position described above towards whatever vowel follows. The Indonesian /w/ phoneme is also considered to be a semivowel because of having vowel and consonantal characteristics.

This sound can be regarded as a consonant because of:

1. Being shorter than an ordinary vowel.
2. Being incapable of forming a syllable.

and it can be regarded as a vowel because in its articulation there is no obstacle in the mouth-passage so that the air from the lungs passes out freely as it occurs in the articulation of a vowel.

The Indonesian /w/ phoneme can occur in initial and medial positions but never in final position. e.g.

Initial	Medial	Final
/waktu/ (time)	/cawan/ (chalice)	-
/wanita/ (woman)	/awan/ (cloud)	-
/warna/ (colour)	/lawan/ (opponent)	-

The Indonesian /w/ phoneme does not have any significant subsidiary member.

B. VOWELS:

The Indonesian vowel system is very interesting. It seems very simple; in reality it is not so, as it is much influenced by its dialectical differences or the differences of regional languages. Let us take the people from Tapanuli (north-Sumatera) as an example. They have a tendency to pronounce /peran/ instead of /pəran/. The reason of this is that they do not have the sound [ə] in their language. Such a kind of complication does not occur only in the Indonesian sound system but also in many languages in the world. In English the pronunciation of Mary, marry and merry varies from area. Gleason says: "For example, east of the Allegheny Mountains, marry, merry, and Mary are generally all pronounced differently. West of the Allegheny marry and Mary, are usually alike, and in some areas all three may be alike" x).

Besides these differences the Indonesian vowel system also has vowel nasalization. The Indonesian nasalized vowels occur in the environment of the nasal consonants, especially when they are after the nasal consonants. But nasalization in Indonesian does not constitute a different meaning. Therefore the Indonesian nasalized and non nasalized vowels are different allophones of the same phoneme.

Vowel length in Indonesian may occur too, but whether we use a short or long vowel is a matter of preference. e.g. when such a word as /bankit/ (get up) is pronounced with a longer /i/ the listener will still understand, though the pronunciation is regarded as uncommon.

We will now see what the Indonesian basic vowels are like. According to Faridjan Hadidjaja and S. Takdir Alisjahbana x). A. H. Gleason Jr; An Introduction to Descriptive Linguistics pag 27 (Copyright 1955, 1961 by Holt, Rinehart and Winston, Inc).

there are six vowels in Indonesian. They are /i/, /e/, /ə/, /a/, /u/ and /o/. Tardjan Hadidjaja says: "Dalam bahasa Indonesia terdapat 9 buah bunji yang dapat di bagi menjadi: djenis I: bunji tunggal : e, a, o, i dan u. djenis II: bunji pada (diftong): au, ai dan oi." x).

S.Takdir Alisjahbana says:

"Dalam bahasa Indonesia terdapat vokal yang berikut:

- | | | |
|-------|---------------|-------------------------------|
| a (a) | seperti dalam | ada, dapat, pundak, pintar. |
| e (ə) | " | " besar, sempit, -tersentak. |
| ə (ə) | " | " kaléng, persen, pésk. |
| i (i) | " | " bikin, pinggir, rintik. |
| o (o) | " | " kotor, pendek, kepampang. |
| u (u) | " | " kuant, kundur, rumput. xx). |

The following is a list of pairs which have a minimal contrast in sound and a difference in meaning. These minimal pairs are words consisting of two syllables, with the same consonants and vowels in the first syllable.

- | | |
|--------|------------|
| /sapa/ | (greeting) |
| /sapi/ | (cow) |
| /sapa/ | (broom) |

From the following pairs we find three Indonesian vowel phonemes /a/, /i/, and /u/.

Then :

- | | |
|---------|----------|
| /baran/ | (thing) |
| /baran/ | (angry). |

The difference is in the vowels of the first syllables /a/ and /e/.

x). Tardjan Hadidjaja, Tata bahasa Indonesia page 5 (U.P Indonesia Jogja, 1964).

xx). S.Takdir Alisjahbana Tata bahasa baru Bahasa Indonesia page 12 (P.T.Pustaka Rakjat. Djakarta 1962).

Again:

/bala/ (danger)

/bola/ (ball)

differs in the vowels of the first syllables /a/ and /o/.

Next:

/barat/ (west)

/b̄arat/ (heavy)

The contrast is in the vowels of the first syllables /a/ and /ə/.

From the set above, it is clear that there are six vowel phonemes in Indonesian.

To see whether they are distinctive phonemes or not, it is worth comparing each vowel sound with the other five.

Let us consider the following pairs:

/a/ and /i/ : /baran/ (thing) /barin/ (lie)

/aaran/ (nest) /sarin/ (select)

/a/ and /u/ : /bare/ (ember) /baru/ (new)

/ibe/ (pity) /ibu/ (mother)

/a/ and /ə/ : /anak/ (child) /enak/ (comfortable).

/akor/ (agree) /ekor/ (tail).

/a/ and /o/ : /aran/ (coal) /oran/ (human)

/lari/ (run) /lori/ (lorry)

/a/ and /ə/ : /balut/ (bandage) /b̄lut/ (eel)

/tabu/ (taboo) /t̄bu/ (sugar cane)

/i/ and /u/ : /bahi/ (pig) /bahu/ (servant)

/kaki/ (foot) /kaku/ (stiff)

/i/ and /ə/ : /rakit/ (canoe) /raket/ (racket).

/bila/ (when) /bela/ (stand for)

/i/ and /o/ : /kita/ (we) /kota/ (town)

/bila/ (when) /bola/ (ball)

/i/ and /ə/ : /kira/ (think) /kora/ (monkey)

/kina/ (quinine) /kona/ (hit the target)

/u/ and /e/ : /balut/ (bandage) /balot/ (ballot)
 /kalut/ (necklace)/kalot/ (tin)
 /u/ and /o/ : /rubah/ (fox) /robah/ (change)
 /luke/ (hurt) /loke/ (place)
 /u/ and /ə/ : /buruk/ (bad) /beruk/ (kind of monkey)
 /kura-kura/ (tortoise) /kəra-kəra/ (monkeys)
 /e/ and /o/ : /elok/ (beautiful)/olok/ (despise)
 /enak/ (delicious)/onak/ (thorn)
 /e and /ə/ : /seran/ (name of town) /səran/ (attack)
 /sedan/ (car) /sədan/ (grief)

From the minimal pairs presented above, it is true that there are 6 distinctive vowel phonemes in Indonesian. But we still have some problems with the Indonesian vowel phonemes, for example the Indonesian phoneme /ə/. When we pronounce the word /dəkət/ instead of /dəkəṭ/, the listeners still give the same response. So in a certain environment the Indonesian /ə/ and /e/ are different phonemes but in another they are the same. Therefore they are considered as having a free variation in certain distributions.

Again, the Indonesian /i/ and /e/, /u/ and /o/ are different phonemes but observe the following pairs:

/nirin/ (slant) - /neren/ (slant)
 /gunun/ (mountain) - /gunen/ (mountain)

In these environments /i/ and /e/, /u/ and /o/ are in free variation in their distributions.

Now the problem is : do they belong to the same phonemes or to different phonemes? Since the difference of pronunciation between /dəkət/ and /dəkəṭ/, /nirin/ and /neren/ and /gunun/ and /gunen/ is because of the influence of the regional language and because of the differences seen in the lists

above, namely occurrence in same environment, the writer, therefore, has considered that they belong to different phonemes.

This 6 Indonesian vowel phonemes can be classified according to:

1. the height to which the tongue is raised.
2. the part of the tongue which is raised highest.

The classification according to the height to which the tongue is raised may be termed: high, mid, low and the classification according to the part of the tongue which is raised highest, may be termed: front centre and back. The six Indonesian vowel phonemes, therefore, can be put into the following chart:

	FRONT	CENTRE	BACK
HIGH	i		u
MID	e	ə	o
LOW		a	

A more detailed description of tongue position, modifying tongue height, tongue forwardness, is clear from the description given below:

1. Front vowels

/i/

The Indonesian /i/ phoneme is a high high, front unrounded vowel. It is made by raising the front surface of

the tongue against the teeth-ridge. The body of the tongue is curved while the tip is still against the lower front teeth.

This phoneme can occur in initial, medial and final positions as in:

Initial	Medial	Final
/ikat/ (tighten)	/parit/ (ditch)	/pati/ (box)
/ikan/ (fish)	/sakit/ (ill)	/dari/ (from)
/itik/ (duck)	/putih/ (white)	/kaki/ (foot)

The Indonesian /i/ phoneme has 2 subsidiary members namely the low variant /i/ and lower low /i/. The low /i/ occurs in a syllable final followed by a closed syllable in which the /i/ or /u/ occurs and the lower low /i/ occurs in a syllable final as in //i/tik/, /p/i/lih/, /p/i/kir/ and /ab/i/s/, /anb/i/l/, /ad/i/k/.

The principle member /i[^]/ occurs elsewhere.

/e/

The Indonesian /e/ phoneme is a high mid, front, unrounded vowel. In its articulation, it is nearly equal to the Indonesian /i/ but the tongue does not rise as high as for the /i/. The surface of the tongue is rather lower throughout, e.i. the space between the tongue and the palate is greater than for the /i/.

The Indonesian /e/ phoneme can occur in initial, medial and final positions as in:

Initial	Medial	Final
/ekor/ (tail)	/korek/ (match)	/sore/ (afternoon)
/enak/ (comfortable)	/nenek/ (grandma)	/sate/ (baked meat)
/elok/ (marvelous)	/deret/ (series)	/lot re/ (lottery)

The Indonesian /e/ phoneme has two subsidiary members.

They are the low variant [e] and the lower low variant [ɛ]. The low variant [e] occurs in a syllable final followed by a closed syllable in which the Indonesian /ə/ or /o/ occurs as in /b/e/lok/, /b/e/res/, /b/e/sək/. The lower low [ɛ] occurs in a closed syllable as in /pənd[ɛ]k/, /kəɾ[ɛ]k/, /no[ɛ]k/. The principle member [e̞] occurs elsewhere.

2. The central vowels:

/ə/.

The Indonesian /ə/ phoneme is a low mid central, neutral vowel. It is made by raising the blade of the tongue towards the soft palate. The tip of the tongue is placed a little bit apart from the lower front teeth while the velum is raised to close the nasal cavity.

This phoneme can occur in initial, medial and final positions:

Initial	Medial	Final
/əmbun/ (dew)	/bəsar/ (big)	/kədə/ (code)
/əran/ (groan)	/tərat/ (heavy)	/kə/ (to)
/əngan/ (not like)	/bəlum/ (not yet)	/arə/ (acre)

The Indonesian /ə/ phoneme does not have any significant subsidiary member.

/a/

The Indonesian /a/ phoneme is a low, central, unrounded vowel. It is formed like the Indonesian /ə/ but the surface of the tongue is rather lower throughout; the space between the tongue and the palate is greater than for the /ə/.

The Indonesian /a/ phoneme can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/api/ (fire)	/batu/ (stone)	/buka/ (open)
/asin/ (salty)	/dari/ (from)	/pesta/ (party)
/arah/ (direction)	/batuk/ (cough)	/surge/ (heaven)

This phoneme has two subsidiary members namely the low [a] and the lower low [a̠]. The [a] occurs in a syllable final position followed by a closed syllable in which the /a/ occurs as in /b/a/pak/, /d/a/sar/, /b/a/man/, and the [a̠] occurs in a closed syllable as in /kap/a/n/, /mak/a/n/, /buk/a/n/. The principle member [a[^]] occurs elsewhere.

3. The back vowels.

The back vowel /u/

The Indonesian /u/ phoneme is made by raising the back part of the tongue towards the velum which is raised to close the nasal cavity. In its articulation the lips are rounded considerably. It can be expressed shortly as a high, back, rounded vowel.

This phoneme can occur in initial, medial and final positions e.g.

/umur/ (age)	/dapur/ (kitchen)	/tiru/ (imitate)
/untuk/ (for)	/labuh/ (sail)	/suku/ (race)
/utama/ (primary)	/bakul/ (basket)	/abu/ (ash)

The Indonesian /u/ phoneme has two subsidiary members. The low variant /u/ occurs in a syllable final followed by a closed syllable in which the Indonesian /i/ or /u/ occurs. The lower low variant /u̠/ occurs in a closed syllable. e.g. /u̠/nur/, /k̠u̠/ray/, /b̠u̠/kit/ and /sun̠u̠/r/, /cab̠u̠/n/, /b̠u̠/n/. The principle member /u[^]/ occurs elsewhere.

/o/

The Indonesian /o/ phoneme is a high mid, back rounded vowel. It is made by raising the dorsum towards the velum, which is raised to close the nasal cavity. It is nearly equal to the Indonesian /u/ but the position of the tongue is lower than for the /u/ and the lips are rounded.

The Indonesian /o/ phoneme can occur initially, medially and finally. e.g.

Initial	Medial	Final
/obat/ (medicine)	/besok/ (tomorrow)	/toko/ (shop)
/otak/ (brain)	/balok/ (log)	/sado/ (carriage)
/orang/ (human)	/garcy/ (robber)	/sawo/ (fruit).

This phoneme has two subsidiary members namely the low variant [o], and the lower low [ɔ]. The /o/ occurs in a syllable final followed by a closed syllable in which the Indonesian /e/ or /o/ occurs as in /r/o/kok/, /p/o/kok/, /n/o/lek/. The [ɔ] occurs in a closed syllable as in /per/ɔ/n/, /bal/ɔ/n/, /tol/ɔ/l/. The principle member [o^] occurs elsewhere.

C. VOWEL CLUSTERS AND DIPHTHONGS.

In this analysis the Indonesian vowel clusters and diphthongs will be classified. By a vowel cluster we mean a sequence of two vowels in which the first element is as prominent as that of the second and by a diphthong we mean a sequence of two vowels in which the first element is more prominent than the second one. The difference of prominence of the first and second element is because of that the first element is syllabic while the second one is non-syllabic. From the explanation above we can conclude that the difference between the Indonesian vowel clusters and diphthongs is in the second element of the vowel sequence, namely the second element of the diphthong is non-syllabic while the second element of the vowel cluster is syllabic. Besides it, the vowel cluster constitutes 2 different phonemes while the diphthong constitutes a single phoneme.

The Indonesian /a/ can cluster with /i/ and /u/, the /i/ can cluster with /a/ and /u/. So can the /u/ with /i/ and /a/. Examples will be given as follows

/a/ : The /a/ clusters with /i/ and /u/:

/ai/ as in /lain/

/kain/

/kail/

/au/ as in /laut/

/raut/

/haus/

/i/ : The /i/ clusters with /a/ and /u/:

/ia/ as in /dia/

/diam/

/biar/

/iʊ/ as in /tiup/

/bius/

/ciur/

/u/ : The /u/ clusters with /i/ and /c/ :

/ui/ as in /buih/

/uii/

/dui/

/ua/ as in /bua/

/lua/

/uaa/

In the examples given above we have the /-VV-/ sequence in which the first vowel is equal to the second one in quality and they constitute 2 different phonemes.

There are only three diphthongs in Indonesian namely the /ai/, /au/ and /oi/

/ai/

The Indonesian diphthong /ai/ is made by pronouncing the Indonesian /a/ then followed by non-syllabic /i/. It may occur in final position but never in initial and medial positions. e.g.

Initial	Medial	Final
-	-	/ramai/ /rama ⁱ / (busy)
-	-	/damai/ /dama ⁱ / (peace)
-	-	/badai/ /bada ⁱ / (storm)

The Indonesian diphthong /ai/ does not have any significant subsidiary member.

/au/

The Indonesian diphthong /au/ is made by pronouncing the Indonesian /a/ then followed by the non syllabic /u/. It can occur finally but never initially or medially e.g.

Initial	Medial	Final
-	-	/pulan/ /pula" / (island)
-	-	/kalan/ /kala" / (if)
-	-	/kerbau/ /kerba" / (buffalo)

It does not have any significant subsidiary member.

/oi/

The Indonesian diphthong /oi/ is made by pronouncing the Indonesian /o/ then followed by the non syllabic /i/. It can occur in final position but never in initial or medial positions. e.g.

Initial	Medial	Final
-	-	/amboi/ /ambe' /
-	-	/səpoi/ /səpo' /

The /oi/ does not have any significant subsidiary member.

CHAPTER II

PRINCIPLES OF COMPARING

TWO SEGMENTAL PHONEMIC SYSTEMS

I. PHONEMIC PROBLEMS.

A. ANALYSIS.

Before we compare two segmental phonemic systems of two languages namely the foreign language we are learning and the native language, we have, first, to prepare a linguistic analysis of the segmental phonemic system of the foreign language and of that of the native one. The analyses should include the data on the phonetic features of the phonemes and their variants and on their distribution.

B. COMPARISON.

The comparison should be based on the following three questions.

a. Does the native language have a phonetically similar phonemes?

If the native language has a phonetically similar phoneme there will be no problem but if the particular phoneme in the foreign language is different from any phoneme of native language or if it does not exist in the native language, it will be a problem. e.g.

- The English /p/ is a voiceless, bilabial, plosive, consonant. The Indonesian /p/ is a voiceless, bilabial, plosive, consonant.

- The English /p/ is not a problem for Indonesian speakers.

- The English /t/ is a voiceless, alveolar, plosive, consonant.

The Indonesian /t/ is a voiceless, dental, plosive, consonant

The English /t/ is a problem for Indonesian speakers because the English and Indonesian /t/ are different in their places of articulation.

- The English /θ/ is a voiceless, dental fricative, consonant.

This kind of phoneme does not occur in Indonesian. The

English /θ/ is a problem for Indonesian speakers.

- b. Are the variants similar in both languages?

If variants are similar in both languages, there will be no problem, but if they are different, there will be a problem. e.g. The English /p/ has an aspirated variant /p^h/ while Indonesian does not have such a variant. In question a), The English /p/ is not a problem but in question b), the English /p/ is a problem for Indonesian speakers. They never aspirate the English /p^h/ occurring before a stressed vowel.

- c. Are the phonemes and their variants similarly distributed?

If the phonemes and their variants are similarly distributed, there will be no problem, but if they are not similarly distributed, there will be a problem. e.g.

- The English /s/ occurs in all three positions. The Indonesian /s/ occurs in all three positions too. In this case the English /s/ is not a problem for Indonesian speakers.
- The English /z/ may occur in final position. The Indonesian /z/ never occurs in final position. In this case the English /z/ occurring in final position is a problem for Indonesian speakers.

II. SEQUENCE PROBLEMS.

Original Indonesian words do not have any initial and final clusters. In two or three syllabic words we find the intervocalic - cc - but the occurrences are limited to certain consonants only. e.g. /hampir/, /arti/, /pandangan/. Besides, the two adjacent consonants are broken by a syllabic division. This means that the first consonant belongs to the last element of the first syllable, the second consonant belongs to the first element of the next syllable. The structure will be /- ve + ve/ e.g. the word "tanpa" → /tan + pa/ not /tamp + a/ nor /ta + npa/. Therefore any English initial and final consonant cluster will be a problem for Indonesian speakers learning English. They tend to omit one or two consonants of the cluster or to insert a vowel between the two consonants. But since many loanwords have been established into Indonesian as /planit/, /prisma/, /putri/, Indonesian speakers do not require great effort in producing some English consonant initial and final clusters.

The following descriptions are some types of sound arrangement relations and sound sequence relations which constitute learning problems for Indonesian speakers learning English. The symbols used in this study are: c = consonant; - = the occurrence of a vowel; the symbols within // = various phonemes; ~ = varies with; # = non occurrence; + = syllabic division; Fl = foreign language; N.L. = native language; The sound arrangements selected from English are cc - , ccc - and - cc , - ccc .

We do not consider here the cluster - cccc which only rarely occurs as in /takata/. We do not consider this cluster

because the final - c is a plural morpheme or a past tense, or a past participle morpheme. Though the pronunciation of this last - c is a problem, we limit ourselves in this thesis and do not consider it, as the pronunciation problem is clear from the general analysis given.

The analysis is given in the form of different types of problems.

Type a. FL = cc - /yz - / $\longrightarrow$ problem
 NL = Σ cc - /y-z-/
 e.g. English : cc - /sp - /
 Indonesian: Σ cc - /s-p- /

c - and /s/, /p/ occur in English and Indonesian;
 cc - and /sp - / occur in English but not in Indonesian.
 Indonesian speakers tend to pronounce the English /sp - /
 $\longrightarrow$ /spiɔ / (spear) as /s-p- / $\longrightarrow$ /s-piɔ /.

Type b. FL = ccc - /xyz - / $\longrightarrow$ problem
 NL = Σ ccc - /x-y-z-/
 e.g. English : ccc - /spr- /
 Indonesian: Σ ccc - /s-p-r- /

c- and /s/, /p/, /r/, occur in English and Indonesian; ccc- and /spr- / occur in English but not in Indonesian. Indonesian speakers tend to pronounce the English /spr- / $\longrightarrow$ /spred/ (spread) as /s-p-r- / $\longrightarrow$ /s-p-red/.

Type c. : FL = cc - /yz- /
 NL = Σ cc - /x-z- / $\sim$ /t-z- /
 e.g. English : cc- /θ r- /
 Indonesian: Σ cc- /s-r- / $\sim$ /t-r- / x).

x). /s/ and /t/ of the N.L are held to be phonetically near to the FL /θ /.

g- and /r/, /s/, /t/ occur in English and Indonesian **cc-**,
/θ/ and /θr-/ occur in English but not in Indonesian. Indo-
nesian speakers tend to pronounce the English /θr-/ → /θ rɪy/
(three) as /s-r-/ → /s-rɪy/ or as /t-r-/ → /t-rɪy/.

Type d : FL : **-cc** /-yz/.

NL : ² **-cc** /-y/ or /-y-z/

e.g. English : **-cc** /-pt/, /-n/.

Indonesian : ² **-cc** /-p/, /-l/ or /-p-t/, /-l-n/

-c and /n/, /p/, /l/, /t/ occur in English and Indonesian.

-cc, /-pt/ and /-n/ occur in English but not in Indonesian.

Indonesian speakers tend to pronounce the English /-pt/ →
/skrip/ (script) as /-p/ → /s-k-rip/ or /s-k-rip-t/ and
the English /-n/ → /film/ (film) as /-l/ → /fil/ or
/fil-n/

Type e : FL : **-ccc** /-xyz/

NL : ² **-ccc** /-x-y-z/

e.g. English : **-ccc** /-dat/

Indonesian : ² **-ccc** /-d-s-t/.

-c and /d/, /s/, /t/ occur in English and Indonesian.

-ccc and /-dat/ occur in English but not in Indonesian.

Indonesian speakers tend to pronounce the English /-dat/
→ /nɪdɪst/ (midst) as /-d-s-t/ → /nɪd-s-t/

Type f : FL : **-cc** /-xy/

NL : ² **-cc** /-x-z/

e.g. English : **-cc** /-aθ/

Indonesian : ² **-cc** /-a-a/ or /-a-t/.

-c and /n/, /s/, /t/ occur in English and Indonesian.

-cc and /n θ/, /θ/ occur in English but not in Indonesian.

Indonesian speakers tend to pronounce the English /-n θ/
→ /wɔːmθ/ (warmth) as /-a-a/ → /wɔːm-a/ or as /-a-t/

→/v ɔ m-t/.

