

## CHAPTER II