Type g : P.L = -ccc /-xyz/

N.L = ^z-ccc /-x-y-u/ or /-x-y-u/ or /-x-y/ or
/-z/

e.g. English : -ccc /-lf /

Indonesian: ^z-ccc /-l-f-a/ or /-l-f-t/ or
/-l-f/ or /-l/.

-c and /f/, /l/, /t/, /a/ occur in English and Indonesian

-ccc and /θ /, /lfθ / occur in English but not in Indonesian.

Indonesian speakers tend to pronounce the English /-lfθ / →

/twelfθ / (twelfth) as /-l-f-a/ → /t-wel-f-a/ or /-l-f-t/

→ /t-wel-f-t/ or /-l-f/ → /t-wel-f/ or /-l/ → /t-wel/.

CHAPTER III**ENGLISH - INDONESIAN SEGMENTAL PHONEMIC
CONTRASTIVE ANALYSIS**

Since the greatest part of the English Analysis is taken from the one written by Daniel Jones, it will not be necessary to give it in a separate chapter. It will be stated in this chapter as the comparison between English and Indonesian proceeds in the detailed discussion of individual phonemes. The English phonemic charts will be given in this chapter too.

THE CHART OF ENGLISH CONSONANTS

		PLACE OF ARTICULATION							
		LABIAL		DENTAL	ALVEOLAR	PALATO ALVEOLAR	PALATAL	VELAR	GLOTTAL
		BI LABIAL	LABIO DENTAL						
MANNER OF ARTICULATION	PLOSIVES	vl	p		t			k	
		vd	b		d			g	
	AFFRICATES	vl				ʧ			
		vd				ʤ			
	FRICATIVES	vl	f		s	ʃ			
		vd	v		z	ʒ			
	NASALS	vl							
		vd	m		n			ŋ	
	LATERAL	vl							
		vd			l				
	ROLLED	vl							
		vd			r				
	SEMIVOWELS	vl							h
		vd	w				y	(w)	

() : the secondary place of articulation .

1. PLOSIVE:

p	t	k
b	d	g

/p/

The English /p/ phoneme is a voiceless, bilabial, plosive, consonant. It is made by closing the lips and blocking the nasal passage with the velum, then compressing the air and suddenly opening the mouth passage so that the air escapes making the /p/ sound.

The English /p/, phoneme can occur in initial, medial and final positions as in:

Initial	Medial	Final
/pæn/ (pan')	/hæpi/ (happy)	/ki:p/ (keep)
/put/ (put')	/kɒpi/ (copy)	/sɒp/ (soap)
/pig/ (pig')	/ri:pnt/ (repent')	/næp/ (nap)

In terms of articulation and phonemic distribution the English /p/ phoneme does not differ from that of Indonesian. It differs from that of Indonesian such that the English /p/ has an aspirated variant but the Indonesian /p/ does not. The English /p/ occurring before a stressed vowel is a problem for Indonesian Speakers learning English. They will not aspirate it in that position. e.g.

Initial position :

//p^h/ahdn/ (pardon) → //p/ahdn) ½)
 //p^h/ensl/ (pencil) → //p/ensl/

x). In the possible substitution we abstract the possible sound problems not being discussed.

Medial position :

/ə [p^h]aht/ (apart) → /ə [p]aht/
 /ə [p^h]iyl/ (appeal) → /ə [p]iyl/.

When the English /p/ phoneme occurs before a lateral, it is lateralized. The Indonesian /p/ does not have a lateralized [p^l] variant. Therefore Indonesian Speakers will use the [p] allophone instead of the [p^l] one, as in

Initial position

// [p^l]leys/ (place) → // [p]leys/ x)
 // [p^l]læstik/ (plastic) → // [p]læstik/

Medial position:

/rɪ [p^l]lay/ (reply) → /rɪ [p]lay/
 /kəm [p^l]liyt/ (complete) → /kəm [p]liyt/.

A nasalized [p[~]] variant of the English /p/ phoneme occurs before a nasal but such a variant never occurs in Indonesian. The English /p/ occurring in the position causes a trouble to Indonesian Speakers. There is the tendency to substitute the [p⁻] for the English [p[~]].

Medial position:

/hi [p[~]]netayz/ (hypnotize) → /hi [p⁻]netayz/
 /tɒ [p[~]]nowst/ (topcoat) → /tɒ [p⁻]nowst/.

/t/

The English /t/ phoneme is a voiceless, alveolar, plosive, consonant. It is made by raising the velum, and the tip of

x). We note here, and this will be true for other phonemes to be considered, that we have abstracted here from a possible sequence problem i.e. /pl/ is not a sequence found in Indonesian. Moreover where variant and distribution are similar this is not explicitly mentioned in this analysis.



the tongue to touch the teeth-ridge so that the air passage is completely blocked; the air is compressed by pressure from the lungs and when the tongue is removed from the teeth-ridge, the air suddenly escapes through the mouth, and in doing so the /t/ sound is heard.

The English /t/ can occur initially, medially and finally as in:

Initial	Medial	Final
/teyk/ (take)	/sent:ns/ (sentence)	/sit/ (sit)
/tel/ (tell)	/riteyn/ (retain)	/hɒt/ (hot)
/taɪn/ (time)	/pætən/ (pattern)	/get/ (get).

The English /t/ does not differ much from the Indonesian /t/. The differences are that the English /t/ is alveolar while the Indonesian /t/ is dental. Therefore Indonesian Speakers tend to dentalize the English /t/ in any position. Besides, the allophonic features of the English /t/ appear differently from those of Indonesian e.g. The alveolar /t/, the aspirated /t^h/, the nasalized /t̃/ and the lateralized /t^l/ do not occur in Indonesian. Therefore the English /t/ after the /a/ sound, before stressed and unstressed vowels, before a nasal and a lateral causes misinterpretation for Indonesian Speakers. They will dentalize it in the positions mentioned above. e.g.

Medial position after the /a/ sound.

/a/tænd/ (stand) → /a/t^dænd/

/a/tɪl/ (still) → /a/t^dɪl/

Final position after the /a/ sound.

/best/ (best) → /best^d/

/kɒst/ (cost) → /kɒst^d/

Initial position before an unstressed vowel.

//t/əbaʊ/(taboo) → //t^d/əbaʊ/

//t/ætʊ/(taboo) → //t^d/ætʊ/

Medial position before an unstressed vowel.

/sen/t/əns/(sentence) → /sen/t^d/əns/

/prin/t/ɪŋ/(printing) → /prin/t^d/ɪŋ/

Initial before a stressed vowel.

//t^h/eɪbəl/(table) → //t^d/eɪbəl/

//t^h/eɪlə/(tailor) → //t^d/eɪlə/.

Medial before a stressed vowel.

/ə/t^h/æk/(attack) → /ə/t^d/æk/

/ə/t^h/end/(attend) → /ə/t^d/end/

Medial before a nasal.

/stɹeɪ/tⁿ/n/(straighten) → /stɹeɪ/t^d/n/.

/nə/tⁿ/n/(nutton) → /nə/t^d/n/.

Medial before a lateral.

/lɪ/t^l/l/(little) → /lɪ/t^d/l/

/təɪ/t^l/l/(title) → /təɪ/t^d/l/.

/k/

The English /k/ phoneme is a voiceless, velar, plosive consonant. It is produced by raising the velum to close the nasal passage and raising the back of the tongue to touch the forepart of the hard palate; the air is compressed by pressure from the lungs and when the tongue is lowered, the air suddenly escapes through the mouth and the /k/ sound is heard.

The English /k/ phoneme can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/kɔːrɛkt/ (correct)	/piːkɔːk/ (peacock)	/meɪk/ (make)
/kaʊnt/ (count)	/ɔːkəh/ (occur)	/laɪk/ (like)
/kɪŋ/ (king)	/oʊkeɪ/ (o.k.)	/bʊk/ (book).

The English /k/ phoneme does not differ from the Indonesian /k/ in its articulation and its phonemic position. The difference between the English and Indonesian /k/ lies in the appearance of its allophonic features.

The English /k/ is aspirated when its position is before a stressed vowel but the Indonesian /k/ is never aspirated. So the English /k/ occurring in the position will be troublesome for Indonesian Speakers. They will use the unaspirated /k/ instead of the aspirated /k^h/. e.g.

Initial position:

//k^hændl/ (candle) → //kændl/

//k^həntri/ (country) → //kəntri/.

Medial position:

/ə/k^hawnt/ (account) → /ə/kawnt/

/ə/k^hrɔs/ (across) → /ə/krɔs/

The English /k/ is nasalized before a nasal but the Indonesian /k/ is not. Indonesian Speakers will identify the nasalized /k[̃]/ as the /k/. e.g.

Medial position:

/beɪ/k[̃]n/ (bacon) → /beɪ/kn/

/blæk/k[̃]n/ (blacken) → /blækkn/.

The lateralized /k^l/ variant occurs before a lateral in English but it does not occur in Indonesian. Indonesian speakers will pronounce the English /k/ in that position e.g.

Initial positions:

//k' /leyn/ (claine) → //k/leyn/

//k' /liyn/ (clean) → //k/liyn/

Medial positions:

/bʌ/k' /l/ (buckle) → /bʌ/k/l/

/səh/k' /l/ (circle) → /səh/k/l/

When the English /k/ occurs in word or syllable finals, the unreleased /k̚/ or the released /k/ is used. In those positions, the glottal stop [ʔ] is used in Indonesian. Therefore Indonesian speakers may use the glottal stop [ʔ] instead of the /k̚/ or the /k/. e.g.

In a word final positions:

/lu/k̚/ or /lu/k/ (look) → /lu/ʔ/.

/tey/k̚/ or /tey/k/ (take) → /tey/ʔ/.

In a syllable final position:

/si/k̚-nis/ or /si/k/nis/ (sickness) → /si/ʔ-nis/

/pi/k̚-nik/ or /pi/k/nik/ (picnic) → /pi/ʔ-nik/.

/b/

The English /b/ phoneme is a voiced, bilabial, plosive, consonant. It is made like the English /p/ but in making the English /b/ the vocal cords are made to vibrate.

The English /b/ can occur in all three positions:

Initial	Medial	Final
/buk/ (book)	/leyb/ (labour)	/boyb/ (babe)
/big/ (big)	/reb.l/ (rebel)	/rowb/ (robe)
/bat/ (but)	/əbawt/ (about)	/trayb/ (tribe)/

The English /b/ is the same as the Indonesian /b/ in its articulation. The difference between the English and Indonesian /b/ is that the English /b/ is fully voiced while the Indonesian

/b/ is only partially voiced. So the English **/b/** occurring in an initial position after a voiced word final and in a final position before a voiced word initial will be a problem for Indonesian speakers. They will use the partially voiced **/b̥/** instead of the voiced **/b/** in an initial position after a voiced word final and the glottalized **/p̚/** instead of the fully voiced + unreleased **/b̚/** in a final position before a voiced word initial. e.g.

Initial position after a voiced word final.

/ə gud **/b̥/**y/ (a good boy) → /ə gud **/b̥/**y/
 /hænd **/b̥/**l/ (hand ball) → /hænd **/b̥/**l/

Final position before a voiced word initial.

/bray/**/b̚/** θə n/ (bribe then) → **/bray/****/p̚/** θə n/
/ra/**/b̚/** it/ (rub it) → **/ra/****/p̚/** it/.

In English, the partially voiced and unreleased **/b̚/** variant is used when the **/b/** phoneme occurs in a final position before a voiceless word initial, but the glottalized **/p̚/** is used in Indonesian. Therefore Indonesian speakers have the tendency to use the **/p̚/** instead of the **/b̚/**. e.g.

/tʌ dæ/**/b̚/** peynt/ (to daɪnpaint) → **/tʌ dæ/****/p̚/** peynt/
/bray/**/b̚/** hɜh/ (bribe her) → **/bray/****/p̚/** hɜh/

The lateralized **/bʲ/** occurs before a lateral in English but such a variant does not occur in Indonesian. Indonesian speaker will use the **/b̥/** instead of the lateralized **/bʲ/** before a lateral as in

Initial position before a lateral.

/bʲ/lɛd/ (blood) → **/b̥/**lɛd/
/bʲ/luː/ (blue) → **/b̥/**luː/.

Medial position before a lateral.

/ey/b^l/l/ (able) → /ey/b^l/l/

/fey/b^l/l/ (fable) → /fey/b^l/l/.

When the English /b/ occurs before a nasal, it is nasalized but the /b/ is never nasalized in Indonesian. So Indonesian speakers tend not to nasalize the English /b/ occurring before a nasal. As in a syllable or word final the glottalized [p^ʔ] is used in Indonesian, they will pronounce the [p^ʔ] instead of the [b^ʔ], as in:

Medial position before a nasal.

/α/b^ʔnɔhɔl/ (abnormal) → /α/p^ʔnɔhɔl/

/sə/b^ʔnit/ (submit) → /sə/p^ʔnit/.

/d/

The English /d/ phoneme is a voiced, alveolar, plosive, consonant. It is formed like the English /t/ but in making the English /d/ the vocal cords are made to vibrate.

The English /d/ can occur in initial, medial and final positions e.g.

Initial	Medial	Final
/deyt/ (dare)	/midl/ (middle)	/bed/ (bed)
/deɪ / (dead)	/redi/ (ready)	/sɔd/ (sad)
/def/ (deaf)	/stadi/ (study)	/red/ (red)

The English /d/ is nearly the same as the Indonesian /d/ in its articulation and its appearance of the phonemic features. The difference is that the English /d/ is fully voiced while the Indonesian /d/ is partially voiced. A trouble which we can expect for Indonesian speakers learning English is that the English /d/ has some variants which do not occur

in Indonesian. These variants are the fully voiced /d/, the unreleased /d̚/, the dentalized /d^d/, the retracted /d̠/, the nasalized /d̃/ and the lateralized /d^l/ . Therefore the English /d/ occurring in the following positions will be very troublesome.

1. They will use the partially voiced /d̥/ instead of the voiced /d/ in a word initial after a voiced word final as well as in an intervocalic position e.g.

Initial position after a voiced word final.

/ə gud /d̥g/ (a good dog) → /ə gud /d̥g/

/fɔl /d̥am/ (fall down) → /fɔl /d̥am/

Intervocalic position.

/grɪd̥l/ (greedy) → /grɪd̥l/

/fə d̥rəl/ (federal) → /fə d̥rəl/

2. The glottalized /t̚/ is used in a word or syllable final instead of the unreleased /d̚/ e.g.

A word-final position:

/ə bəd̚ nən/ (a bad man) → /ə bəd̚ t̚ nən/

/ə rəd̚ buk/ (a red book) → /ə rəd̚ t̚ buk/

Syllable final position:

/ste d̚ fəst/ (steadfast) → /ste t̚ fəst/

/be d̚ təɪn/ (bedtime) → /be t̚ təɪn/

3. Before the /θ/, they use the partially voiced /d̥/ instead of the dentalized /d^d/ as in:

/hʌndrəd̥θ/ (hundredth) → /hʌndrəd̥θ/

/wɪ d̥θ/ (width) → /wɪ d̥θ/.

4. The partially voiced /d̥/ variant is used instead of the retracted /d̠/ before the /r/. e.g.

//d'/rayv/ (drive) ———> //d/ rayv/

//d'/ril/ (drill) ———> //d/ ril/

5. They tend to use the partially voiced /d/ instead of the nasalized /d'/ before a nasal e.g.

/mey/d'/n/ (maiden) ———> /mey/d/n/

/gah/d'/n/ (garden) ———> /gah/d/n/.

6. There is a tendency to use the partially voiced /d/ instead of the lateralized /d'/ before a lateral. e.g.

/ni/d'/l/ (middle) ———> /ni/d/l/

/pɹ/d'/l/ (paddle) ———> /pɹ/d/l/.

/g/

The English /g/ phoneme is a voiced, velar, plosive, consonant. It is made like the English /k/ but in making the English /g/ the vocal cords are made to vibrate.

The English /g/ can occur in all three positions. e.g.

Initial	Medial	Final
/geɪn/ (game)	/bɪɡɪn/ (begin)	/bɔːɡ/ (bag)
/ɡʊd/ (good)	/dɪsɡəst/ (disgust)	/dɔːɡ/ (dog)
/ɡest/ (guest)	/fəɡət/ (forgot)	/ləɡ/ (leg)

The differences between the English and the Indonesian /g/ are that the English /g/ is fully voiced while the Indonesian /g/ is partially voiced and the English /g/ can occur in final position while the Indonesian /g/ never occurs in final position. Therefore Indonesian speakers find it difficult to pronounce the English /g/ occurring in final position. They tend to pronounce the /k/ instead of the /g/ as in:

/bɪɡ/ (big) ———> /bɪk/

/dræɡ/ (drag) ———> /dræk/.

The English voiced /g/ variant occurs in an intervocalic

position but the partially voiced $/g̊/$ is used in this position in Indonesian. Indonesian speakers tend to use the partially voiced $/g̊/$ instead of the fully voiced $/g/$

$/bi/g̊ni/$ (bigamy) $\longrightarrow /bi/g̊ni/$

$/si/g̊ah/$ (cigar) $\longrightarrow /si/g̊ah/$

The fronted voiced $/g/$ occurs in a word initial after a voiced word final before a front unrounded vowel in English but the fronted partially voiced $/g̊/$ is used in Indonesian. So Indonesian speakers have the tendency to pronounce the fronted partially voiced $/g̊/$ instead of the fronted fully voiced $/g/$ e.g.

$/θə/g̊ift/$ (the gift) $\longrightarrow /θə/g̊ift/$

$/yʌ/g̊et/$ (you get) $\longrightarrow /yʌ/g̊et/$

The retracted and lip rounded voiced $/gʷ/$ occurs in a word initial after a voiced word final, before a back rounded vowel in English but the retracted, lip-rounded and partially voiced $/g̊ʷ/$ variant is used in Indonesian. So Indonesian speakers will pronounce the partially voiced lip-rounded and retracted $/g̊ʷ/$ instead of the voiced lip rounded and retracted $/gʷ/$ e.g.

$/θə/g̊ʷowl/$ (the goal) $\longrightarrow /θə/g̊ʷowl/$

$/wi/g̊ʷow/$ (we go) $\longrightarrow /wi/g̊ʷow/$

When the English $/g/$ phoneme occurs in a word or syllable final, the unreleased $/g̚/$ or the released $/g/$ is used, but it does not occur in Indonesian. Indonesian speakers will pronounce the $[ʔ]$ instead of the unreleased $/g̚/$ or released $/g/$. e.g.

Syllable final position:

$/dræ/g̚n/$ (dragon) $\longrightarrow /dræ[ʔ]n/$

$/re/g̚julə/$ (regular) $\longrightarrow /re[ʔ]julə/$

Word final position

/f>[g-]/ (fog) → /f>[ʔ]/

/b>[g-]/ (bag) → /b>[ʔ]/

The nasalized /g̃/ variant occurs before a nasal in English but it never occurs in Indonesian. Indonesian speakers will tend to pronounce the glottal stop /ʔ/ instead of the nasalized /g̃/ e.g.

/di/g̃/niti/ (dignity) → /di/ʔ/niti/

/d>[g̃]nɪtik/ (dogmatic) → /d>[ʔ]nɪtik/.

The lateralized /g̊/ never occurs in Indonesian but it occurs before a lateral in English. Therefore the English /g/ occurring before a lateral is a problem for Indonesian speakers. They pronounce the partially voiced /g̊/ instead of the lateralized /g̊/. e.g.

Initial position:

//g̊/ɫəd/ (glad) → //g̊/ɫəd/

//g̊/laɦə/ (glass) → //g̊/laɦə/.

Medial position:

/str>[g̊]l/ (struggle) → /str>[g̊]l/

/tr>[g̊]l/ (triangle) → /tr>[g̊]l/

2. AFFRICATES :

$$\frac{\text{č}}{\text{ǰ}}$$

/č/.

The English /č/ phoneme is a voiceless, palato-alveolar, affricate, consonant. It is made by raising the velum to close the nasal cavity, and the tip and the blade of the tongue against the teeth-ridge to block the air passage; while the stop is being held, air is compressed by pressure from the lungs; when the tongue is removed from the teeth-ridge

slowly, the air escapes through the mouth producing the /č/ sound; the vocal cords are not made to vibrate.

The English /č/ can occur initially, medially and finally.
e.g.

Initial	Medial	Final
/čallɪs/ (chalice)	/pɪkčə/ (picture)	/kəč/ (catch)
/čeɪn/ (chain)	/fɔːtʃən/ (fortune)	/dɪč/ (ditch)
/čɔːk/ (chalk)	/fjuːtʃə/ (future)	/pɪč/ (pitch)

The formation of the Indonesian /č/ is nearly the same as that of English. The differences between the English and Indonesian /č/ are that :

1°. In producing the English /č/, the body of the tongue is raised higher than the Indonesian /č/ so that the space between the tongue and the hard palate is narrower than in producing the Indonesian /č/.

2°. In producing the English /č/, the muscles of our mouth are tense while in producing the Indonesian /č/, the muscles of our mouth are relax.

3°. The English /č/ is produced with the protrusion of the lips while the Indonesian /č/ is not.

In addition to the differences mentioned above the English /č/ can occur in final position but the Indonesian /č/ never occurs in that position. Therefore the English /č/ is difficult for Indonesian speakers to pronounce, especially when it occurs in final position. There is a tendency to place a vowel after the final /č/. e.g.

/lənč/ (lunch) → /lənčə/

/nəč/ (match) → /nəčə/

The English /č/ has an aspirated variant occurring in a stressed position but it does not occur in Indonesian. Indonesian speakers will substitute the /tʃ/ for the /č/. e.g.

Initial stressed position:

/tʃʌrtɪ/ (cherry) → /tʃʌrtɪ/

/tʃʌnəl/ (channel) → /tʃʌnəl/

Initial stressed positions:

//č^h/æriti/ (charity) → //tʃ/æriti/

//č^h/ænal/ (channel) → //tʃ/ænal/.

Medial position:

/in/č^h/ahnt/ (enchant) → /in/tʃ/ahnt/

/ə/č^h/iyv/ (achieve) → /ə/tʃ/iyv/.

/ʃ/

The English /ʃ/ phoneme is a voiced, palato-alveolar, affricate, consonant. It is made like the English /č/ but in pronouncing the English /ʃ/ the vocal cords are made to vibrate. The quality of the English /ʃ/ is different from that of Indonesian. The differences are that :

1°. In pronouncing the English /ʃ/, the body of the tongue is raised higher than that of Indonesian. Therefore the space between the body of the tongue and the hard palate in producing the English /ʃ/ is narrower than in producing the Indonesian /ʃ/.

2°. In producing the English /ʃ/ the muscles of our mouth are tense while in producing the Indonesian /ʃ/, they are relax.

3°. The English /ʃ/ is produced with the protrusion of the lips while the Indonesian /ʃ/ is not.

4°. The English /ʃ/ is fully voiced but the Indonesian /ʃ/ is partially voiced.

The English /ʃ/ can occur initially, medially and finally as in

Initial	Medial	Final
/ʃendə/ (gender)	/piʃin/ (pigeon)	/peɪʃ/ (page)
/ʃenərəl/ (general)	/oriʃin/ (origin)	/reɪnʃ/ (range)
/ʃiynyua/ (genius)	/ənʃəy/ (enjoy)	/ʃəʃ/ (judge).

The English /ʃ/ can occur in final position but the Indonesian /ʃ/ cannot. The English /ʃ/ occurring in final position will be a great problem for Indonesian speakers, because besides the quality of the English and Indonesian /ʃ/ is different, their distributions are also different. They will have the tendency to place a vowel after the /ʃ/ as in

/brɪʃ/ (bridge) → /brɪʃə/
 /keɪʃ/ (cage) → /keɪʃə/.

3. FRICATIVES:

f	θ	s	ʃ
v	ð	z	ʒ

/f/

The English /f/ phoneme is a voiceless, labio-dental, fricative, consonant. It is made by pressing the lower lip against the upper teeth and allowing the air to force its way between them and through the openings between the teeth.

The English /f/ can occur in all three positions e.g.

Initial	Medial	Final
/frefʃ/ (fresh)	/rɪfjuːz/ (refuse)	/laɪf/ (life)
/frɒg/ (frog)	/rɪfrefʃ/ (refresh)	/ruːf/ (roof)
/frɒnt/ (front)	/dɪfɪdnt/ (devident)	/tʌf/ (tough).

The English and the Indonesian /f/ are the same in their articulation as well as their distribution. Therefore Indonesian speakers have no difficulty in pronouncing the English /f/.

Some Indonesian speakers, especially the uneducated ones, pronounce the Indonesian /p/ instead of the Indonesian /f/. For those who substitute the Indonesian /p/ for the Indonesian /f/, the English /f/ is a problem. They tend to pronounce the English /f/ as the /p/. e.g.

Initial position

/faynd/ (find) → /paynd/

/finia/ (finish) → /pinia/

Medial position

/riflekt/ (reflect) → /riplekt/

/ freyd/ (afraid) → / preyd/

Final position:

/rɔf/ (rough) → /rɔp/

/hahf/ (half) → /hahp/.

/θ/.

The English /θ/ phoneme is a voiceless, dental, fricative, consonant. It is formed by the tip of the tongue against the upper teeth, the main part of the tongue being fairly flat; the air passage between the tip of the tongue and the upper teeth is narrow, the velum is raised to close the nasal cavity and the vocal cords are not made to vibrate.

The English /θ/ can occur initially, medially and finally as in

Initial	Medial	Final
/θin/ (thin)	/nɔθɪŋ/ (nothing)	/tuθ/ (tooth)
/θɪŋ/ (thing)	/ɪθə/ (ether)	/saθ/ (south)
/θɪf/ (thief)	/eθɪks/ (ethics)	/paθ/ (path)

Since the /θ/ does not occur in Indonesian, it may be identified as the /t/ because of its dental quality or it may be identified as the /s/ or the /f/ because of its fricative quality.

Initial position:

/θɪŋ/ (thing) → /tɪŋ/ ~ /sɪŋ/ ~ /fɪŋ/

/θrɔt/ (throat) → /tɹɔt/ ~ /sɹɔt/ ~ /fɹɔt/.

Medial positions:

/səmθɪŋ/ (something) → /səntɪŋ/ ~ /sənsɪŋ/ ~ /sənfɪŋ/
 /məθəd/ (method) → /mətəd/ ~ /məsəd/ ~ /məfəd/.

Final positions:

/deθ/ (death) → /det/ ~ /des/ ~ /def/
 /tuθ/ (tooth) → /twt/ ~ /tws/ ~ /twf/.

/s/

The English /s/ phoneme is a voiceless, alveolar, fricative, consonant. It is made by the tip of the tongue against the teeth-ridge, the front part of the tongue is being at the same time somewhat raised in the direction of the hard palate. The teeth are closed together, the space between the blade of the tongue and the teeth-ridge is extremely narrow. The velum is raised to close the nasal cavity and the vocal cords are made to vibrate.

The English /s/ can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/stədi/ (study)	/pɔsɪbl/ (possible)	/sens/ (sense)
/seɡmənt/ (segment)	/beɪn/ (basin)	/hɔhs/ (horse)
/sɪlekt/ (select)	/əsɪst/ (assist)	/bɔs/ (bus).

The English /s/ is the same as the Indonesian /s/ in its articulation and distribution. It, therefore, does not cause any difficulty for Indonesian speakers learning English.

/ʃ/

The English /ʃ/ is a voiceless, palato-alveolar, fricative, consonant. It is made by the tip and blade of the tongue against the hinder part of the teeth-ridge, the whole of the

main body of the tongue is raised. The teeth are closed together. The space between the blade of the tongue and the teeth-ridge is narrow. There is protrusion of the lips. The velum is raised to close the nasal cavity and the vocal cords are not made to vibrate.

The English /ʃ/ can occur in all three positions. e.g.

Initial	Medial	Final
/ʃow/ (show)	/kəʃh/ (cashier)	/fref/ (fresh)
/ʃet/ (shut)	/məʃəl/ (marshal)	/bləʃ/ (blush)
/ʃut/ (shoot)	/bʊʃ/ (bushy)	/rəʃ/ (rush)

The English /ʃ/ and the Indonesian /s/ are different both in quality and in their distribution namely:

1°. The space between the blade of the tongue and the teeth ridge of the English /ʃ/ is narrower than that of the Indonesian.

2°. In pronouncing the English /ʃ/, the muscles of the mouth are tense while in pronouncing the Indonesian /s/ they are relax.

3°. The English /ʃ/ is produced with lip-protrusion while the Indonesian /s/ is not.

4°. The English /ʃ/ occurs in final position but the Indonesian /s/ does not.

The English /ʃ/ causes a major difficulty for Indonesian speakers, especially when it occurs in final position. They will pronounce the Indonesian /s/ instead of the English /ʃ/ in initial and medial positions and they will pronounce the /s/ instead of the /ʃ/ in final position. e.g.

Initial position:

//ʃip/ (ship) → //sɪp/

//ʃəl/ (shall) → //səl/

Medial position:

/kʌ/ʃən/ (cushion) → /kʌ/ʃən/

/menʃən/ (mention) → /menʃən/

Final position:

/fɪnɪʃ/ (finish) → /fɪnɪʃ/

/brʌʃ/ (brush) → /brʌʃ/

Some Indonesian speakers, especially uneducated ones pronounce the Indonesian /ʃ/ as the /s/. They have the tendency to pronounce the English /ʃ/ as the /s/ in any positions.

/v/

The English /v/ phoneme is voiced, labio-dental, fricative, consonant. It is made in the same way as the production of the English /f/. The only difference is that in the production of the English /v/, the vocal cords are made to vibrate.

The English /v/ can occur in initial, medial and final positions as in

Initial	Medial	Final
/vænɪʃ/ (vanish)	/oʊvə/ (over)	/lɪv/ (live)
/væn/ (van)	/oʊvən/ (even)	/lʌv/ (love)
/vaɪn/ (vine)	/raɪvəl/ (rival)	/seɪv/ (save)

The /v/ phoneme does not occur in Indonesian. So Indonesian speakers will have a difficulty in distinguishing the sound /v/ from the sound /f/ or /w/ in all three positions. e.g.

Initial position:

/veri/ (very) → /feri/ ~ /veri/

/vaɪn/ (vine) → /faɪn/ ~ /waɪn/

Medial position:

/oʊvə/ (over) → /oʊfə/ ~ /oʊwə/

/ɪnvənt/ (invent) → /ɪnfənt/ ~ /ɪnwənt/

Final position:

/lʌv/ (love) → /lʌf/ ~ /lʌw/.

/seɪv/ (save) → /seɪf/ ~ /seɪw/.

/ð/

The English /ð/ phoneme is a voiced, dental, fricative, consonant. It is made in the same way as the production of the English /θ/ but in producing the English /ð/, the vocal cords are made to vibrate.

The English /ð/ can occur initially, medially and finally.

e.g.

Initial	Medial	Final
/ðɪz/ (this)	/mʌðə / (mother)	/beɪð / (bathes)
/ðæt/ (that)	/bʌðə / (bother)	/wɪð / (with)
/ðey/ (they)	/eɪðə / (either)	/brɪð / (breathe)

The /ð/ phoneme is absent in Indonesian. Therefore the English /ð/ occurring in any position will be a trouble for Indonesian speakers. They might pronounce the /d/ or /t/ instead of the /ð/ in all three positions. e.g.

Initial position:

/ðən/ (then) → /dən/ ~ /tən/

/ðə / (the) → /də/ ~ /tə/

Medial position:

/mʌðə / (mother) → /mədə/ ~ /mətə/

/bʌðə / (bother) → /bədə/ ~ /bətə/

Final position:

/wɪð / (with) → /wɪd/ ~ /wɪt/

/beɪð / (bathes) → /beɪd/ ~ /beɪt/

They might identify it as the /d/ or /t/ because of its dental quality.

/z/

The English /z/ phoneme is a voiced, alveolar, fricative, consonant. It is made like the English /s/ but the difference is that the English /z/ is made with the vibration of the vocal cords.

The English /z/ can occur initially, medially and finally.
e.g.

Initial	Medial	Final
/zəʊn/ (zone)	/rəʊzi/ (rosy)	/raɪz/ (rise)
/ziərəʊ/ (zero)	/nyʊzɪk/ (music)	/nəʊz/ (nose)
/zuː/ (zoo)	/rɪzəlt/ (result)	/kəʊz/ (cause)

The differences between the English and the Indonesian /z/ are that the English /z/ is fully voiced while the Indonesian /z/ is partially voiced and the English /z/ can occur in all three positions but the Indonesian /z/ never occurs in final position. Therefore the English /z/ occurring in initial position after a voiced word final, in intervocalic position and in final position will cause a difficulty for Indonesian speakers. They tend to pronounce the partially voiced /z/ instead of the fully voiced /z/ in initial position after a voiced word final and in intervocalic position and to pronounce the /s/ instead of the fully voiced /z/ in final position. e.g.

Initial position after a voiced word final.

/ðə/zuː/ (the zoo) → /ðə /z/zuː/
/ə/z/ɪbrə/ (a zebra) → /ə /z/ɪbrə/

Intervocalic position.

/yʊz/z/ɪʃ/ (usage) → /yʊz/z/ɪʃ/
/nyʊz/z/ɪk/ (music) → /nyʊz/z/ɪk/

Final position.

/snɪy/z/ (sneeze) → /snɪy/ɜ:/

/piy/z/ (peas) → /piy/ɜ:/

Some Indonesian speakers replace the Indonesian /j/ for the English /z/. For those who do it, the English /z/ will be troublesome. They will also replace the /j/ for the /z/ e.g. /zeləz/ (zealous) → /jeləz/ (initial), /reyzə/ (razor) → /reyjə/. (medial).

/z/

The English /z/ phoneme is a voiced, palato-alveolar, fricative, consonant. It is made like the English /s/ but it is accompanied with the vibration of the vocal cords.

The English /z/ can occur in medial and final positions but never in initial position. e.g.

Initial	Medial	Final
-	/neʒə/ (measure)	/ruwʒ/ (rouge)
-	/pleʒə/ (pleasure)	/gərahʒ/ (garage)
-	/leʒə/ (leisure)	/ - / -

Since this phoneme does not occur in Indonesian, it causes a trouble for Indonesian speakers in any position. They tend to pronounce the /s/ or /j/ because of its palato-alveolar quality and the /z/ because of its fricative quality. e.g.

Medial position:

/neʒə/ (measure) → /neʃə/ ∪ /nejə/ ∪ /nezə/.

/pleʒə/ (pleasure) → /pleʃə/ ∪ /plejə/ ∪ /plezə/.

Final position:

/ruwʒ/ (rouge) → /ruwʃ/ ∪ /ruwj/ ∪ /ruwz/

/gərahʒ/ (garage) → /gərahʃ/ ∪ /gərahj/ ∪ /gərahz/

4. NASALS : m n ŋ

/n/

The /n/ phoneme of English is a voiced, bilabial nasal consonant. It is formed by closing the lips to block the mouth passage and lowering the velum to let the air from the lungs pass through the nose; the tongue is held in a neutral position and the vocal cords are made to vibrate.

The English /n/ can occur in initial, medial and final positions e.g.

Initial	Medial	Final
/ni:n/ (mean)	/pre:nɪə/ (premise)	/sɔ:n/ (come)
/maʊθ/ (mouth)	/dɪˈmɑ:nd/ (demand)	/dɪn/ (din)
/mæn/ (man)	/rɪˈmeɪn/ (remain)	/kɔ:n/ (come)

The English /n/ differs from the Indonesian /n/ in that

1. The English /n/ is fully voiced while the Indonesian /n/ is partially voiced.
2. The English /n/ has two variants which do not occur in Indonesian. These variants are the labio dental /ɱ/ and the voiced /n/ occurring before the /f/ or /v/ and elsewhere except after the /s/, respectively. They tend to pronounce the partially voiced /ɱ/ instead of the labio dental /ɱ/ and the partially voiced /n/ instead of the voiced /n/ e.g.

Medial position before the /f/ or /v/

/trayə/ɱf/ (triumph) → /trayə/nf/

/kɔ:n/ɱt/ (comfort) → /kɔ:n/nt/

Initial position:

//n/eyk/ (make) → //n/eyk/

//n/ɔ:tə/ (motor) → //n/ɔ:tə/

Medial position

/sah/n/pl/ (sample) → /sah/n/pl/

/tra/n/p/ (tramp) → /tra/n/p/.

Final position:

/tay/n// (time) → /tay/n//

/day/n// (dine) → /day/n//

/n/

The English /n/ phoneme is a voiced, alveolar, nasal, consonant. It is formed by raising the tip of the tongue to touch the teeth-ridge to block the mouth-passage, and the velum is lowered to let the air pass through the nose.

The vocal cords are made to vibrate.

The English /n/ can occur initially, medially and finally
e.g.

Initial	Medial	Final
/neɪn/ (name)	/nɪnɪt/ (minute)	/neɪn/ (nine)
/niɪd/ (need)	/kænʊ/ (cance)	/nɔn/ (non)
/næp/ (nap)	/əneɪ/ (annoy)	/pətrən/ (patron)

The English /n/ is nearly the same as the Indonesian /n/ in its articulation. The difference is only that the English /n/ is fully voiced while the Indonesian /n/ is partially voiced. Besides the difference in its articulation the English /n/ also differs from the Indonesian /n/ in its appearance of its allophonic features. The English /n/ has three variants which do not exist in the Indonesian /n/. These variants are the dental /n^d/ which occurs before the /θ/ or /ð/, the retracted /n^r/ which occurs before the /r/ and the fully voiced /n/ which occurs elsewhere except after the /s/. So the English /n/ occurring in the positions mentioned above will cause a difficulty for Indonesian speakers. They

have the tendency to use the partially voiced /ŋ/ in those positions. e.g.

Medial position before the /θ/ or /ð/.

/ɪ/n^d/θroun/ (enthron) → /ɪ/n/θroun/

/æ/n^d/θəʊn/ (anthos) → /æ/n/θəʊn/

Medial position before the /r/

/ɪ/n^r/riç/ (enrich) → /ɪ/n/rɪç/

/ɪ/n^r/roul/ (enrol) → /ɪ/n/roul/

Initial position

//n/eytɪv/ (native) → //n/eytɪv/

//n/əmbə/ (number) → //n/əmbə/

Medial position except after the /ə/, before the /r/, /θ/, or /ð/.

/re/n/t/ (rent) → /re/n/t/

/tre/n/d/ (trend) → /tre/n/d/

Final position

/nəʊ/n/ (mourn) → /nəʊ/n/

/bi/n/ (been) → /bi/n/

/ŋ/

The English /ŋ/ phoneme is a voiced, velar, nasal consonant. It is formed by raising the back of the tongue to touch the forepart of the soft palate. The soft palate is lowered so that the air from the lungs passes through the nose. The vocal cords are made to vibrate.

The English /ŋ/ can occur in medial and final positions but never in initial position e.g.

Initial

Medial

Final

-

/trɒŋk/ (trunk) /lɒŋ/ (long)

-

/brɪŋɪŋ/ (bringing) /sɪŋ/ (sing)

-

/fɪŋɡə/ (finger) /jʌŋ/ (young)

The Indonesian /ŋ/ is nearly the same as the English /ŋ/ in its production. The difference between them is in the quality of voicing. The English /ŋ/ is fully voiced while the Indonesian /ŋ/ is partially voiced. Indonesian speakers will pronounce the partially voiced /ŋ̤/ for the fully voiced /ŋ/ e.g.

Medial position after a front vowel.

/bli/ŋ̤/ (blink) → /bli/ŋ̤̤/

/li/ŋ̤/ (linger) → /li/ŋ̤̤/

Medial position after a central vowel.

/trə/ŋ̤/ (trunk) → /trə/ŋ̤̤/

/sə/ŋ̤/ (sunkən) → /sə/ŋ̤̤/

Medial position after a back vowel.

/rɔ/ŋ̤/ (wrongly) → /rɔ/ŋ̤̤/

/strɔ/ŋ̤/ (stronger) → /strɔ/ŋ̤̤/

Final position after a front vowel

/si/ŋ̤/ (sing) → /si/ŋ̤̤/

/ri/ŋ̤/ (ring) → /ri/ŋ̤̤/

Final position after a central vowel

/sə/ŋ̤/ (sung) → /sə/ŋ̤̤/

/strə/ŋ̤/ (strung) → /strə/ŋ̤̤/

Final position after a back vowel.

/sɔ/ŋ̤/ (song) → /sɔ/ŋ̤̤/

/lɔ/ŋ̤/ (long) → /lɔ/ŋ̤̤/

5. LATERAL: l

/l/

The English /l/ phoneme is a voiced, alveolar, lateral, consonant. It is made by putting the tip of the tongue to touch the teeth-ridge so that there is a complete closure in

the middle of the mouth. The air from the lungs can pass out through one or both sides of the tongue. The soft palate is raised to close the nasal cavity and the vocal cords are made to vibrate.

The English /l/ can occur in initial, medial and final positions . e.g.

Initial	Medial	Final
/lɪnɪt/ (limit)	/niːdlɪs/ (needleless)	/spɪl/ (spill)
/laʊd/ (loud)	/prɪklɪ/ (prickly)	/tɪl/ (till)
/lɪtl/ (little)	/nekls/ (necklace)	/fʊl/ (full)

The English /l/ is nearly the same as that of English in its articulation and distribution. The only difference is that the English /l/ is fully voiced while the Indonesian /l/ is partially voiced. Indonesian speakers usually pronounce the partially voiced /l̥/ instead of the fully voiced /l/ in prevocalic position and before the /y/ e.g.

Syllable initial before a vowel.

//l̥et/ (let) —————> //l̥et/

//l̥aɪst/ (last) —————> //l̥aɪst/

Syllable initial before the /y/.

//l̥yʊsɪnt/ (lucent) —————> //l̥yʊsɪnt/

//l̥yʊsɪd/ (lucid) —————> //l̥yʊsɪd/

The English /l/ phoneme has a subsidiary member called the dark /l̥/ occurring before a consonant and in final position. The dark /l̥/ does not exist in Indonesian. Indonesian speakers find it difficult to pronounce the dark /l̥/. They will pronounce it as the partially voiced /l̥/ e.g.

Medial position before a consonant.

//fɪl̥tə/ (filter) —————> //fɪl̥tə/

//fɛl̥t/ (felt) —————> //fɛl̥t/



Final position:

/teɪ/ɪ/ (tale) → /teɪ/ɪ/

/bi/ɪ/ (bill) → /bi/ɪ/

6. ROLLED: r

/r/

The English /r/ phoneme is a voiced, alveolar, rolled consonant. It is made by a rapid succession of taps of the tip of the tongue against the teeth-ridge. The velum is raised to close the nasal cavity and the vocal cords are made to vibrate. The lips are protruded.

The English /r/ can occur in initial medial positions but never in final position except when it is followed by a word beginning with a vowel e.g.

Initial	Medial	Final
/rɪd/ (riddle)	/praʊd/ (proud)	/faɪə weɪ/ (far away)
/raʊnd/ (round)	/draɪv/ (drive)	/peɪə əv/ (pair of)
/raɪz/ (raise)	/fraɪd/ (fried)	/bəɪə əv/ (bar of)

The Indonesian /r/ is nearly the same as the English /r/ in its articulation. The differences between the English and the Indonesian /r/ are that the English /r/ is fully voiced while the Indonesian /r/ is partially voiced and the English /r/ is pronounced with the protrusion of the lips while the Indonesian /r/ is not. So the English /r/ in any position will be mispronounced by Indonesian speakers. e.g.

Medial position and stressed after a voiceless consonant.

/p/ɪ/ʊv/ (prove) → /p/ɪ/ʊv/

/k/ɪ/ʌd/ (crowd) → /k/ɪ/ʌd/

In an unstressed intervocalic position.

/ve/ɪ/ɪ/ (very) → /ve/ɪ/ɪ/

/pɪə/ɪ/ɪd/ (period) → /pɪə/ɪ/ɪd/

In a word ending with /ə/ followed by a word beginning with a vowel.

/aɪdɪə [rʰ] əv ɪt/ (idea of it) → /aɪdɪə əv ɪt/

/saʊd ə [rʰ] ənd/ (soda and) → /saʊd ə ənd/.

Initial stressed position.

//r/ aʊndnɪs/ (roundness) → //r/ aʊndnɪs/

//r/ eɪdnɪs/ (readiness) → //r/ eɪdnɪs/

7. SEMIVOWELS:

$$\begin{array}{c} \text{h} \\ \hline \text{y} \quad \text{w} \end{array}$$

/y/

The English /y/ is a voiced, palatal, semivowel. It is formed by raising the front of the tongue rather high in the direction of the hard-palate; the velum is raised to close the nasal cavity and the vocal cords are made to vibrate.

The English /y/ can occur in the initial, medial positions and in the second element of the diphthongs /ɪy/, /ey/, /ay/ and /y/. e.g.

Initial	Medial
/yʌŋ/ (young)	/bɪyʌnd/ (beyond)
/yes/ (yes)	/rɪfyz/ (refuse)
/ɪyɪld/ (yield)	/regjʊlə/ (regular)

In the second element of the diphthongs /ɪy/, /ey/, /ay/, /y/.

/sɪy/ (see)

/seɪ/ (say)

/baɪ/ (buy)

The English /y/ differs from the Indonesian /y/ in that

1. The English /y/ is fully voiced while the Indonesian /y/ is partially voiced.

2. In producing the English /y/ the muscles of the mouth are tense while in producing the Indonesian /y/, they are relax.

The differences in quality between the English and the Indonesian /y/ cause a difficulty for Indonesian speakers. They will use the partially voiced and relax /j/ instead of the voiced tense /y/ e.g.

Initial prevocalic position:

/ /y/əŋ/ (young) → //j/əŋ/

//y/ez/ (yes) → //j/ez/

Medial prevocalic position:

/bi/y/ənd/ (beyond) → /bi/j/ənd/

/reg/y/ulə/ (regular) → /reg/j/ulə/

The examples of the English /y/ occurring in the second element of the diphthongs /iy/, /ey/, /ay/, and /oy/, will be given later.

/w/

The English /w/ is formed by raising the back of the tongue in the direction of the soft-palate. The velum is raised to close the nasal cavity. The vocal cords are made to vibrate so that the voiced sound is heard. The lips are protruded and rounded. The English /w/ can be expressed shortly by defining it as a voiced, labio-velar, semivowel.

The English /w/ can occur in initial, medial positions and in the second element of the diphthong /aw/, /ow/ and /uw/. e.g.

Initial

Medial

/went/ (went)

/dweɪ/ (dwell)

/weɪt/ (wait)

/kwæf/ (quaff)

/wɪnɪ/ (women)

/ɪkwɪvələnt/ (equivalent)

In the second element of the diphthongs /aw/, /ow/, /uw/.

/sow/ (so)

/low/ (low)

/gow/ (go)

The English /w/ differs from the Indonesian /w/ in that.

1. The English /w/ is fully voiced while the Indonesian /w/ is partially voiced.
2. The English /w/ is produced with the protrusion of the lips while the Indonesian /w/ is not.
3. In producing the English /w/, the muscles of the mouth are tense while in producing the Indonesian /w/, the muscles of the mouth are relax.

Because of the differences above, Indonesian speakers find it difficult to produce the English /w/ correctly. They tend to use the Indonesian /w/ instead of the English /w/. e.g.

Initial prevocalic positions:

//w/ent/ (went) ———> //w/ent/

//w/eyt/ (wait) ———> //w/eyt/

Medial prevocalic positions:

/d/w/el/ (dwell) ———> /d/w/el/

/k/w/ahf/ (quaff) ———> /k/w/ahf/

The examples of the English /w/ occurring in the diphthongs /aw/, /ow/, /uw/ will be given later.

/h/

The English /h/ phoneme is a voiceless, glottal, semivowel. It is produced in the same way as that of a vowel and air is emitted through the wide open glottis. The velum is raised to close the nasal cavity. The vocal cords are not made to vibrate.

The English /h/ can occur in initial, medial positions and in the second element of the diphthong /ih/, /ah/, /uh/, /əh/, /eh/, /oh/. e.g.

Initial

Medial

/hevi/ (heavy)

/bihaynd/ (behind)

/hæbit/ (habit)

/bihowld/ (behold)

/hevn/ (heaven)

/biheyv/ (behave)

In the second element of the diphthongs /ih/, /ah/, /uh/, /ɔh/, /eh/, /ɔh/.

/dih/ (dear)

/fah/ (far)

/puh/ (poor)

The English /h/ is different phonemically from the Indonesian /h/ namely the English /h/ is treated as a semivowel while the Indonesian /h/ is a pure consonant. It is, however, worth comparing between the English and Indonesian /h/ because one of the English /h/ variants is the same as one of those of Indonesian. So Indonesian speakers have a minor difficulty with the English /h/, e.i. when it occurs in an intervocalic position, a stressed position and in the second element of the diphthongs /ih/ /ah/, /uh/, /ɔh/, /eh/, /ɔh/. e.g.

Intervocalic position:

/bi/h/aynd/ (behind) → /bi/h/aynd/

/bi/h/eyv/ (behave) → /bi/h/eyv/

Stressed position:

//h'evi/ (heavy) → //h'evi/

//h'evn/ (heavy) → //h'evn/

The examples of the English /h/ occurring in the diphthongs /ih/, /ah/, /uh/, /ɔh/, /eh/, /ɔh/, will be given later.

B. VOWELS

/i/

The English /i/ phoneme is a low high front, unrounded vowel. It is made by raising the surface of the tongue against the palate. The body of the tongue is curved and the tip is still against the lower front teeth. The Indonesian /i/ is higher and fronter than the English /i/. The danger, therefore, is that Indonesian speakers might interpret the English /i/ as the English /iy/ because the Indonesian /i/ is closer to the English /iy/ rather to the English /i/. e.g.

/bit/ (bit) —————> /biyt/

/sit/ (sit) —————> /siyt/

The English as well as the Indonesian /i/ can occur in all three positions e.g.

Initial	Medial	Final
/it/ (it)	/bil/ (bill)	/nahsti/ (nasty)
/is/ (is)	/kil/ (kill)	/bywti/ (beauty)
/il/ (ill)	/nis/ (miss)	/fiksiti/ (fixity)

When the English /i/ occurs in final position followed by another word in the same sense group, the /i/ variant is used. Indonesian speakers will use the /i^/ variant in this position. The English /i/, therefore, is difficult to recognize, when it occurs in this position. e.g.

/ðə sit/i/ əv lɒndən/ (the city of London) —————>
/ðə sit/i^/ əv lɒndən/.

/ðə bywt/i/ əv it/ (the beauty of it) —————>
/ðə bywt/i^/ əv it/.

When the /i/ phoneme occurs in final position the /i/ variant is used in English but the /i^/ variant is used in Indonesian. Indonesian speakers tend to use the /i^/ instead

of the /ɪ/ when the English /i/ occurs in final position e.g.

Final position:

/heɪv /ɪ/ (heavy) → /heɪv/ɪ/

/neɪn/ɪ/ (namely) → /neɪn/ɪ/

The English [ɪ] variant occurs in the penultimate of the termination "-ity", and in an unstressed position. Indonesian speakers might use the [i̇] or the [ɪ] in those two positions e.g.

In the penultimate of the termination "-ity".

/maɪnər /ɪ/ ti/ (minority) → /maɪnər/i̇ ti/

/kəpəs/ɪ/ ti/ (capacity) → /kəpəs/i̇ ti/

Initial, unstressed, open syllabic position:

//ɪ/lektro/ (electro) → //i̇/lektro/

// //ɪ/lekt/ (select) → //i̇/lekt/.

Medial, unstressed, open syllabic position:

/b/ɪ/keɪn/ (became) → /b/i̇/keɪn/

/b/ɪ/foʊ/ (before) → /b/i̇/foʊ/.

Initial, unstressed, closed syllabic position:

//ɪ/ksentrik/ (eccentric) → //i̇/ksentrik/

//ɪ/ʔesəəl/ (especial) → //i̇/ʔesəəl/

Medial, unstressed, closed syllabic position:

/gʊd/ɪ/əs/ (goodness) → /gʊd/i̇/əs/

/eks/ɪ/ t/ (exit) → /eks/i̇/ t/.

/e/

The English /e/ phoneme is a mid front, unrounded vowel. It is nearly the same as the English /i/ but the tongue does not rise as high as for the English /i/. The surface of the tongue is rather lower throughout and the space between the

tongue and the palate is greater than for the /ɪ/. The Indonesian /e/ is higher and fronter than the English /e/. It is closer to the English /ey/ rather than to the English /e/. The danger is that Indonesian speakers might interpret the English /e/ as the English /ey/. e.g.

/bet/ (bet) → /beyt/

/let/ (let) → /leyt/

The English /e/ can occur initially and medially but never finally e.g.

Initial	Medial	Final
/ekspənt/ (expert)	/despənt/ (despot)	-
/eksploɪt/ (exploit)	/levl/ (level)	-
/ænd/ (and)	/pen/ (pen)	-

The English principle member /e/ occurs in any position except before the dark /ɪ/. The Indonesian principle member /e/ occurs in an open syllable. The English /e/ occurring in any position, except before the dark /ɪ/, of an open syllable, therefore, is troublesome for Indonesian speakers. They tend to use the /e/ variant instead of the /e/ e.g.

Initial position of open syllables.

//e/kwəbl/ (equable) → //e'/kwəbl/

//e/gɔtɪzəm/ (egotism) → //e'/gɔtɪzəm/

Medial position of open syllables:

/b/e/rit/ (heret) → /b/e'/rit/

/n/e/dɪʃɪnəl/ (dedicinal) → /n/e'/dɪʃɪnəl/

The English /ɛ/ variant occurs before the dark /ɪ/ as in /f/e/lt/, /b/e/ɪ/ and /t/ɛ/ɪ/. Since the Indonesian /e/ occurs in a closed syllable position, the English /e/ occurring before the dark /ɪ/ does not cause any trouble.

/æ/.

The English /æ/ phoneme is a mid low, front, unrounded or neutral vowel. It is made by placing the tip of the tongue some-

what retracted from the lower teeth. The vocal cords are made to vibrate and the nasal cavity is closed. This phoneme does not occur in Indonesian. It, therefore, is a sound problem for Indonesian speakers learning English. They tend to substitute the /e/ for it. e.g.

/bəd/ (bad) → /bed/

/æd/ (sad) → /sed/

The English /e/ phoneme can occur in initial and medial positions but never in a final position. e.g.

Initial	Medial	Final
/æd/ (add)	/blæk/ (black)	-
/ækt/ (act)	/klæp/ (clap)	-
/æs/ (ass)	/næn/ (nan)	-

The English /æ/ phoneme has two allophones namely the [æ] occurring in any position, except before the dark /ɪ/, as in //æ/pɪ/ (apple), //æ/kənt/ (accent) and //æ/ŋgə/ (anger), and the lower variant [æ^v] occurring before the dark /ɪ/ as in /b[æ^v]/lkəni/ (balcony), /k[æ^v]/ɔ:ri/ (calory), and /f[æ^v]/ləw/ (fallow). Since this phoneme does not exist in Indonesian, Indonesian speakers might use the /e/ instead of the [æ] or the [æ^v] e.g.

Initial positions:

//æ/dmərəl/ (admiral) → //e/dmərəl/

//æ/dikwɪt/ (adequate) → //e/dikwɪt/

Medial positions:

/l[æ]/d/ (lad) → /l[e]/d/

/s[æ]/d/ (sad) → /s[e]/d/

Initial before the dark /ɪ/

//[æ^v]/lkəhol/ (alcohol) → //[e]/lk h l/

//[æ^v]/lbətros/ (albatros) → //[e]/lbətros/.

Medial before the dark /ɪ/

/b/æ'/lɪd/ (balled) → /b/ɛ/lɪd/

/k/æ'/ləw/ (callow) → /k/ɛ/ləw/.

/ə/.

The English /ə/ phoneme is a low, central, unrounded or neutral vowel. It is made by raising the blade of the tongue towards the soft palate. The tip of the tongue is placed a little bit apart from the lower front teeth while the velum is raised to close the nasal cavity. The Indonesian /ə/ is the same as the English /ə/ in its articulation. So far the English /ə/ is not a problem for Indonesian speakers.

The English as well as the Indonesian /ə/ can occur in all three positions e.g.

English:

Initial	Medial	Final
/ə'lɒŋ/ (along)	/bətəri/ (battery)	/tiycə/ (teacher)
/əbaʊt/ (about)	/sæləri/ (salary)	/peypə/ (paper)
/əgeɪn/ (again)	/sæləd/ (salad)	/pɪkə/ (picture)

The English /ə/ phoneme has two subsidiary members namely the lower /əʊ/ occurring in an unstressed final position and the high low /ʌ/ occurring in a stressed position. These two variants are absent in Indonesian. So the English /ə/ in these two positions causes a difficulty for Indonesian speakers. e.g.

Final, unstressed position:

/cainəʊ/ (cane) → /cainə/.

//lətəʊ/ (letter) → /lətə/.

Initial stressed position:

//ʌpraɪz/ (uprise) → //əpraɪz/

//ʌntrʊθ/ (untruth) → //əntrʊθ/

Medial stressed position:

/bl/ʌ/d/ (blood) → /bl/a/d/

/k/ʌ/t/ (cut) → /k/a/t/.

/a/

The English /a/ phoneme is a low low, central, unrounded or neutral vowel. It is made like the English /ə/ but the tongue does not rise as high as for the English /ə/. The surface of the tongue is rather lower throughout and the space between the tongue and the palate is greater than for the /ə/. The Indonesian /a/ is the same as the English /a/ in its articulation.

The English /a/ phoneme only occurs in the first element of the diphthong /ay/, /aw/ and /ah/ as in:

/ay/ : /fayn/ (fine)

/aw/ : /baʊt/ (about)

/ah/ : /fah/ (far)

Since the Indonesian /a/ is the same as that of English and it can occur in any position, the English /a/ is easy to recognize. This phoneme will be discussed in more detail when the diphthongs are discussed.

/ʊ/

The English /ʊ/ phoneme is a low high, back, rounded vowel. It is made by raising the back of the tongue towards the velum and the velum closes the nasal cavity. The lips are rounded. The Indonesian /ʊ/ is higher and backer than the English /u/. It is closer to the English /uw/ rather than to the English /u/. The danger, therefore, is Indonesian speakers might identify the English /ʊ/ as the English /uw/ as in

/fʊl/ (full) → /fuwl/

/pʊl/ (pull) → /puwl/.

The English as well as the Indonesian /u/ can occur in initial, medial and final positions e.g.

Initial	Medial	Final
/ʊnɪʃn/ (union)	/pʊt/ (put)	/tu/ (to)
/ʊh/ (ugh)	/gʊd/ (good)	/dʊ/ (do)
/ʊnləʊt/ (unlout)	/wʊd/ (would)	/ju/ (you)

The Indonesian has three allophones namely the high high /u̟/ occurring in an open syllable, the low high /u/ occurring in a syllable final followed by a closed syllable in which /i/ or /u/ occurs and the lower low /u̠/ occurring in a closed syllable. The English /u/ has only one allophone i.e. the /u/. Indonesian speakers, therefore, have the tendency to use the /u̟/ instead of the /u/ in an open syllable and the /u̠/ instead of the /u/ in a closed syllable. e.g.

In an open syllable:

/bʊ/keɪ/ (bouquet) → /bʊ̟/keɪ/
 /kʏnɪʃn/ (cynical) → /kʏnɪʃn̟/

In a closed syllable:

/bʊ/ (book) → /bʊ̠/
 /lʊ/ (look) → /lʊ̠/.

/o/

The English /o/ phoneme is a mid, back, rounded vowel. It is made like the English /u/ but the position of the tongue is lower than for the /u/. The Indonesian /o/ is higher and backer than the English /o/. It is closer to the English /ɔ/ rather than to the English /o/. The danger is Indonesian speakers might use the /ɔ/ instead of the /o/. Since the English /o/ only occurs in the first element of the English diphthong /ɔu/, it does not cause any difficulty for Indonesian speakers. This

phoneme will be discussed in more detail in the discussion of the English diphthongs.

/ɔ/

The English /ɔ/ phoneme is a mid low, back, rounded vowel. It is made like the English /o/ but the position of the tongue is lower than for the /o/. In Indonesian the [ɔ] sound is not an independent phoneme. It is an allophone of the Indonesian /o/ which occurs in a closed syllable. Since the English /ɔ/ phoneme is only found in a closed syllable, Indonesian speakers do not have any difficulty with the English /ɔ/.

Both the English /ɔ/ and the Indonesian [ɔ] can occur in initial and medial positions but never in final position. e.g.

English:

Initial	Medial	Final
/ɔfə/ (offer)	/bɔdi/ (body)	-
/ɔstrɪk/ (ostrich)	/kɔnflɪkt/ (conflict)	-
/ɔpərə/ (opera)	/pɔplin/ (poplin)	-

C. DIPHTHONGS.

/iy/

The English /iy/ phoneme is a diphthong starting from the English /i/ position followed by the high front off-glide /ɪ/. The English /iy/ phoneme can occur in all three positions. e.g.

Initial	Medial	Final
/iyt/ (eat)	/biyt/ (beat)	/siy/ (see)
/iyst/ (east)	/siyd/ (seed)	/biy/ (bee)
/iyl/ (eal)	/fiyd/ (feed)	/tiy/ (tea)

The Indonesian does not have the diphthongal /iy/ phoneme but the Indonesian /i/ is quite close to the English /iy/ in

its quality. The only difference is that the English /ɪy/ is a diphthong while the Indonesian /i/ is a pure vowel. Therefore students of Indonesia tend not to make the glide.

e.g.

Initial position:

/ɪyt/ or //i/ t/ (eat) → /it/ or //i/ t/

/ɪyst/ or //i/ st/ (east) → /ist/ or //i/ st/.

Medial position:

/biyt/ or /b/ i / t/ (beat) → /bit/ or /b/ i / t/

/siyd/ or /s/ i / d/ (seed) → /sid/ or /s/ i / d/.

Final position:

/siy/ or /s/ i // (see) → /si/ or /s/ i ^//

/biy/ or /b/ i // (bee) → /bi/ or /b/ i ^//

/ey/

The English /ey/ phoneme is a diphthong starting from the English /e/ position followed by the high front off-glide /ɪ/. The English /ey/ can occur in initial medial and final positions as in:

Initial	Medial	Final
/eyn/ (ain)	/meyn/ (came)	/sey/ (say)
/eyd/ (aid)	/deyt/ (date)	/dey/ (day)
/eyl/ (ail)	/meyd/ (made)	/mey/ (may)

The diphthongal /eɪ/ sound does not occur in Indonesian. The nearest Indonesian phoneme to the English /ey/ or /eɪ/ is the Indonesian /e/. The difference between the English /ey/ and the Indonesian /e/ is that the English /ey/ is a diphthong while the Indonesian /e/ is a pure vowel.

Indonesian people, therefore, have the tendency to use the Indonesian /e/ instead of the English /ey/. e.g.

Initial position:

/eɪn/ or /[[eɪ]/n/ (ain) → /en/ or /[[e]/n/

/eɪd/ or /[[eɪ]/d/ (aid) → /ed/ or /[[e]/d/

Medial position:

/keɪz/ or /k[[eɪ]/z/ (kaze) → /ken/ or /k[[e]/z/

/deɪt/ or /d[[eɪ]/t/ (date) → /det/ or /d[[e]/t/

Final position:

/seɪ/ or /s[[eɪ]]/ (say) → /se/ or /s[[e]]/

/deɪ/ or /d[[eɪ]]/ (day) → /de/ or /d[[e]]/

/əɪ/

The English /əɪ/ phoneme is a diphthong starting from the English /e/ position followed by the high-front, off-glide /ɪ/. It can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/aɪs/ (ice)	/paɪp/ (pipe)	/baɪ/ (buy)
/aɪdɪə/ (idea)	/raɪz/ (rise)	/laɪ/ (lie)
/aɪlənd/ (island)	/laɪf/ (life)	/naɪ/ (ny)

The English /əɪ/ is nearly the same as the Indonesian diphthong /ai/. The difference is that the English /əɪ/ is a glide starting from one vowel position followed by the high front semivowel while the Indonesian diphthong /ai/ consists of the Indonesian /a/ followed by the less prominent /i/. The difficulty that can be expected for Indonesian speakers is that they may use the Indonesian diphthong /ai/ instead of the English /əɪ/ e.g.

Final position:

/baɪ/ or /b[[aɪ]]/ (buy) → /bai/ or /b[[a]]/

/naɪ/ or /n[[aɪ]]/ (ny) → /nai/ or /n[[a]]/

Since the Indonesian diphthong /ai/ does not occur in initial and medial positions, they will use the vowel cluster /ai/ in which the first and the second elements have the same prominence for the English diphthong /ay/ as in:

Initial position:

/ays/ or /æ/s/ (ice) → /ais/ or /ai/s/

/aydi/ or /æ/di/ (idea) → /aidi/ or /ai/di/

Medial position:

/payp/ or /p/æ/p/ (pipe) → /paip/ or /p/ai/p/

/rayz/ or /r/æ/z/ (raise) → /raiz/ or /r/ai/z/

/ɔy/

The English /ɔy/ phoneme is a diphthong starting from the English /ɔ/ position followed by the high-front, off-glide /e/. It can occur in initial, medial and final positions e.g.

Initial	Medial	Final
/ɔyl/ (oil)	/sɔyl/ (soil)	/bɔy/ (boy)
/ɔyntmənt/ (ointment)	/tɔyl/ (toil)	/tɔy/ (toy)
/ɔystɔ/ (oyster)	/bɔyl/ (boil)	/jɔy/ (joy)

The English /ɔy/ is nearly the same as the Indonesian diphthong /ai/. The difference between them is that the English /ɔy/ is a glide starting from the English /ɔ/ variant, followed by the high-front semivowel /e/ while the Indonesian diphthong /ai/ consists of the Indonesian /ɔ/ variant followed by the less prominent /i/. Indonesian speakers, therefore, have the tendency to use the Indonesian /ai/ instead of the English /ɔy/ e.g.

Final positions:

/bɔy/ or /bɔg/ (boy) → /boi/ or /bɔi/

/tɔy/ or /tɔe/ (toy) → /toi/ or /tɔi/

In initial and medial positions, Indonesian speakers tend to use the vowel cluster /oi/ in which the first element is the same prominent as the second, instead of the English /y/. e.g.

Initial position:

/ɔyl/ or /ɔe/ (oil) → /oi/ or /ɔi/

/ɔystə/ or /ɔe/ (oyster) → /oistə/ or /ɔi/

Medial position:

/sɔyl/ or /sɔe/ (soil) → /soil/ or /sɔi/

/tɔyl/ or /tɔe/ (toil) → /toil/ or /tɔi/

/ih/.

The English /ih/ phoneme is a diphthong starting from the English /i/ position followed by the nonretroflex off-glide /h/. It can occur in all three positions e.g.

Initial	Medial	Final
/ih/ (ear)	/biɦd/ (beard)	/diɦ/ (dear)
/ihraɦn/ (Iran)	/diɦri/ (deary)	/biɦ/ (bier)
/ihrə/ (era)	/niɦli/ (merely)	/hiɦ/ (here)

The diphthongal /i:/ sound does not occur in Indonesian. The nearest Indonesian phoneme to the English /ih/ is the Indonesian vowel cluster /ia/. The difference between them is that the English /ih/ is a diphthong while the Indonesian /ia/ is a vowel cluster in which the first element is the same prominent as the second one. The danger, therefore, Indonesian speakers tend to use the Indonesian /ia/ instead of the English /ih/ e.g.

Initial position:

/ɪh/ or //iː// (ear) → /iə/ or //i'ə//

/ɪhrə/ or //iː/rə/ (era) → /iərə/ or //i'ə/rə/.

Medial position:

/biɦd/ or /bɪːd/ (beard) → /biəd/ or /bɪ'ə/d/

/niɦli/ or /nɪːli/ (nearly) → /niəli/ or /nɪ'ə/li/

Final position:

/diɦ/ or /dɪː/ (dear) → /diə/ or /dɪ'ə/

/biɦ/ or /bɪː/ (bier) → /biə/ or /bɪ'ə/.

/eh/

The English /eh/ phoneme is a diphthong starting from the English /ɛ/ position followed by the nonretroflex off-glide /ə/. It can occur in initial, medial and final positions.
e.g.

Initial	Medial	Final
/ehpɔht/ (airport)	/tehɦut/ (barefoot)	/beh/ (bear)
/ehliə/ (airless)	/kehɦful/ (careful)	/teh/ (tear)
/ehɦeɦl/ (airmail)	/deɦɦɦɦ/ (daring)	/deɦ/ (dare)

The diphthongal /ɛə/ sound does not exist in Indonesian. It is nearly the same as the Indonesian vowel cluster /eə/. The difference between them is that the English /eh/ is a diphthong while the Indonesian /eə/ is a vowel cluster in which the first and the second elements have the same prominence. The trouble will be that Indonesian speakers substitute the vowel cluster /eə/ for the diphthong /eh/ as in

Initial position:

/ehpɔht/ or //ɛə/pɔht/ (airport) → /eəpɔht/ or //e'ə/pɔht/

/ehliə/ or //ɛə/liə/ (airless) → /eəliə/ or //e'ə/liə/

Medial position:

/bəʃʊt/ or /b[ɛə]/ʃʊt/ (barefoot) → /beəʃʊt/ or /b[ə̃ə]/ʃʊt/
 /kəʃʊl/ or /k[ɛə]/ʃʊl/ (careful) → /keəʃʊl/ or /k[ə̃ə]/ʃʊl/

Final position:

/beɪ/ or /b[ɛə]// (bear) → /beə/ or /b[ə̃ə]//
 /teɪ/ or /t[ɛə]// (tear) → /teə/ or /t[ə̃ə]//.

/əʊ/.

The English /əʊ/ phoneme is a diphthong starting from the English /ə/ position followed by the nonretroflex off-glide /ə̃/. It can occur initially, medially and finally. e.g.

Initial	Medial	Final
/əʊ/ (err)	/bəʊd/ (bird)	/səʊ/ (sir)
/əʊn/ (ermine)	/dəʊt/ (dirt)	/fəʊ/ (fur)
/əʊʃ/ (urge)	/skəʊt/ (skirt)	/həʊ/ (her)

Indonesian does not have the diphthongal /ə̃ə̃/ sound. The Indonesian sound nearest to it is the Indonesian /ə̃/.

The difference between the English /ə̃ə̃/ and the Indonesian /ə̃/ is that the English /ə̃ə̃/ is a diphthong while the Indonesian /ə̃/ is a pure vowel. So the English /ə̃ə̃/ may be misinterpreted as a pure vowel identical to /ə̃/. e.g.

Initial position:

/əʊ/ or /[ə̃ə̃]// (err) → /ə̃/ or /[ə̃]//
 /əʊʃ/ or /[ə̃ə̃]ʃ/ (urge) → /ə̃ʃ/ or /[ə̃]ʃ/

Medial position:

/bəʊd/ or /b[ə̃ə̃]d/ (bird) → /bə̃d/ or /b[ə̃]d/
 /dəʊt/ or /d[ə̃ə̃]t/ (dirt) → /də̃t/ or /d[ə̃]t/

Final position:

/səʊ/ or /s[ə̃ə̃]// (sir) → /sə̃/ or /s[ə̃]//
 /fəʊ/ or /f[ə̃ə̃]// (fur) → /fə̃/ or /f[ə̃]//.

/ah/

The English /ah/ phoneme is diphthong starting from the English /a/ position followed by the non retroflex off-glide /h/. It can occur in all three positions. e.g.

Initial	Medial	Final
/ahftə/(after)	/fahmə/(farmer)	/fah/ (far)
/ahni/(army)	/gahdn/(garden)	/bah/(bar)
/ahstɪst/(artist)	/lahst/(last)	/kah/(car)

In Indonesian the diphthongal [aʰ] sound is non occurrence. The Indonesian sound nearest to the English /ah/ is the Indonesian /a/. The difference between the English /ah/ and the Indonesian /a/ is that the English /ah/ is a diphthong while the Indonesian /a/ is a pure vowel. The danger, therefore, is that Indonesian speakers will identify the English /ah/ as a pure vowel identical to /a/. e.g.

Initial positions:

/ahftə/ or /fahftə/(after) → /fah/ftə/ or /aftə/
 /ahni/ or /fahni/ (army) → /fah/ni/ or /ani/

Medial positions:

/fahmə/ or /fahmə/(farmer) → /fah/ma/ or /fama/
 /gahdn/ or /gahdn/(garden) → /gah/da/ or /gadm/

Final positions:

/fah/ or /fah/ (far) → /fah/ or /fa/
 /bah/ or /bah/ (bar) → /bah/ or /ba/

/uh/.

The English /uh/ phoneme is a diphthong starting from the English /u/ position followed by the non-retroflex off-glide /h/. It can occur in initial, medial and final positions. e.g.

Initial	Medial	Final
/uhdu/ (Urdu)	/juhl/ (duel)	/pyuh/ (pure)
/ - / (-)	/tuhni/ (tourney)	/puh/ (poor)
/ - / (-)	/tuhrist/ (tourist)	/kyuh/ (cure)

We do not find the /uh/ phoneme in Indonesian. The Indonesian phoneme that is near to the English is the Indonesian vowel cluster /uə/. It differs from the English /uh/ in that the English /uh/ is a diphthong while the Indonesian /uə/ is a sequence of two vowels. Indonesian speakers, therefore, have the tendency to interpret the English /uh/ as a sequence of the Indonesian /uə/. e.g.

Initial position:

/uhdu/ or //u^hdu/ (Urdu) → /uədu/ or //u^ədu/

Medial position:

/juhl/ or //j^huyl/ (duel) → /juəl/ or //j^əuəl/

/tuhni/ or //t^huyni/ (tourney) → /tuəni/ or //t^əuəni/

Final position:

/pyuh/ or //py^hu/ (pure) → /pyuə/ or //py^əuə/

/puh/ or //p^hu/ (poor) → /puə/ or //p^əuə/

/ɔh/

The English /ɔh/ phoneme is a diphthong starting from the English /ɔ/ position followed by the non-retroflex off-glide /h/. It may occur in initial, medial and final positions. as in:

Initial	Medial	Final
/ɔh/ (ore)	/kɔhmə/ (corner)	/pɔh/ (pore)
/ɔhdə/ (order)	/bɔhdə/ (border)	/fɔh/ (for)
/ɔhəl/ (oral)	/nɔhməl/ (normal)	/dɔh/ (door)

The English /ɔh/ phoneme does not occur in Indonesian.

Indonesian speakers tend to identify it as the Indonesian phoneme that has nearly the same in quality. It is the Indonesian sequence of vowel /ə/. It differs from the English /ɔh/ in that it is a vowel cluster while the English /ɔh/ is a diphthong. Indonesian speakers, therefore, tend to substitute the Indonesian /ə/ for the English /ɔh/. e.g.

Initial position:

/ɔhiə/ or //ɔ:/d/ (order) → /ədiə/ or //ə:/də/
 /ɔhrəl/ or //ɔ:/rəl/ (oral) → /ərəl/ or //ə:/rəl/.

Medial position:

/kɔhna/ or /k/ɔ:/nə/ (corner) → /kənə/ or /k/ə:/nə/
 /bɔhda/ or /b/ɔ:/də/ (border) → /bədə/ or /b/ə:/də/

Final position:

/pɔh/ or /p/ɔ:// (pore) → /pə/ or /p/ə://
 /fɔh/ or /f/ɔ:// (fore) → /fə/ or /f/ə:/.

/ə/.

The English /əw/ phoneme is a diphthong starting from the English /ə/ position followed by the high back off-glide /ɔ/. It can occur initially, medially and finally. e.g.

Initial		Medial		Final
/aʊt/	(out)	/baʊt/	(about)	/kaʊ/ (cow)
/aʊns/	(ounce)	/daʊt/	(doubt)	/baʊ/ (bow)
/aʊh/	(ouch)	/daʊn/	(down)	/raʊ/ (row)

The English /əw/ is nearly the same as the Indonesian /ə/. So Indonesian speakers have the tendency to interpret the English /əw/ as the Indonesian /ə/. The difference between the English /əw/ and the Indonesian /ə/ is that the English /əw/ is a diphthong starting from the English /ə/.

followed by the high back- off-glide /ɔ/ while the Indonesian /au/ is also a diphthong in which the first element is more prominent than the second one.

Examples:

Final position:

/kau/ or /k/əʊ/ (cow) → /kau/ or /k/aʰu/

/bau/ or /b/əʊ/ (bow) → /bau/ or /b/aʰu/

Since the Indonesian /au/ diphthong does not occur in a closed syllable, Indonesian speakers may use the Indonesian vowel cluster /au/ in which the first and the second elements have the same prominence, instead of the English /au/ diphthong. e.g.

Initial closed syllable.

/aut/ or /ʔəʊt/ (out) → /aut/ or /ʔ/aʰuʔt/

/aʊc/ or /ʔəʊc/ (ouch) → /aʊc/ or /ʔ/aʰuʔc/.

Medial closed syllable.

/əbaʊt/ or /b/əʊt/ (about) → /əbaʊt/ or /əb/aʰuʔt/

/daʊt/ or /d/əʊt/ (doubt) → /daʊt/ or /d/aʰuʔt/.

/u/.

The English /u/ phoneme is a diphthong starting from the English /y/ position followed by the high back off-glide /ɔ/. This phoneme can occur in all three positions. e.g.

Initial	Medial	Final
/uʊz/ (ooze)	/puʊl/ (pool)	/tuʊ/ (too)
/ - / (-)	/buʊn/ (boon)	/wuʊ/ (woo)
/ - / (-)	/luʊz/ (loose)	/təbuʊ/ (taboo)

The diphthongal /u/ phoneme is non-occurrence in Indonesian. The nearest Indonesian phoneme to the English /u/

phoneme is the Indonesian /u/. So Indonesian speakers will tend to replace the Indonesian /u/ for the English /ʊ/. The difference between the English /ʊ/ and the Indonesian /u/ is that the English /ʊ/ is a diphthong while the Indonesian /u/ is a pure vowel: e.g.

Initial position:

/ʊz/ or //ʊz/ (ooze) → /uz/ or //u/ z/

Medial position:

/puʌl/ or /p/ʊl/ (pool) → /puʌ/ or /p/u/ l/

/luʌs/ or /l/ʊs/ (loose) → /luʌ/ or /l/u/ s/

Final position:

/tuʌ/ or /t/ʊ/ (too) → /tuʌ/ or /t/u/ //

/vuʌ/ or /v/ʊ/ (voo) → /vuʌ/ or /v/u/ //

/oʊ/

The English /oʊ/ phoneme is a diphthong starting from the English /o/ position followed by the high back off-glide /ʊ/.

It can occur in initial, medial and final positions as in

Initial	Medial	Final
/oʊn/ (own)	/hoʊn/ (hone)	/loʊ/ (low)
/oʊbeɪ/ (obey)	/boʊt/ (boat)	/sɔːroʊ/ (sorrow)
/oʊpən/ (open)	/koʊd/ (code)	/soʊ/ (so)

We do not have the diphthongal /oʊ/ phoneme in Indonesian. The nearest Indonesian phoneme to the English /oʊ/ phoneme is the Indonesian /o/. Indonesian speakers, therefore, will interpret the Indonesian /o/ for the English /oʊ/. This is dangerous because the English /oʊ/ and the Indonesian /o/ are different one from the other. The English /oʊ/ is a diphthong while the Indonesian /o/ is a pure vowel. e.g.

Initial position:

/əbey/ or //əy/bey/(obey) → /əbey/ or //ə'y/bey/
 /əpən/ or //əy/pən/(open) → /əpən/ or //ə'y/pən/

Medial position:

/hənz/ or /h'əy/n/(hence) → /hənz/ or /h'əy/n/
 /bəst/ or /b'əy/t/(best) → /bəst/ or /b'əy/t/

Final position:

/ləw/ or /l'əy/(low) → /ləw/ or /l'əy/
 /səw/ or /s'əy/(sow) → /səw/ or /s'əy/

D. CONSONANT CLUSTERS.

Since initial and final consonant clusters do not occur in Indonesian (if they do, they are all of foreign origin), the writer will only list the sequences in English which cause problems for Indonesian speakers learning English. Each type of sequence problems will be marked with the sign a, b, c, etc.

Type a.

Position I

II

p-

l- (play)
 y- (pny)
 r- (pray)

t-

s- (tses)
 r- (tray)
 w- (tweed)

k-

l- (clay)
 y- (cute)
 r- (crew)
 w- (quick)



Position	I	II
		l- (blue)
	b-	y- (bugle)
		r- (brown)
		r- (drive)
	d-	v- (dwelt)
		l- (glow)
	g-	y- (gules)
		r- (grass)
		l- (flee)
	f-	y- (few)
		r- (fry)
		p- (spell)
		t- (stand)
		k- (skin)
		s- (sphere)
	s-	l- (slide)
		n- (snell)
		n- (snare)
		y- (sue)
		v- (sweet)
	a-	r- (shrew)
		y- (hus)
	h-	v- (which)
	l-	y- (lute)
	u-	y- (music)
	n-	y- (new)

In the list of the consonant clusters mentioned above Indonesian speakers have the tendency to insert the /ə/ between the phonemes in the positions I and II.

Examples:

/pley/ —————> /pəley/
 /prey/ // — /pərey/

Type b.

Position:	I	II	III	
		p-	l-	(split)
s-		p-	y-	(spew)
		p-	r-	(spread)
s-		t-	r-	(strew)
		t-	y-	(student)
		k-	y-	(shower)
s-		k-	r-	(scratch)
		k-	v-	(square)
s-		n-	y-	(snow)

We can expect that Indonesian speakers will insert the /ə/ between the phonemes in the positions I and II, and, II and III.

Examples:

/split/ —————> /səplit/
 /spred/ / —————> /səpred/

Type c.

Position :	I	II	
θ -		r-	(thread)
θ -		v-	(thwart)
v-		y-	(view)

It can be expected that Indonesian speakers tend to replace the /θ/ by the /s/ or /t/ or /f/ and the /v/ by the /w/ or /f/ or /p/, and to insert the /ə/ between the phonemes in the positions I and II.

Examples:

/θ red/ → /æred/ or /tared/ or /færed/
 /vyum/ → /wəyum/ or /fəyum/ or /pəyum/

Type d.

Position: I

II

-p

-t (script)

-s (lapse)

-k

-t (tact)

-s (mix)

-f

-t (tuft)

-s

-p (wasp)

-t (mist)

-k (risk)

-l

-p (gulp)

-t (bolt)

-k (milk)

-b (bulb)

-d (weld)

-f (self)

-s (false)

-z (balls)

-n (eln)

-n (kilo)

-n

-p (pump)

-b (lamb)

-f (nymph)

-z (Thames)

-n

-t (hint)

-d (bend)

-s (tense)

-z (lens)

Position: I

II

-n

-k

(rank)

In this type of consonant clusters, Indonesian speakers have the tendency to insert the /ə/ between the phonemes in the positions I and II, or to omit the phoneme in the position II.

Examples:

/nika/ → /nika/ or /nik/

/band/ → /benəd/ or /ben/

Type e.

Position	I	II	III	
	-k	-s	-t	(text)
	-d	-s	-t	(midst)
		-k	-t	(mulet)
	-l	-f	-t	(delft)
		-s	-t	(whilst)
		-p	-t	(tempt)
	-n	-p	-s	(glimpse)
		-k	-t	(instinct)
	-n	-s	-t	(amongst)

In the type e, Indonesian speakers tend to insert the /ə/ between the phonemes in the positions I and II, II and III, or to omit one or two last phonemes.

Examples:

/tekst/ → /tekəsət/ or /tekəs/ or /tek/

/tempt/ → /tenəpət/ or /tenəp/ or /ten/

Type f.

Position I	II	
-p	-θ	(depth)
-t	-θ	(eighth)
-d	-θ	(width)
-f	-θ	(fifth)
-n	-θ	(war ^u th)
-l	- ^v c	(belch)
	- ^y j	(bulge)
	-θ	(health)
	-v	(valve)
-n	- ^v c	(lunch)
	- ^y j	(change)
	-θ	(tenth)

Indonesian speakers can be expected to use the /t/, /s/ or /f/ instead of the /θ/ and to insert the /ə/ between the phonemes in the positions I and II, or to omit the last phoneme.

Examples:

/depθ/ → /depət/ or /depəs/ or /depəf/ or /dep/
 /fifθ/ → /fifət/ or /fifəs/ or /fifəf/ or /fif/

Type g.

Position: I	II	III	
-k	-s	-θ	(sixth)
-l	-f	-θ	(twelfth)
-n	-d	-θ	(thousandth)
-n	-k	-θ	(length)

In this type of consonant clusters we can expect that

Indonesian speakers will replace the /t/, /a/ or /f/ for the /θ/, and to insert the /ə/ between the phonemes in positions I and II, II and III, or, to omit one or last two phonemes.

Examples:

/siksθ/ → /siksət/ or /siksəs/ or /siksəf/ or
/siks/ or /sik/

/lenkθ/ → /lenəkət/ or /lenəkəs/ or /lenəkəf/ or
/lenək/ or /len/

CHAPTER IV

COMMON ERRORS

We have given a contrastive analysis of English and Indonesian segmental phonemes and we have known that some phonemes of the two languages are alike and some others are different. The difference is either in their place and manner of articulation or in their appearance of their allophonic features or in their distribution. It is worth stating here that we may not suppose that all sounds which appear to be contrastive sounds will create the same amount of difficulty for Indonesians learning English. Some sounds are considered very hard to study and some others are not so.

The following phonemes are considered to be the great problems for Indonesian speakers learning segmental phonemes of English.

1. The English sounds absent in Indonesian

a. consonants : /θ, ð, v, z/

b. vowels : /æ/

c. diphthongs : /iɪ, eɪ, ɪh, eh, ah, uh, əh, ɔh, ow, ɔw/.

d. clusters : all consonant clusters.

As a matter of fact it is very difficult to say which sounds Indonesian speakers may substitute for the sounds above, but nearest equivalents are:

a. /θ/ → /s/, /t/ or /tʃ/

/ð/ → /z/ or /d/

/v/ → /f/ or /u/

/z/ → /s/, /ʃ/ or /j/

b. /æ/ → /e/

c. /ɪy/ → /ɪ/

/ey/ → /e/

/ih/ → /ɪ/

/eh/ → /eə/

/ah/ → /a/

/uh/ → /uə/

/ɔh/ → /oə/

/əh/ → /ə/

/ow/ → /o/

/uw/ → /u/

d. Indonesian speakers may insert the /ə/ in any initial and final sequences of consonants and omit one or two last sounds of a final sequence of consonants.

2. Sounds occur in English and Indonesian but different in quality.

a. vowels : /ɪ, e, u, ə, ɔ/ x)

b. consonants : 1. aspiration
2. voicing
3. lip - protrusion
4. lip - rounding
5. /t/, /h/

c. diphthongs : /əy, ɔy, əw/

x). Since the English /ə/ only occurs in the diphthong /əw/ the English /ə/ is not a problem. We have the /ɔ/ variant occurring in the closed syllable in Indonesian. Because of that the English /ɔ/ only occurs in the closed syllable, it is not troublesome for Indonesian speakers to identify the English /ɔ/.

ad. a. The Indonesian /i, e, u, o/ are higher than the English /e, e, u, o/. They are closer to the English /iy, oy, uw, ow/ rather than to the English /i, e, u, o/. Consequently Indonesian speakers find difficult to differentiate:

The English: /i/ and /iy/ as in /bit/ - /biyt/

/sit/ - /siyt/

/rit/ - /riyt/

/e/ and /ey/ as in /get/ - /geyt/

/net/ - /neyt/

/let/ - /leyt/

/u/ and /uw/ as in /put/ - /puwt/

/lut/ - /luwt/

/fut/ - /fuwt/

ad. b. 1^o. aspiration

Aspiration is a puff of air accompanying the production of the English voiceless plosives and affricate. It occurs in a stressed position. In Indonesian aspiration never occurs. It, therefore, takes constant practices for Indonesian speakers to pronounce correctly the English voiceless plosives and affricate occurring in stressed positions.

2^o. Voicing.

The English voiced consonants are produced with full voicing but the Indonesian voiced consonants are not. Consequently the distinction between the English:

/bɪk/ - /bɪg/

/bɪt/ - /bɪd/

/pɪg/ - /bɪg/

is difficult for Indonesian speakers to acquire.

3. Lip - protrusion

The difference between the English and Indonesian /č, ĵ, š and r/ is that the English /č, ĵ, š, and r/ are produced with the protrusion of the lips while the Indonesian /č, ĵ, š and r/ are not. Thus the production of the English /č, ĵ, š and r/ is a problem for Indonesian speakers.

4. Lip - rounding.

The English /w/ is pronounced with lip - rounding while the Indonesian /w/ is not. Unless Indonesian speakers get drill in pronouncing the English /w/, they never pronounce it correctly.

5. The English /t/ has an alveolar place of articulation while the Indonesian /t/ has a dental place of articulation. Therefore Indonesian speakers tend to dentalize the English /t/, occurring in any position.

The English /h/ is a semivowel and it occurs in the second element of some diphthongs in English. The Indonesian /h/ is a pure consonant and it never occurs in the diphthongs. Therefore the English /h/ occurring in the diphthongs is a problem.

ad c. The English /ay, ɔy, aw/ differ from the Indonesian /ai, oi, au/ in that the English /ay, ɔy, aw/ consist of vowel and semivowel while the Indonesian /ai, oi, au/ consist of vowel and another vowel which the first element is more prominent than the second one. Therefore the English /ay, ɔy, aw/ are difficult for Indonesian speakers.

By knowing the common errors made by Indonesian speakers learning English, we may have special attention to the trouble spots so that we may overcome them more easily.

CHAPTER V

TESTING

A. RECOGNITION TESTS.

In comparing the English and Indonesian segmental phonemes, we can find, theoretically, some causes of difficulties for Indonesian speakers learning English segmental phonemes. This theory of finding some causes of difficulties should be tested to see whether the result is true or not. For this purpose, therefore, the writer gave some tests to some groups of students of the S.P.G.C_{II} (Teachers Training Junior High School) who had learned English as a written language for 3 years. Each group of students consisted of 20 boys and girls. The writer gave them only some tests on recognition. For this test he only tested the English vowels which do not occur in Indonesian.

His method was as follows.

To test the English /e/ the writer gave 20 items of three words, each item consisting of at least one word with an /e/. The other words had the same consonants but their vowels or diphthongs were those of the following vowels or diphthongs /i/, ɪ, ey, æ/. e.g.

	a		b		e
1	bit	-	bet	-	bet
2	let	-	late	-	lit
3	bed	-	bed	-	bed
4	said	-	said	-	said
5	get	-	get	-	get

	a	b	c
6	meet	- met	- nit
7	mess	- mess	- miss
8	lest	- lest	- list
9	fill	- fell	- fell
10	bait	- bat	- bit

The students had to write down which of the 9 words were the same e.g. ab, ac, bc, abc. If no words were the same, then they would write o.

The test would show if the students could hear the difference between the /e/ and the other vowels or diphthongs given. If the result of a test is given as: mistake: 35%, this means that in 35 out of 100 cases the distinction was not heard. What was in actual fact heard is not reported in this test.

The result of the tests on recognition

1. /i/ compared with the /iy, e/
mistake : 15%
- 2 /e/ compared with the /iy, i, ey, x/
mistake 35%
- 3 /æ/ compared with the /e/
mistake 50%
- 4 /u/ compared with the /ux/
mistake 15%
- 5 /o/ compared with the /ou/
mistake 16%
- 6 /θ/ compared with the /s, t, f/
mistake 25%
- 7 /ð/ compared with the /z, d/
mistake 26%

- 8 /v/ compared with the /f, w/
mistake 37%
- 9 /z/ compared with the /y, s, ʒ, z/
mistake 45%

B. SEMI PRODUCTION TESTS.

For the production test the writer gave some tests to 5 students who hardly and never knew English. The materials he tested were the same as those for the recognition test except the English /ɔ/. He left the English /ɔ/ out because in his comparative analysis the English /ɔ/ was not a problem for Indonesian speakers occurring in a closed syllable and the English /ɔ/ rarely occurred in an open syllable. His method of testing was as follows.

The writer read 10 items of a word consisting of a particular sound problem. e.g.

- 1 thin
- 2 third
- 3 thought
- 4 thorn
- 5 thinkable
- 6 thank
- 7 thief
- 8 thick
- 9 think
- 10 thesis

The students were tested apart one by one; in this way they did not have beforehand what might be given and to be unduly influenced.

The 10 items of a certain problem were given one by one, allowing time for the students to pronounce the whole word in a reasonable time. The actual sound heard at the problem spot was immediately repeated.

a reasonable time. The actual sound heard at the problem spot was immediately written down.

The number of students tested were 5 in number. The results given below are the combination, thus the average, of the results obtained of these 5 cases.

This process seemed valid enough. In the first place it was seen in the results that the repetition sound did not cause a certain habit, whether this be right or wrong. Further there were certain individual differences, as was to be expected, but the 5 results did not vary so greatly as not to justify the taking of an average.

This second test was not a test of pure production alone. There was of course the recognition factor. The writer was aware of this, finding it difficult to construct a simple production test. He was thinking of the actual classroom learning situation, where right production is ultimately a problem both of recognition and production. The test results would therefore report where weak spots lay and possible deviations from the norm.

The result of the testing:

1. /i/	e	= 44%
	ey	= 4%
	i	= 48%
	ə	= 4%
2. /e/	e	= 90%
	ey	= 10%
3. /æ/	e	= 79%
	ey	= 12%
	a	= 2%
	ay	= 16%

4. /v/

$$\left\{ \begin{array}{l} v = 30\% \\ w = 38\% \\ o = 32\% \end{array} \right.$$

5. /θ/

$$\left\{ \begin{array}{l} \theta = 62\% \\ f = 14\% \\ s = 16\% \\ t = 8\% \end{array} \right.$$

6. /ð/

$$\left\{ \begin{array}{l} \delta = 6\% \\ \phi = 90\% \\ \theta = 4\% \end{array} \right.$$

7. /v/

$$\left\{ \begin{array}{l} v = 10\% \\ f = 26\% \\ w = 64\% \end{array} \right.$$

8. /z/

$$\left\{ \begin{array}{l} j = 34\% \\ s = 24\% \\ \phi = 28\% \\ \phi = 2\% \\ z = 12\% \end{array} \right.$$

AN OUTLINE OF ENGLISH AND INDONESIAN CONSONANTAL PHONEMIC ANALYSIS

/p/

/p/: a voiceless, bilabial, plosive consonant.

/p/: a voiceless, bilabial, plosive consonant. x)

	Initial	Medial	Final
/p/: 1. after /e/	-	1.-p-(spider)	-p(clasp)
2. before unstressed vowels	2.p-(peculiar)	2.-p-(upper)	-
/p/: word + syllable initial (stressed or unstressed)	p-(patch) p-(pen)	-p-(lupa) x)	-
/p ^h /: before a stressed vowel	p-(pardon)	-p-(apart)	-
/p ^h /: before plosives		-p-(pepper)	-
/p ^h /: syllable+word finals	-	-p-(captain)	-p(keep)
/p ^h /: syllable final	-	-p-(sapa)	-p(gonap) x)
/p ^h /: before a lateral	p-(place)	-p-(replace)	-
/p ^h /: before a nasal	-	-p-(hypnotize)	-
/p ^h /: before a rounded vowel	p-(pool)	-p-(spool)	-
/p ^h /: before a rounded vowel	p-(putih)	-p-(hapus) x)	-
/p /: syllable+word final			

x). Indonesian analysis.

/t/

/t/: a voiceless, alveolar, plosive consonant.

/t /: a voiceless, dental, plosive consonant. x)

	Initial	Medial	Final
/t/: 1. after /s/ 2. before unstressed vowels	- t - (taboo)	-t- (station) -t- (matter)	-t (best) -
/t ^d /: word+syllable initial (stressed or unstressed)	t- (terang) t - (tak) x)	-t- (batu)	-
/t ^h /: before stressed vowels	t - (table)	-t - (attack)	-
/t ^h /: syllable final followed by consonants	-	-t- (jet gas)	-t (a hot day)
/t ^h /: syllable final	-	-t- (ratna)	-t (sebut) x)
/t ^d /: before /θ/ or /ð/	-	-t- (eighth)	-
/t ⁿ /: before nasals	-	-t- (mutton)	-
/t ^l /: before a lateral	-	-t- (bottle)	-
/t ^w /: before a rounded vowel	t- (tumbuh)	-t- (centuh) x)	

x). Indonesian analysis.

/k/

/k/: a voiceless, velar plosive consonant.

/k/: a voiceless, velar plosive consonant. x)

	Initial	Medial	Final
/k/: 1. after /a/ 2. before unstressed vowels	- k - (capacity)	-k- (skin) -k- (market)	-k (risk) -
/k/: word+syllable initial (stressed or unstressed)	k- (karang) k- (kas) x)	-k- (buka)	-
/k/: before a plosive	-	-k- (marked)	-
/k/: syllable and word final	-	-k- (rakasa)	-k (balok) x)
/k^/: before a stressed vowel	k - (cover)	-k- (become)	-
/k^/: before a nasal	-	-k- (baca)	-
/k^/: before laterals	k- (clase)	-k- (declare)	-
/k^/: before a rounded vowel	k- (queen)	-k- (require)	-
/k^/: before a rounded vowel	k- (kuat)	-k- (ikut) x)	-
/k^/: before a front vowel	k- (kean)	-k- (seeks)	-
/k/: before a back vowel	k- (cottage)	-k- (box)	-

x). Indonesian analysis.

	Initial	Medial	Final
/k'/:before a front vowel	k- (kita)	-k- (makin) x)	
/k':before a back vowel	k- (kota)	-k- (toko)	
/k/:syllable + word final	-	-k- (picture)	-k (seek)

/b/

/b/: a voiced, bilabial, plosive consonant.

/b/: a partially voiced, bilabial, plosive consonant. x)

	Initial	Medial	Final
/b/: in a word final before a voiced word initial after a voiced consonant	-	-	-d (bribe then)
/p':in a word or syllable final	-	-s- (sabu)	-b (sebab) x)

x). Indonesian analysis.

	Initial	Medial	Final
/b/ : 1. in a word initial after a voiceless word final.	-b- (black-bird)	-	-
2. in a word final before a voiceless word initial	-	-	-d (dob paint)
3. after a voiced ^{ess} consonant	-	-d- (blackboard)	-
/b/ : word + syllable initial	b- (bila)	-b- (tiba) x)	-
/b^h/ : before a nasal	-	-b- (abnormal)	-
/b^l/ : before a lateral	b- (black)	-b- (tumbler)	-
/b/ : elsewhere	b- (a red book)	-b- (baby)	-b (stab then)

/d/: a voiced, alveolar, plosive consonant.

/d^h/: a partially voiced, alveolar, plosive consonant. x).

x). Indonesian analysis.

/d/

	Initial	Medial	Final
/d-/: in a word or syllable final (fv with /d-//	-	/ -d- (admire)	-d (trade)
/t'/: in a word or syllable final	-	-d- (badminton)	-d (abad) x).
/d ^d /: before /θ/	-	-d- (width)	-
/d'/: before /r/	d- (dry)	-d- (address)	-
/d'/: before a nasal	-	-d- (admire)	-
/d'/: before a lateral	-	-d- (middle)	-
/d/: elsewhere (fv with /d-//	d- (door)	-d- (modern)	-d (made)
/d/: in a word or syllable initial	d- (debu)	-d- (dendeng) x).	-
/d/: 1. in a word initial after a voiceless word final	d- (a glass-door)	-	-
2. in a word final before a voiceless word initial	-	-	-d (bad chair)

x). Indonesian analysis

	Initial	Medial	Final
3. before a voiceless consonant	-	-d- (bedtime)	

/g/

/g/: a voiced, velar, plosive consonant.

/g/: a partially voiced, velar, plosive consonant. x).

	Initial	Medial	Final
/g/: 1. a word initial after a voiceless word final	g- (a pleasant game)	-	-
2. a word final before a voiceless word initial	-	-	-g (the dog came)
3. after a voiceless consonant	-	-g- (background)	-
/g/: 1. in a word initial	g- (gerakan)	-	-
2. syllable initial	-	-g- (pegang) x)	-

x). Indonesian analysis.

	Initial	Medial	Final
/g'/: before a front vowel	g- (geese)	-g- (begin)	-
/g'/: before a back vowel	g- (got)	-g- (forgot)	-
/g'/: before /n/ or /n/	-	-g- (dogmatic)	-
/g'/: before a rounded vowel	-	-g- (language)	-
/g/: elsewhere	g- (a good garden)	-g- (egard)	-g (the dog is ...)
/g'/: before a front vowel	g- (gerang)	-g- (lagi)	-
/g'/: before a back vowel	g- (golong)	-g- (lagu)	-
/g'/: before a rounded vowel	g- (gubug)	-g- (ragu) x)	-
/g'/: in word + syllable final	-	-g- (dragon)	-g (bag)
/g'/: before a lateral	g- (gald)	-g- (struggle)	-

/c/: a voiceless, palato-alveolar affricate consonant with the protrusion of the lips.

/c/: a voiceless, palato-alveolar, affricate consonant without the protrusion of the lips. x).

	Initial	Medial	Final
/c/: in an unstressed position	c- (chaetice)	-c- (lecture)	-c (stop watch)

x) Indonesian analysis

/c/

	Initial	Medial	Final
/tʃ/: in initial-medial positions (stressed + unstressed)	č- (tjara)	-č- (katjau) x)	-
/č/: in a stressed position	č (change)	č- (baagches)	č (research)

/ʃ/

/ʃ/: a voiced palato-alveolar affricate consonant with the protrusion of the lips.

/ʃ/: a partially voiced, palato-alveolar, affricate consonant without the protrusion of the lips. x)

	Initial	Medial	Final
/ʃ/: 1. in a word initial after a voiceless word final	ʃ- (in general)	-	-
2. in a word final before a voiceless word initial	-	-ʃ- (gasjet)	-ʃ (a bridge can ...)
3. after a voiceless sound	-	-ʃ- (gasjet)	
/dʃ/: 1. in initial position	ʃ- (dʒagung)		-
2. in syllable initial	-	-ʃ- (medja) x)	-

x). Indonesian analysis.

/24/

	Initial	Medial	Final
/j/: elsewhere	j- (in general)	-j- (magic)	-j (the edge of...)

/ɣ/

/ɣ/: a voiceless, labio-dental, fricative consonant.

/ɣ/: a voiceless, labio-dental, fricative consonant. x)

	Initial	Medial	Final
/f/: in all positions	f- (funny)	-f- (confirm)	-f (laugh)
/f/: in all positions	f- (fadjar)	-f- (hafal)	-f (huruf) x).

/θ/

/θ/: a voiceless dental fricative consonant.

	Initial	Medial	Final
/θ/: in all positions	θ- (thin)	-θ- (breathless)	-θ (length)

/s/

/s/: a voiceless, alveolar fricative consonant.

/s/: a voiceless, alveolar fricative consonant. x)

x). Indonesian analysis



	Initial	Medial	Final
/s/: in all positions	s- (sing)	-s- (conscience)	-s (increase)
/s/: in all positions	s- (saja)	-s- (asan)	-s (emas) x)

/š/

/š/: a voiceless palato-alveolar fricative consonant.

/š/: a voiceless palato-alveolar fricative consonant (without protrusion of the lips) x).

	Initial	Medial	Final
/š/: in all positions	š- (sheep)	-š- (leadership)	-š (finish)
/š/: in a word or syllable initial	š- (sjarat)	-š- (masjarakat) x)	-

/v/

/v/: a voiced labio-dental fricative consonant.

	Initial	Medial	Final
/v/: 1. in a word initial after a voiceless word final	v- (cheap velvet)	-	-
2. in a word final before a voiceless word initial	-	-	-ʔ (love her)
/v/: elsewhere	v- (a good ventilator)	-v- (reverse)	-v (prove it)

x). Indonesian analysis

/ð/

/ð/: a voiced dental fricative consonant.

	Initial	Medial	Final
/ð/: 1. in a word initial after a voiceless word final	- (it is their)	-	-
2. in a word final before a voiceless word initial	-	-	-ð (to bathe her)
/ð/: elsewhere	ð- (give them)	-ð- (breathing)	-ð (bathe them)

/z/

/z/: a voiced alveolar fricative consonant.

/z/: a partially voiced alveolar, fricative consonant. x)

	Initial	Medial	Final
/z/: 1. in a word initial after a voiceless word final	z- (got zero)	-	-
2. in a word final before a voiceless word initial	-	-	-z (his pen)
/z/: elsewhere	z- (in the zoo)	-z- (razor)	-z (his book)
/z/: in a word or syllable initial	z- (zaman)	-z- (lezat) x)	-

x) Indonesian analysis.

/z/

/z/: a voiced palato-alveolar, fricative consonant.

	Initial	Medial	Final
/z/: in final position before a voiceless word initial	-	-	-z (the garage show!..)
/z/: elsewhere	-	-z- (pleasure)	-z (the garage will..)

/n/

/n/: a voiced bilabial nasal consonant.

/ɲ/: a partially voiced, bilabial nasal consonant. x).

	Initial	Medial	Final
/ɲ/: before /t/ or /v/	-	-ɲ- (triumph)	-
/ɲ/: before /s/	-	-ɲ- (small)	-ɲ (realism)
/n/: elsewhere	n- (make)	-n- (formation)	-n (game)
/ɲ/: in all positions	n- (naken)	-ɲ- (line)	-ɲ (salan) x).

/n/

x) Indonesian analysis.

/n/

/n/: a voiced alveolar nasal consonant.

/n/: a partially voiced, alveolar, nasal consonant. x)

	Initial	Medial	Final
[n ^d]: before /θ/ or /ð/	-	-n- (enthusiasm)	-
[n ^ʳ]: before /r/	-	-n- (enroll)	-
[n̥]: after /ə/	-	-n- (sneeze)	-
/n/: elsewhere	n- (name)	-n- (blind)	-n (fine)
/n/: in all positions	n- (name)	-n- (dimana)	-n (aman) x).

/ñ/

/ñ/: a partially voiced, palato-alveolar, nasal consonant. x)

	Initial	Medial	Final
/ñ/: initial position	ñ- (njata)	-	-
medial position	-	-ñ- (ternjata) x)	-

/ŋ/: a voiced, velar, nasal, consonant.

/ŋ/: a partially voiced, velar, nasal, consonant. x)

x) Indonesian analysis.

/ŋ/

	Initial	Medial	Final
/ŋ/:after a front vowel	-	-ŋ-(ringing)	-ŋ (sing)
/ŋ/:after a front vowel	-	-ŋ- (suntingan)	-ŋ (daging) x).
/ŋ/:after a back vowel	-	-ŋ- (lenger)	-ŋ (song)
/ŋ/:after a back vowel	-	-ŋ- (pertolongan)	-ŋ (tolong) x).
/ŋ/:elsewhere	-	-ŋ (younger)	-ŋ (young)
/ŋ/:elsewhere	ŋ- (ngarai)	-ŋ- (larangan)	-ŋ (pedang) x).

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/l/: a voiced alveolar lateral consonant.

/l/: a partially voiced, alveolar, lateral consonant. x).

	Initial	Medial	Final
/l/:1. before a consonant	-	-l (pulse)	-
2. in final position	-	-	-l (ball)
/l/:1. before a vowel	l- (lake)	-l- (belong)	-
2. before /ɪ/	l- (lure)	-l- (million)	-
/l/: in all positions	l- (lubang)	-l- (gelang)	-l (nakal) x).

x). Indonesian analysis.

/r/

/r/: a voiced alveolar, rolled consonant (with protrusion of the lips)

/r/: a partially voiced, alveolar, rolled consonant (without protrusion of the lips) x).

	Initial	Medial	Final
/r/: in unstressed position after a voiceless consonant	-	-r- (try)	-
/r/: 1. in an unstressed intervocalic position	-	-r- (experiment)	-
2. in a word ending with /o/ followed by a word beginning with a vowel	-	-	-r (far away)
/r/: elsewhere	-r- (rubber)	-r- (graduate)	-r -
/R/: in all positions	r- (radja)	-r- (barang)	-r (sabar) x).

/h/

/h/: a voiceless, glottal, fricative consonant. x)

	Initial	Medial	Final
/h/: 1. initial position	h- (habis) x)	-	-
x). Indonesian analysis.			

2. between the two same vowels

3. between the two different vowels of words derived from a foreign language

/h/: 1. between two different vowels

2. in final position

Initial

-

-

-

-

Medial

-h- (bahaga) x)

-h- (tahu) x)

-l- (lihat) x)

-

Final

-

-

-

-h (tunjuk) x)

/h/

/h/: a voiceless, glottal, semivowel.

/i/: in the second element of the diphthong /ih/

/a/: in the second element of the diphthong /ah/

/u/: in the second element of the diphthong /uh/

Initial

-

-

-

Medial

-

-h- (garden)

-

Final

-h (ear)

-h (far)

-h (poor)

x). Indonesian analysis.

	Initial	Medial	Final
[ɔ]: in the second element of the diphthong /ɔh/	-	-h- (heard)	-h (fur)
[e]: in the second element of the diphthong /eh/	-	-h- (hears)	-h (bear)
[ɔ]: in the second element of the diphthong /ɔh/	-	-h- (pores)	-h (pore)
[h]: between two voiced sounds	-	-h- (behind)	-
[h']: in initial position	h- (hello)	-	-

/w/

/w/: voiced labio-velar semivowel.

/w/: partially voiced velar semivowel. x)

	Initial	Medial	Final
[w]: before a vowel	w- (win)	-w- (twin)	-
[W]: in a word/syllable initial	w- (wanita)	-w- (kawat) x)	-
[w]: in the second element of the diphthong /uw/	-	-w- (fool)	-
[w]: in the second element of the diphthong /ow/	-	-w- (hone)	-w (low)

	Initial	Medial	Final
/ə/: in the second element of the diphthong /aw/	-	-w (about)	-u (see)

/y/: a voiced palatal semivowel.

/y/: a partially voiced palatal semivowel. x)

	Initial	Medial	Final
/y/: before a vowel	y- (yield)	-y- (beyond)	-
/i/: before a vowel	y- (jang)	-y- (hajang) x)	-
/ɪ/: in the second element of the diphthong /iy/	-	-y- (beet)	-y (see)
/I/: in the second element of the diphthong /ey/	-	-y- (bait)	-y (bay)
/e/: in the second element of the diphthong /ey/ and /ay/	-	-y- (hoil)	-y (boy)
	-	-	-y (buy)

x). Indonesian analysis.

AN OUTLINE OF ENGLISH AND INDONESIAN VOWEL PHONEMIC ANALYSIS

/1/

/i/: low high, front, spread vowel.

/i/: high high, front, spread vowel. x).

	Initial	Medial	Final
/i/: 1. in final position followed by another word in the same sense group.	-	-	-i (the city of London)
2. in the first element of the diphthongs /iy/ + /ih/	i- (eat)	-i- (beat)	-i (see)
3. elsewhere	i- (italic)	-i- (bit)	-
/i': elsewhere	i- (itu)	-i- (lima)	-i (tari) x).
/I/: final position	-	-	-i (heavy)
/I/: syllable final followed by a closed syllable in which /I/ or /u/ occurs	-	-i- (pikir) -i- (pikuk)	-
/I': 1. in the penultimate of the termination-"ity"	-	-i- (ability)	-
2. in unstressed position	i- (expect)	-i- (goodness)	-
/I/: in a closed syllable	-	-i- (terbit) x)	-

x). Indonesian analysis.

/e/

/e/: a mid, front, spread vowel.

/e/: a high mid, front, spread vowel. x)

	Initial	Medial	Final
/e/: elsewhere	e- (aligent)	-e- (lesson)	-
/e/: elsewhere	e- (enak)	-e- (dewan)	-e (nate) x).
/e/: 1. before the dark /ɪ/	e- (elbow)	-e- (felt)	-
2. in the diphthong /eh/	e- (air)	-e- (fair)	-
/e/: syllable final followed by a closed syllable in which /e/ or /o/ occurs	e- (ekor)	-e- (belok) x)	-
/e/: in a closed syllable	e- (Erna)	-e- (pendek) x)	-

/æ/

/æ/: a mid low, front, spread (neutral) vowel.

	Initial	Medial	Final
/æ/: elsewhere	æ- (accent)	-æ- (bad)	-

x). Indonesian analysis.

	Initial	Medial	Final
[æʷ]: before the dark /ɪ/	æ- (alphabet)	-æ- (calculate)	-

/ə/

/ə/: a low mid, central, spread (neutral) vowel.

/ə/: a low mid, central, spread (neutral) vowel. x).

	Initial	Medial	Final
[ə]: 1. elsewhere	ə- (alone)	-ə- (proposal)	-
2. in the diphthong /h/	-	-ə- (fur)	-
[ə]: in all positions	ə- (ambur)	-ə- (bosar)	-ə (ke) x).
[əʷ]: in a final unstressed position	-	-	-ə (China)
[ʌ]: in a stressed position	ə- (untrue)	-ə- (but)	-

/ə/

/ə/: a low low, central, neutral vowel.

/ə/: a low low, central, neutral vowel. x).

x). Indonesian analysis.

	Initial	Medial	Final
/a/: in the diphthong /ay/ + /aw/	-a (ice) -a (out)	-a- (fright) -a- (about)	- -
/a': elsewhere	-a- (ada)	-a- (pakai)	-a (raba) x).
/a/: in the diphthong /ah/	a- (arm)	-a- (garden)	-a (far)
/a]: in a syllable final followed by a closed syllable in which /a/ occurs.	a- (adat)	-a- (padat)	- x)
/a]: in a closed syllable	a- (asma)	-a- (rapat)	- x)

/u/: a low high, back, rounded vowel.

/u': a high high, back, rounded vowel. x)

	Initial	Medial	Final
/u/: in all positions	u- (Urdu)	-u- (put)	-u (to)
/u': elsewhere	u- (usik)	-u- (putra)	-u (datu) x)

x). Indonesian analysis.

/u/

	Initial	Medial	Final
/u/: in a syllable final followed by a closed syllable in which /U/ or /I/ occurs.	u- (usur)	-u- (putus) x)	-
/U/: in a closed syllable	u- (untuk)	-u- (buntu) x)	-

/o/

/o/: a high mid, back, rounded vowel. x)

	Initial	Medial	Final
/o^/: elsewhere	o- (orang)	-o- (soro)	-o (toko) x).
/o/: in a syllable final followed by a closed syllable in which /o/ or /e/ occurs	o- (bleng) o- (olek)	-o- (tjorek) x) -o- (tolong)	- -
/o/: in a closed syllable	o- (embak)	-o- (pendek)	-

/ɔ/

/ɔ/: a mid low, back, rounded vowel.

x) Indonesian analysis.

	Initial	Medial	Final
/ɔ/:in initial-medial positions	ɔ- (obstacle)	-ɔ- (not)	-

AN OUTLINE OF ENGLISH AND INDONESIAN DIPHTHONGAL PHONEMIC ANALYSIS

/ɪy/

/ɪy/: a diphthong starting from the English /ɪ/ position followed by a high front off-glide /i/.

	Initial	Medial	Final
/ɪ/:in all positions	ɪy- (eat)	-ɪy- (seed)	-ɪy (see)

/oy/

/oy/: a diphthong starting from the English /e/ position followed by a high front off-glide /i/.

	Initial	Medial	Final
/e/:in all positions	ey- (ain)	-ey- (bait)	-ey (say)

x). Indonesian analysis.

/ay/

/ay/: a diphthong starting from the English /a/ position followed by a high front off-glide /e/.

/ai/: a glide starting from the Indonesian /a/ position followed by a less prominent /i/. x).

	Initial	Medial	Final
/ae/: in all positions	ay- (ice)	-ay- (rise)	-ay (buy)
/a/: in final position	-	-	-ai (ranai) x).

/oy/

/oy/: a diphthong starting from the English /o/ position followed by a high fronted off-glide /e/.

/oi/: a glide starting from the Indonesian /o/ position followed by a less prominent /i/. x)

	Initial	Medial	Final
/oe/: in all positions	oy- (oil)	-oy- (toil)	-oy (boy)
/o/: in final position	-	-	-oi (arboi) x).

/ih/

/ih/: a diphthong starting from the English /i/ position followed by a nonretroflex off-glide /h/

	Initial	Medial	Final
/i:/ in all positions	ih- (ear)	-ih- (fears)	-ih (dear)

/eh/

/eh/: a diphthong starting from the English /e/ position followed by a nonretroflex off-glide /h/.

	Initial	Medial	Final
/e:/ in all positions	eh- (air)	-eh- (bears)	-eh (bare)

/əh/

/əh/: a diphthong starting from the English /ə/ position followed by a nonretroflex off-glide /h/.

	Initial	Medial	Final
/ə:/ in all positions	əh- (earn)	-əh- (birth)	-əh (fur)

/ah/

/ah/: a diphthong starting from the English /a/ position followed by a nonretroflex off-glide /ə/.

	Initial	Medial	Final
[aə]: in all positions	ah- (arm)	-ah- (farm)	-ah (far)

/uh/

/uh/ a diphthong starting from the English /u/ position followed by a nonretroflex off-glide /y/

	Initial	Medial	Final
[uy]: in all positions	uh- (Urdu)	-uh- (pool)	-uh (poor)

/ɔh/

/ɔh/: a diphthong starting from the English /ɔ/ position followed by a non-retroflex off-glide /ə/.

	Initial	Medial	Final
[ɔə]: in all positions	ɔh- (ore)	-ɔh- (pork)	-ɔh (pore)

/au/

/au/: a diphthong starting from the English /a/ position followed by a high back off-glide /ɔ/.

/au/: a glide starting from the Indonesian /a/ position followed by a less prominent /y/. x).

x). Indonesian analysis.

	Initial	Medial	Final
/a:/ in all positions	aw- (out)	-aw- (about)	-aw (bow)
/a'/: in final position	-	-	-aw (pulan) x).
in a syllable final	-	-aw- (saudara)	-aw (kerbau) x).

/u/

/u/: a diphthong starting from the English /u/ position followed by a high back off-glide /y/.

	Initial	Medial	Final
/uy/: in all positions	uw- (ooze)	-uw- (boot)	-uw (too)

/ou/

/ou/: a diphthong starting from the English /o/ position followed by a high back off-glide /y/.

	Initial	Medial	Final
/ou/: in all positions	ow- (own)	-ow- (homo)	-ow (cow)

APPENDIX II

A CONTRASTIVE ANALYSIS OF
ENGLISH AND INDONESIAN
CONSONANTS

ENGLISH		INDONESIAN		
voiceless bilabial plosive	/p/	Positions	/p/	voiceless bilabial plosive
e.g. peculiar	[p]	1. before an unstressed unrounded vowel and elsewhere	[p]	e.g. pindah
pool	[p̚]	2. after /a/ before a rounded vowel	-	-
police	[p̚]	3. before an unstressed rounded vowel	[p̚]	pokok
pick	[p̚]	4. before a stressed unrounded vowel.	[p̚]	api
pool	[p̚]	5. before a stressed rounded vowel	[p̚]	hapus
pepped	[p̚]	6. before a plosive	[p̚]	diharapkan
keep	[p̚]	7. in a word final	[p̚]	harap
	~ /p/			
captain	[p̚]	8. in a syllable final	[p̚]	harapkan
place	[p̚]	9. before a lateral	[p̚]	-
hypnotize	[p̚]	10. before a nasal	-	-
voiceless, alveolar plosive	/t/		/t/	voiceless, dental plosive
still	[t̚]	1. after /a/ before an unrounded vowel and elsewhere	-	-

ENGLISH		INDONESIAN		
voiceless, alveolar plosive	/t/		/t/	voiceless, dental plosive
Tibet	[t]	2. before an unstressed unrounded vowel	[t ^d]	tidak
stolen	[t ^v]	3. after /a/ before a rounded vowel.		-
detonate	[t ^v]	4. before an unstressed rounded vowel	[t ^d]	topi
take	[t ^h]	5. before a stressed unrounded vowel	[t ^d]	mati
topic	[t ^h]	6. before a stressed rounded vowel	[t ^d]	batu
hot	[t ⁻] [t]	7. in a word final	[t ^d]	sebut
jetgas	[t ⁻]	8. in a syllable final	[t ^d]	sebutkan
eighth	[t ^d]	9. before /θ/	-	-
train	[t ^v]	10. before /r/	-	-
mutton	[t ^v]	11. before a nasal	[t ⁻]	ratna
bottle	[t ^l]	12. before a lateral	-	-
voiceless, velar plosive	/k/		/k/	voiceless, velar plosive
e.g. market	[k]	1. before an unstressed front unrounded vowel and elsewhere	[k]	e.g. kota
skin	[k]	2. after /a/ before a front unrounded vowel	/ - /	-
decomposition	[k ^v]	3. before an unstressed back rounded vowel	[k ^v]	kota
school	[k ^v]	4. after /a/ before a back rounded vowel	-	-

ENGLISH

INDONESIAN

voiceless, velar plosive	/k/		/k/	voiceless, velar plosive
e.g. keen	/k ^h /	5. before a stressed front unrounded vowel.	/k/	e.g. nakin
cottage	/k ^{hu} /	6. before a stressed back rounded vowel.	/k ^u /	toka
sickness	/k ⁻ /	7. in a syllable final	/ʔ/	raksasa
seek	/k ⁻ /	8. in a word final	/ʔ/	balok
bacon	/k ^ʔ /	9. before a nasal	-	-
class	/k ^l /	10. before a lateral	-	-
voiced, bilabial plosive	/b/		/b/	partially voiced bilabial, plosive
a red book	/b/	1. in a word initial after a voiced word final and elsewhere	/b/	jang baru
baby	/b/	2. in an intervocalic position.	/b/	tiba
bribe them	/b ^ʔ / /b/	3. in a word final before a voiced word initial	/p ^ʔ /	sebab dari
robbed	/b ⁻ /	4. after a voiced consonant	-	-
black bird	/b ^o /	5. in a word initial after a voiceless word final	/b ^ʔ /	banjak buku
dab-paint	/b ⁻ /	6. in a word final before a voiceless word initial	/p ^ʔ /	sebab kita

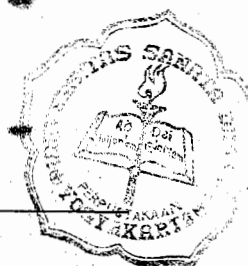
ENGLISH		INDONESIAN		
voiced, bilabial plosive	/b/	Position	/b/	partially voiced bilabial, plosive
blackboard	[b̥]	7. after a voiceless consonant.	/- /	-
abnormal	[bʰ]	8. before a nasal	[pʰ]	abnormal
black	[b]	9. before a lateral	-	- -
voiced, alveolar plosive	/d/		/d/	partially voiced alveolar, plosive
e.g. beautiful day	[d]	1. in a word initial after a voiced word final and elsewhere	[d]	e.g. sebab dari
modern	[d]	2. in an intervocalic position	[d]	adik
bad book	[d̥]	3. in a word final before a voiced word initial	[tʰ]	abad jang
-		4. before a voiced consonant	-	-
glass-door	[d̥]	5. in a word initial after a voiceless word final	[d̥]	sibuk dengan
bad chair	[d̥] ~ [d]	6. in a word final before a voiceless word initial	[tʰ]	djasad kita
bedtime	[d̥]	7. before a voiceless consonant	/- /	-
width	[d̥]	8. before /θ/	-	-
dry	[d̥]	9. before /r/	-	-
admire	[d̥]	10. before a nasal	[tʰ]	badminton
middle	[d]	11. before a lateral	-	-

ENGLISH

INDONESIAN

voiced velar plosive	/g/	Positions	/g/	partially voiced velar, plosive
e.g. regard	/g/	1. in an intervocalic position and elsewhere	/g/	e.g. pegang
a good book	/g ^v /	2. in a word initial after a voiced word final, before a back rounded vowel	/g ^v /	dalam golong- an
a good geese	/g/	3. in a word initial after a voiced word final before a front unrounded vowel	/g̊/	pemain gitar
the dog is	/g̊/	4. in a word final before a voiced word initial	-	-
a pleasant game	/g̊/	5. in a word initial after a voiceless word final before a front unrounded vowel.	/g̊/	tak girang
white goat	/g ^v /	6. in a word initial after a voiceless word final, before a back rounded vowel.	/g ^v /	menbuat gu- buk
the dog came	/g̊/	7. in a word final before a voiceless word initial	/-/	-
dogmatic	/g ^v /	8. before a nasal	-	-
glass	/g ^l /	9. before a lateral	-	-
voiceless, palato alveolar affricate (with protuded lips)	/t͡ʃ/		/t͡ʃ/	voiceless, palato alveolar affricate (without protusion)
e.g. chestise	/t͡ʃ/	1. in an unstressed syllable initial and elsewhere	/t͡ʃ/	e.g. tjara

ENGLISH	INDONESIAN			
VOICELESS, palato alveolar affricate (with protruded lips)	/tʃ/	Positions	/tʃ/	voiceless, palato alveolar affricate (without protrusion)
stopwatch	/tʃ/	2. in an unstressed syllable final	/tʃ/	-
change	/tʃ/	3. in a stressed syllable initial	/tʃ/	katjan
research	/tʃ/	4. in a stressed syllable final	-	-
voiced, palato alveolar affricate (with protruded lips)	/dʒ/		/dʒ/	partially voiced palato alveolar, affricate (without lip protru- sion)
e.g.				e.g.
in general	/dʒ/	1. in a word initial after a voiced word final and elsewhere	/dʒ/	tanam dja- gung
the edge of	/dʒ/	2. in a word final before a voiced word initial.	-	-
it is general	/dʒ/	3. in a word initial after a voiceless word final	/dʒ/	habis djaga
the bridge can	/dʒ/	4. in a word final before a voiceless word initial	-	-
gasjet	/dʒ/	5. after a voiceless sound	-	-
voiceless labio dental fricative	/f/		/f/	voiceless labio dental fricative
e.g.				e.g.
funny	/f/	1. in all positions	/f/ ~ /v/	fadjar



ENGLISH

INDONESIAN

voiced labio dental fricative	/v/	Positions	-	-
a good	/v/	1. elsewhere	-	-
cheap velvet	/v/	2. in a word initial after a voiceless consonant	-	-
love her	/v/	3. in a word final before a voiceless word initial	-	-
voiceless dental fricative	/θ/		-	
e.g. thin	[θ]	1. in all positions	-	
voiced, dental fricative	/ð/		-	
it is their	/ð/	1. in a word initial after a voiceless word final	-	-
to bathe her	/ð/	2. in a word final before a voiceless word initial	-	-
give them	/ð/	3. elsewhere	-	-
voiceless alveolar fricative	/s/		/s/	voiceless, alveolar fricative
e.g. sing	/s/	1. in all positions	/s/	e.g. saja
voiced- alveolar fricative	/z/		/z/	partially voiced alveolar fricative
in the zoo	/z/	1. elsewhere	/z/	lozat

ENGLISH		INDONESIAN		
voiced- alveolar fricative	/z/	Positions	/z/	partially voiced alveolar fricative
got zero	[z/	2. in initial position after a voiceless word final	/z/	kisah zaman
this pen	[z/	3. in a word final before a voiceless word initial	-	-
voiceless palato- alveolar fricative (with protruded lips).	/ʃ/		/ʃ/	voiceless palato - alveolar fricative without protrusion
cheap	[ʃ/	1. in initial+medial positions	[ʃ/	sjarat
finish		2. in final position	-	-
voiced, palato alveolar fricative	/ʒ/		-	-
the garage should	[ʒ/	1. elsewhere	-	-
the garage should	[ʒ/	2. in a final position before a voiceless word initial	-	-
voiced, bilabial nasal	/m/		/m/	partially voiced, bilabial, nasal
make	[m/	1. elsewhere	[m/	malan
small	[m/	2. after /s/	-	-
triumph	[m/	3. before /t/ or /v/	-	-

ENGLISH

INDONESIAN

voiced, alveolar, nasal	/n/	Positions	/n/	partially voiced alveolar, nasal
name	/n/	1. elsewhere	/n/	nama
enroll	/n̥/	2. before /r/	-	
onset	/n/	3. after /s/	-	
enthusiasm	/n̥ ^d /	4. before /θ/ or /ð/	-	
	-		/ɲ/	partially voiced, palato alveolar, nasal
	-	1. in initial and medial positions	/ɲ/	njata
voiced, velar nasal	/ŋ/		/ŋ/	partially voiced velar nasal
e.g. sing	/ŋ̥/	1. after a front vowel	/ŋ̥/	e.g. daging
song	/ŋ̥/	2. after a back vowel	/ŋ̥/	tolong
young	/ŋ/	3. elsewhere	/ŋ/	ngarai
voiced, alveolar lateral	/l/		/l/	partially voiced alveolar lateral
belong	/l̥/	1. before a vowel	/l̥/	lubang
lure	/l̥/	2. before /y/	-	-
pulse	/l̥/	3. before a consonant	-	-
ball	/l̥/	4. final position	/l̥/	nakal
voiced, alveolar protruded, rolled	/r/		/r/	partially voiced, alveolar, rolled.
try	/r̥/	1. in a stressed position after a consonant	-	-

ENGLISH

Indonesian

voiced, alveolar protruded, rolled	/r/	Positions	/r/	partially voiced, alveolar, rolled.
expedient	[r ^f]	2. in an unstressed intervocalic position	[r]	gerakan
far away	[r ⁱ]	3. in a word ending with /ə/ followed by a word beginning with a vowel.	-	-
rubber	[r]	4. elsewhere	[r]	radja
voice, palatal semivowel	/y/		/y/	voiced (partially) palatal semivowel
yield	[y]	1. before a vowel	[y]	jang
beat	[ɪ]	2. in the second element of the diphthong /ɪy/	-	
bait	[ɪ]	3. in the second element of the diphthong /ey/	-	
boil	[e]	4. in the second element of the diphthong /ɔy/ and /ey/	-	
voiced, labio- velar semivowel	/w/		[w]	partially voiced bilabial semivowel
e.g. win	[w]	1. before a vowel	[w]	e.g. wanita
fool	[ʊ]	2. in the second element of the diphthong /ɪw/	-	
home	[ʊ]	3. in the second element of the diphthong /ow/	-	

ENGLISH		INDONESIAN		
voiced labio-velar semivowel	/w/	Positions	/w/	partially voiced, bilabial semivowel
about	[ə]	4. in the second element of the diphthong /aw/	-	
voiceless, glottal semivowel	/h/		/h/	voiceless, glottal fricative consonant.
ear	[ɪ]	2. in the second element of the diphthong /ih/	-	-
far	[ə]	2. in the second element of the diphthong /ah/	-	-
poor	[ʊ]	3. in the second element of the diphthong /uh/	-	-
fur	[ə]	4. in the second element of the diphthong /əh/	-	-
bear	[ə]	5. in the second element of the diphthong /eh/	-	-
pore	[ɔ]	6. in the second element of the diphthong /ɔh/	-	-
behind	[R]	7. in the intervocalic of two different vowels.	[h]	lihat
	[R]	8. in the intervocalic of two same vowels.	[k]	bahaya
hello	[hʰ]	9. in a stressed initial syllable	[h]	pahit
herself	[h]	10. elsewhere	[h]	lebah

ENGLISH	INDONESIAN			
low, high, front un- rounded (spread)	/ɪ/	Positions	/i/	high high, front, spread.
e.g. the city of London	/i/	1. in final position followed by another word in the same sense group+elsewhere	/i'/	e.g. hari-raja
heavy	/i/	2. in final position	/i'/	tari
ability	/i'/	3. in the penultimate of the termination-"ity"	-	-
report	/i'/	4. in an unstressed position (open syllable)	/i'/	lina
goodness	/i'/	5. in an unstressed closed syllable	/i/	timbul
-	/i'/	6. in an unstressed followed by a closed syllable in which /ɪ/ or /ʊ/ occurs	/i/	pikir
mid, front, spread	/e/		/e/	high mid, front spread
elbow	/e/	1. before the dark /ɪ/	-	-
eligent	/e/	2. elsewhere and in an open syllable	/e'/	onak
end	/e/	3. elsewhere and in a closed syllable	/e/	pendek
-	/e/	4. elsewhere and in an open syllable followed by a closed syllable in which /e/ or /o/ occurs	/e/	belok
mid low, front spread (neutral)	/æ/		-	
calculate	/æ/	1. before the dark /ɪ/	-	
bad	/æ/	2. elsewhere	-	

ENGLISH

INDONESIAN

low mid, central, neutral	/ə/	Positions	/ə/	low mid, central, neutral
alone	/ə/	1. in an unstressed initial and medial positions	/ə/	anbun
china	/ə/	2. in an unstressed final position	-	-
untrue	/ʌ/	3. in a stressed position	/ə/	ke
low low, central, neutral	/a/		/a/	low low, central, neutral
e.g. -	-	1. in the open syllable	/a/	e.g. ada
-	-	2. in the closed syllable	/a/	rahmat
-	-	3. in the open syllable followed by a closed syllable in which /ə/ occurs	[a]	rapat
low high, back rounded	/u/		/u/	high high, back rounded
to	/u/	1. in the open syllable	/u/	batu
put	/u/	2. in the closed syllable	/u/	untuk
-	/u/	3. in the syllable final followed by a closed syllable in which /i/ or /u/ occurs	/u/	umur
mid, back rounded	/o/		/o/	high mid, back, rounded
-	-	1. in the open syllable	/o/	toko
-	-	2. in the closed syllable	/o/	repat
-	-	3. in the syllable final followed by a closed syllable in which /e/ or /ə/ occurs	/o/	golong

ENGLISH

INDONESIAN

mid low, back rounded	[ɔ]	Positions	-	
not	[ɔ]	1. in a word initial and medial positions.	-	
a diphthong: from [ɪ] followed by [ʊ]	/ɪʊ/		-	
best	[ɛɪ]	1. in all positions	-	
a diphthong [e] followed by [ɪ]	/ey/		-	
bait	[eɪ]	1. in all positions		
a diphthong [ə] followed by [ɪ]	/aɪ/		/aɪ/	a diphthong [ə] followed by [ɪ]
ice	[aɪ]	1. in all positions	-	
buy	[aɪ]	2. in final positions	[aɪ]	rarai
a diphthong [ɔ] followed by [e]	/ɔy/		/oɪ/	a diphthong [o] followed by [ɪ]
e.g. boil	[ɔɪ]	1. in a syllable initial	-	e.g. -
boy	[ɔɪ]	2. in a syllable final	[ɔɪ]	anboi.
a diphthong [ɪ] followed by [ɪ]	/iɪ/		/-/	
ear	[ɛɪ]	in all positions	-	

ENGLISH

INDONESIAN

a diphthong [ɛ]/followed by [ə/]	/eh/	Positions	-	
air	/ɛə/	in all positions		
a diphthong [ɑ]/followed by [ə/]	/ah/		-	
far	/ɑə/	in all positions	-	
a diphthong [y]/followed by [ʊ/]	/uh/		-	
pool	/uʊ/	in all positions	-	
a diphthong [ɔ]/followed by [ɔ/]	/oʊ/		-	
ore	/ɔɔ/	in all positions	-	
a diphthong [ə]/followed by [ə/]	/əh/		-	
earn	/əə/	in all positions	-	
a diphthong [ə]/followed by [ə/]	/au/		/au/	a diphthong [ə]/followed by [ʊ/]
out	/əʊ/	1. in a syllable initial	-	
bow	/əʊ/	2. in a syllable final	/əʊ/	pulau
a diphthong [ɔ]/followed by [u/]	/ou/		-	
home	/oʊ/	in all positions	-	

ENGLISH

INDONESIAN

a diphthong [ɪ] followed by [w]	/ɪw/	Positions	-	
ooze	/uɪ/	in all positions	-	

APPENDIX III

THE POSSIBLE PROBLEMS THAT
WE GET AFTER THE CONTRASTIVE
ANALYSIS

1. CONSONANTS.

1. Plosives:

I	:	p	t	k	b	d	g
I	:	p	t	k	b	d	g

Reception: no problem

Production: no problem.

2. Affricates:

I	:	tʃ	dʒ
I	:	tʃ	dʒ

Reception : no problem

Production : no problem

3. Fricatives:

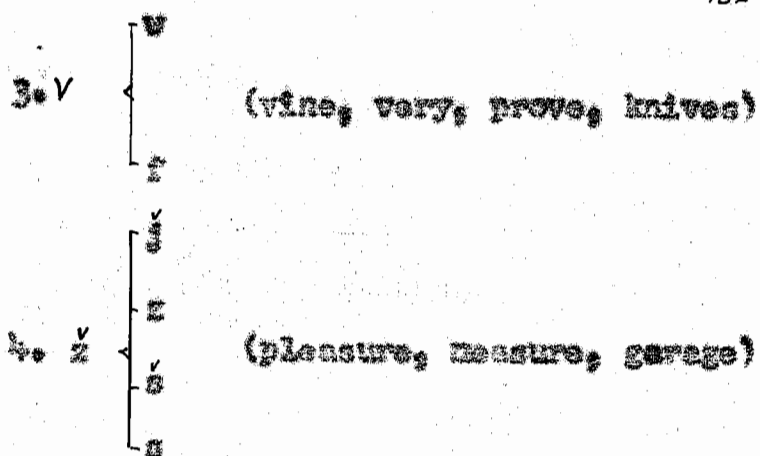
I	:	f	θ	s	ʃ	v	ð	z	ʒ	-
I	:	f	-	s	ʃ	-	-	z	-	j

Reception:

1. θ { t
s (thin, think, teeth, bath)

Production:

2. ð { d
z (then, they, bathe, breathe)

4. Nasalized

E	:	n	n	-	ŋ
I	:	n	n	ñ	ɲ

Reception: no problem

Production: no problem.

5. Lateral :

E	:	l
I	:	l

Reception : no problem

Production : no problem

6. Rolling :

E	:	r
I	:	r

Reception : no problem

Production : no problem

7. Semi-vowels:

I	:	w	h	y
I	:	w	-	y

Reception :

Production : vowel /h/ ^{semi} → consonantal /h/

(fear, dare, fur, far, poor, pool, pore)

E : p p^u p^h p^{hw} p⁻ pⁿ p^l
I : p p^u - - p⁻ - -

Reception: p^h → p : before a stressed unrounded vowel
 (pillar, picture, peasant, peaceful)

p^{hw} → p^u : before a stressed rounded vowel
 (popular, portrait, postman, important)

p^l → p : before a lateral (place, planet,
 replace, dample)

pⁿ → p : before a nasal (hypothesis, topmost)

Production: the same as in the reception.

/t/

I : t t^u t^h t^{hw} t⁻ t^d t['] tⁿ t^l
I : - - - - - t^d - - - t^{d-} t^{dw}

Reception : t → t^d : after /s/ before an unrounded
 vowel and before an unstressed
 unrounded vowel (station, still,
 taxation, technique)

t^u → t^{dw} : after /s/ before an rounded vowel
 and before an unstressed rounded
 vowel (stood, stool, torpedo,
 totality)

t^h → t^d : before a stressed unrounded
 vowel. (table, attack, tennis,
 tender).

t^{hw} → t^{dw} : before a stressed rounded vowel
 (token, toilet, tonic)

t⁻ → t^{d-} : in a syllable and word final
 (hot, not, street, jetgas).

t['] → t^d : before /r/ (train, retract,
 attractive, try).

tⁿ → t^d : before a nasal (mutton, button,
 written).

t^l → t^d : before a lateral (bottle, atlantic
 title)

Production :

/k/:

E	k	k ^{u>}	k ^h	k ^{hw>}	k ⁻	k ^l	k ⁿ	-
I	k	k	-	-	-	-	-	?

Reception : k^h → k : before a stressed front unrounded vowel (came, kingdom, kidney, kidney)

k^{hw>} → k^{u>} : before a stressed back rounded vowel (cosmos, cottage, costume, cotton)

k⁻ → ? : in a syllable/ word final (rock, seek, look).

k^l → k : before a lateral: (clean, clear, buckle)

kⁿ → k : (beacon, reckon)

Production : the same as in the reception.

/b/:

E	b	b ⁻	b _o	b _o ⁻	b ⁿ	b ^l	-
I	-	-	b _o	-	-	-	p ^q

Reception : b → b_o : 1. in a word initial after a voiced word final (a good book, the baby)

2. between 2 vowels (baby).

b⁻ → p^q : in a word/syllable final before a voiced sound (write them, rub it, object, obvious)

b_o → b_o : in a word initial after a voiceless word final (not beautiful, black-bird)

b_o⁻ → p^q : in a word/syllable final before a voiceless sound (obstinate, absent, a red book, the ball)

bⁿ → p^q : before a nasal (abnormal, obnoxious)

b^l → b_o : before a lateral (black, oblige, blade).

[	:	d	d ⁻	d ^o	d ^o	d ^d	d ^{>}	d ⁿ	d ^l	-
I	:	-	-	d	-	-	-	-	-	t ^q

Reception: d → d : in a word initial after a voiced word final and between two vowels (very dangerous, to decide, modern)

d⁻ → t^q : in a word final before a voiced word initial and syllable final before a voiced sound. (bad boy, a red book, advert)

d → d : in a word initial after a voiceless word final (bright day, the right door).

d^o → d : in a word/syllable final before a voiced sound. (sad story, good paper, bedtime).

d^d → t^q : before /θ/ (with, breadth)

d[>] → d : before /r/ (dry, dream).

dⁿ → t^q : before a nasal (admire)

d^l → t^q : before a lateral (middle, saddle)

[	:	g	g ^{<}	g ^{w>}	g ⁻	g ^o	g ^{<}	g ^{w>}	g ⁻	-
I	:	-	-	-	-	g	g ^{<}	g ^{w>}	-	k

Reception: g → g : in a word initial after a voiced word final before a central vowel (a beautiful garden, a heavy gun)

g[<] → g[<] : in a word initial after a voiced word final before a front vowel (lovely game, a small gallery)

g^{w>} → g^{w>} : in a word initial after a voiced word final before a back rounded vowel (very good, a large gong)

g⁻ → k^q : in a word/syllable final before a voiced sound (the leg of ..., a bag made of)

g^o → g^o : in a word initial after a voiceless word final before a central vowel (pleasant garment, rough ground).

$\dot{g}^{\circ} \longrightarrow \dot{g}^{\circ}$: in a word initial after a voiceless word final before a front vowel (pleasant game, Christmas gift)

$\dot{g}^{\circ} \longrightarrow \dot{g}^{\circ}$: in a word initial after a voiceless word final before a back rounded vowel.
(the skin of goat, precious gold)

$\dot{g}^{\circ} \longrightarrow k^{\circ}$: in a word/syllable final before a voiceless sound. (gag him, his leg shall be cut).

/č/:

$\dot{c}$	:	$\dot{c}$	$\dot{c}^h$
I	:	-	- tj

Perception : $\dot{c} \longrightarrow tj$: in initial and medial unstressed positions (chastise, lecture)

Production :

$\dot{c}^w \longrightarrow t$: in final stressed and unstressed positions (stop watch, research)

$\dot{c}^h \longrightarrow tj$: in initial and medial stressed positions (change, beseech)

/j/:

$\dot{j}$	:	$\dot{j}$	$\dot{j}_\bullet$
I	:	-	- dj

Perceptions: $\dot{j} \longrightarrow tj$: 1. in a word initial after a voiced sound (in general, be generous).

Productions:

2. between two vowels (magic major)

$\dot{j} \longrightarrow d$: in a word final before a voiced sound (the edge of the bridge will....)

$\dot{j} \longrightarrow j$: in a word/syllable initial after a voiceless sound (gas-jet, it generally)

$\dot{j}_\bullet \longrightarrow d$: in a word final before a voiceless sound. (the bridge can..., the judge has...).

/z/

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E :	f	
I :	f	~ p

Reception : no problem

Production: no problem

except for those who replace /z/
with /p/

/s/

E :	s
I :	s

Reception : no problem

Production : no problem

/z/

E :	z	z
I :		z

Reception : z → z : in a word/syllable initial after a voiced sound.
Production: (the zoo, razor).

z → s : in a final position before a voiced word initial. (his book it is good).

z → z : in a word initial after a voiceless word final. (get zero, as zealous as....)

z → s : in a word final before a voiceless word initial (this pen, it is time).

/s/

E :	s	.
I :	-	sj

Reception : s → sj : in a word/syllable initial (sheep, share, leadership)

Production : s → s : in final position. (finish, fish, punish).

/n/:

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	<u>E</u>	:	<u>n</u>	<u>ṇ</u>	<u>n̥</u>
I	:	-	-	-	-

Reception : n → ṇ : any position except before /t/ or /v/ and after /s/.

Production : (make, formation, game).

ṇ → ṇ : after /s/ (small, smart, snake).

n̥ → n̥ : before /t/ or /v/. (triumph, Durville)

/n/:

	<u>E</u>	:	<u>n</u>	<u>n^d</u>	<u>n^r</u>	<u>ṇ</u>
I	:	-	-	-	-	-

Reception : n → ṇ : in any position except before /θ/, /ð/, /r/ and after /s/ (name, bind, fine).

Production :

n^d → ṇ : before /θ/ or /ð/. (enthusiasm)

n^r → ṇ : before /r/ (enroll, enrich, enrage)

ṇ → ṇ : after /s/ (sneeze, snake, snag).

/n/:

	<u>E</u>	:	<u>n</u>	<u>n^ˆ</u>	<u>n^ˈ</u>	-	-
I	:	-	-	-	-	ṇ ^ˆ	ṇ ^ˈ

Reception : n → ṇ : after a central vowel (younger, young).

Production :

n^ˆ → ṇ^ˆ : after a front vowel. (ringing, sing).

n^ˈ → ṇ^ˈ : after a back vowel. (longer, long)

/l/:

	<u>E</u>	:	<u>l</u>	<u>ɫ</u>
I	:	-	-	-

Reception : ɫ → l : 1. before a consonant. (felt, pulse, sold).

Production :

2. in final position (ball, fell, shall).

l → l : 1. before a vowel

2. before /j/

/r/

E :	r	r̥	rʲ	
I :	-	-	-	R

Reception : r → R : elsewhere

Production: r̥ → R : in a stressed position after a voiceless consonant.

rʲ → R : 1. in an unstressed intervocalic position.

2. in a word ending with /ə/ followed by a word beginning with a vowel

/y/

E :	y	ɪ	ɪ	ə
I :	-	-	-	j

Reception : y → j : before a vowel

Production: ɪ, ɪ → - : in the second element of the diphthongs iy, ey

ə → - i : in the second element of the diphthongs ay, y.

/w/

E :	w	u	U	o
I :	-	-	-	w

Reception : w → W : before a vowel

Production : u, U → - : in the second element of the diphthongs ow, uw.

o → u, u : in the second element of the diphthong aw.

/h/

E :	h	ʁ	ɪ	ə	u	ə	ə	ɔ	-
I :	h	-	-	-	-	-	-	-	h

h → h : in initial position

ʁ → h : between two voiced sounds.

ɪ, ə, u, ɔ → ə : in the second element of the diphthongs ih, eh, uh, ɔh.

ə, ə → - : in the second element of the diphthongs əh, ah.

2. VOWELS.

Question A.:

/i/. The Indonesian /i/ is higher than the English /i/. It is closer to the English /iy/ rather than to the English /i/.

Danger: Learners will use the English phoneme /iy/ instead of the English /i/. e.g. /bit/ → /biyt/ (fit, sit, ship)

/e/. The Indonesian /e/ is higher than the English /e/. It is nearly the same as the English /ey/ or /i/. Danger: Learners will use the English /ey/ or /i/ instead of the English

/e/. e.g. /bet/ { /bit/ (set, let, bed).
/heyt/

/æ/. The Indonesian does not have the phoneme /æ/. like in (bad, sat, mad). Danger: they will replace the English /æ/ with the Indonesian /e/. e.g. /bæd/ → /bed/.

/ɔ/. The Indonesian /ɔ/ is the same as the English /ɔ/. Therefore there is not any problem.

/a/. The Indonesian phoneme /a/ is the same as the English /a/ → no problem.

/u/. The Indonesian /u/ is higher than the English /u/. It is nearly the same as the English /uw/. Danger: Learners will use the English /uw/ instead of the English /u/. e.g. /pul/ → /puwl/. (look, full).

/o/. The English /o/ is not a problem for the learners because it only occurs in the glides /ow/ and such glide occurs in Indonesian too.

/ɔ/. The English /ɔ/ does not occur in Indonesian. Therefore it is a problem for learners. They will use the Indonesian /o/ instead of the English /ɔ/. e.g. /hot/ (not, box, rock).

Question B.:

E : - 1 I I'

I : 1' 1 I -

Question C.:

[ɪ].

E : 1. the city of London [ɪ] 2. italic [ɪ] 3. bit [ɪ]

I : [ɪ'] [ɪ'] [ɪ']
D D D

[ɪ]

E : 1. heavy [ɪ]

I : [ɪ']
D

[ɪ]

E : 1. expect [ɪ'] 2. goodness [ɪ']

I : [ɪ] [ɪ']
D D

Problem in hearing
producing

[ɪ] → [ɪ'] : 1. in final position followed by another word in the same sense group (merry-g-round the beauty of the town).

2. in the open stressed syllables (magnificent, intermission, illiterate).

[ɪ] → [ɪ] : in a closed stressed syllable (ignorant, import, infiltrate).

$[ɪ] \rightarrow [i^*]$: in a final position (pretty, very, enemy)

$[ɪ^*] \rightarrow [i^*]$: in an open unstressed syllable (identity, nationality, personality).

$[ɪ^*] \rightarrow [ɪ]$: in a closed unstressed syllable (illuminate, illusion, immune).

$[ɪ^*] \rightarrow [ɪ]$: in an open unstressed followed by /ɪ/ or /ʊ/ (precipice, predict, prettiness)

Question B.:

E :	-	ə	ε
I :	ə^	ə	ε

Question C.:

$[e]$

E : 1. elegant $[e]$. 2. lesson $[e]$

I :	$[e^*]$	$[e^*]$
	D	D

$[ɛ]$

E : 1. elbow $[ɛ]$ 2. felt $[ɛ]$

I :	$[ɛ]$	$[ɛ]$
	O.k.	O.k.

Problem in hearing
producing

$[e] \rightarrow [e^*]$: in an open syllable (element, eligible, desolate).

$[e] \rightarrow [ɛ]$: in a closed syllable (gentle, gesture, meant)

Question B.:

E :	ə	ə^	^
I :	ə	-	-

Question C.:

[ə]

E : 1. alone [ə] 2. proposal [ə]

I :	[ə]	[ə]
	O.k.	O.k.

[əʊ]

E : 1 China [əʊ]

I :	[əʊ] or [a]
	D

[ʌ]

E : 1. untrue [ʌ] 2. but [ʌ]

I :	[a]	[ə]
-----	-----	-----

Problem in hearing
producing

[əʊ] → [ə] or [a] : in a final unstressed position
(manner, teacher, reader)

[ʌ] → [a] : in stressed positions (running,
punish, puncture).

Question B.:

E :	-	u	
I :	u^	u	U

Question C.:

/u/

E : 1. ugh [u] 2. put [u] 3. to [u]

I :	[u]	[U]	[uʔ]
	D	D	D

Problem in hearing
producing

/u/ → /U/ : in a closed syllable: (pull, took, good)

/u/ → [uʔ] : in an open syllable. (to).

3. DIPHTHONG.

Question B.:

E : ɔə -
I : - ɔⁱ or oɪ

Question C.:

[ɔə]

E : 1. oil [ɔə] 2. toil [ɔə] 3. boy [ɔə]

I : [ɔɪ] [ɔɪ] [ɔɪ]
D D D

Problem in hearing
producing

ɔə → ɔⁱ or oɪ in all positions

Question B.:

E : æ -
I : - æⁱ or aɪ

Question C.:

[æ]

E : 1. ice [æ] 2. rice [æ] 3. buy [æ]

I : [aɪ] [aɪ] [aɪ]
D D D

Problem in hearing
producing

æ → æⁱ or aɪ in all positions

Question B.:

E : æ -
I : - æ^u or aʊ

Question C.:

[æ]

E : 1. out [æ] 2. about [æ] 3. bow [æ]

I : [aʊ] [aʊ] [aʊ]
D D D

Problem in hearing
producing

ae → a^o in al. positions.

Question A.:

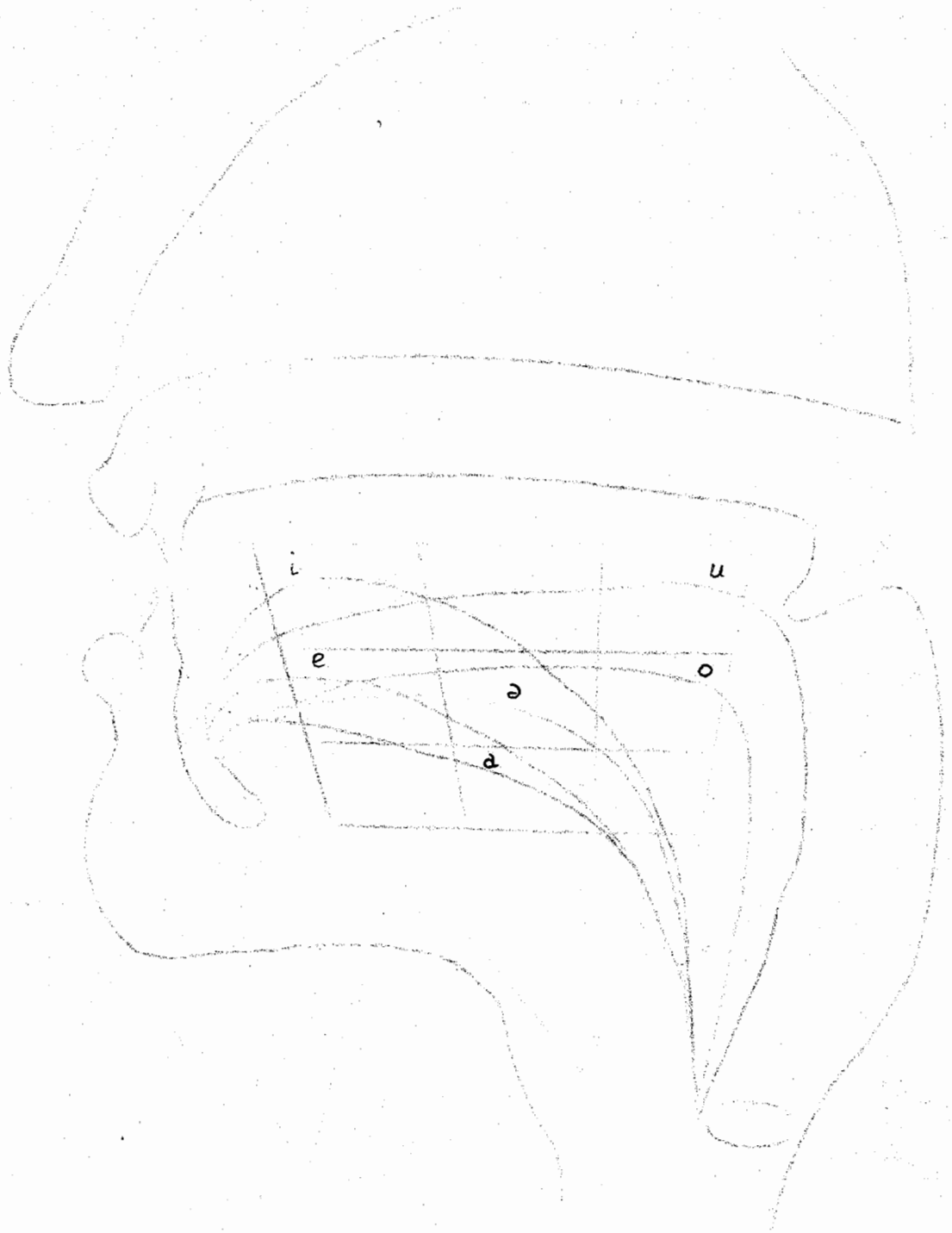
/iy/ → eat → /i/
 /ey/ → ain → /e/
 /ih/ → ear → /iə/
 /eh/ → air → /eə/
 /uh/ → urdu → /uə/
 /ɔh/ → ore → /oə/
 /əh/ → earn → /ə/
 /ah/ → arm → /ɑ/
 /us/ → ooze → /u/
 /ou/ → own → /ə/
 /əp/ → out → /aʊ/

Problem in hearing
producing

/iy/ → /i/
 /ey/ → /e/
 /ih/ → /iə/
 /eh/ → /eə/
 /uh/ → /u/
 /ɔh/ → /oə/
 /əh/ → /ə/
 /ah/ → /ɑ/
 /us/ → /u/
 /ou/ → /ə/
 /əp/ → /aʊ/



APPENDIX IV
THE DIAGRAM OF THE INDONESIAN
VOWELS



LIST OF ADDITIONAL PHONEMIC SYMBOLS

/p/	/t/	/k/
[p ^u]: lip rounded /p/	[t ^u]: lip rounded /t/	[k ^{u>}]: retracted and lip rounded /k/
[p ^h]: aspirated /p/	[t ^h]: aspirated /t/	[k ^h]: aspirated /k/
[p ^{hu}]: aspirated and lip rounded /p/	[t ^{hu}]: aspirated and lip rounded /t/	[k ^{hu>}]: aspirated retracted lip rounded /k/
[p ⁻]: unreleased /p/	[t ⁻]: unreleased /t/	[k ^l]: lateralized /k/
[p ^l]: lateralized	[t ^d]: dentalized /t/	[k ⁿ]: nasalized /k/
[p ⁿ]: nasalized /p/	[t ^{>}]: retracted /t/	[ʔ]: glottal stop
	[t ⁿ]: nasalized /t/	
	[t ^l]: lateralized /t/	
/b/	/d/	/g/
[b ⁻]: unreleased /b/	[d ⁻]: unreleased /d/	[g ⁻]: unreleased /g/
[b ^o]: partially voiced /b/	[d ^o]: partially voiceless /d/	[g ^o]: partially voiced /g/
[b ^{o-}]: partially voiced un- released /b/	[d ^{o-}]: partially voiced unreleased /d/	[g ^{o-}]: partially voiced and un- released /g/
[b ⁿ]: nasalized /b/	[d ^d]: dentalized /d/	[g [']]: fronted /g/
[b ^l]: lateralized /b/	[d ^{>}]: retracted /d/	[g ^{u>}]: retracted and lip rounded /g/
[p ^q]: glottalized /p/	[d ⁿ]: nasalized /d/	[k ^q]: glottalized /g/
	[d ^l]: lateralized /d/	
/c/	/j/	/v/
[c ^u]: unaspirated /c/ (with protrusion of the lips)	[j ^u]: voiced /j/	[v]: voiced v
[c ^h]: aspirated /c/ (with protrusion of the lips)	[j ^o]: voiceless/ partially voiced /j/	[v ^o]: partially voiced v

[tj]: unaspirated
and without
protrusion
of the lips,
relax and
narrow-
spaced /c/

[dj]: partially
voiced
without
protrusion
of the lips,
relax and
narrow-
spaced /j/

/z/

/z/

/n/

[z]: voiced /z/

[z]: voiced /z/

[n]: labio dental
/n/

[z]: partially
voiced /z/

[z]: partially
voiced /z/

[n]: partially
voiced /n/

[sj]: without
protrusion
of the lips,
relax and
narrow spaced
/s/

/n/

/l/

/r/

[n^d]: dentalized
/n/

[l]: dark /l/

[r]: partially
voiced /r/

[n^r]: retracted /n/

[r^f]: flapped /r/

[n]: partially
voiced /n/

[R]: partially
voiced and
without pro-
trusion of the
lips /r/

/y/

/h/

/w/

[y]: raised
syllable pre-
vocalic /y/

[h]: voiced /h/
(syllable
prevocalic /h/

[u]: high back
diphthongal /w/

[y]: lowered
syllable pre-
vocalic /y/

[h^h]: aspirated /h/
(syllable pre
vocalic /h/

[U]: lower high back
diphthongal /w/

[i]: high front
diphthongal
/y/

[i]: high front
central
diphthongal /h/

[o]: mid back
diphthongal /w/

[I]: lower high
front
diphthongal /y/

[e]: front mid
central
diphthongal /h/

[w]: syllable pre-
vocalic /w/
[W]: partially voiced,
unprotuded, relax
/w/.

/e/ mid front
diphthongal /y/

/ə/ mid central
diphthongal /h/

/a/ low central
diphthongal /h/

/u/ high back
central
diphthongal /h/

/ɔ/ low back
central
diphthongal /h/

/i/

/e/

/æ/

/iː/ raised /i/
(higher /i/)

/eː/ higher /e/

/æː/ lower
variant

/ɪ/ lower variant

/ɛ/ lower /e/

/ɪː/ lower low /i/

/ə/

/a/

/u/

/əː/ lower /ə/

/aː/ lower and
more
retracted /a/

/ʌ/ high lower /ə/

/ɑ/ low central /a/

/ /

Note: [iː] + [ɪ] are vowel lengthening + nasalisation
respectively .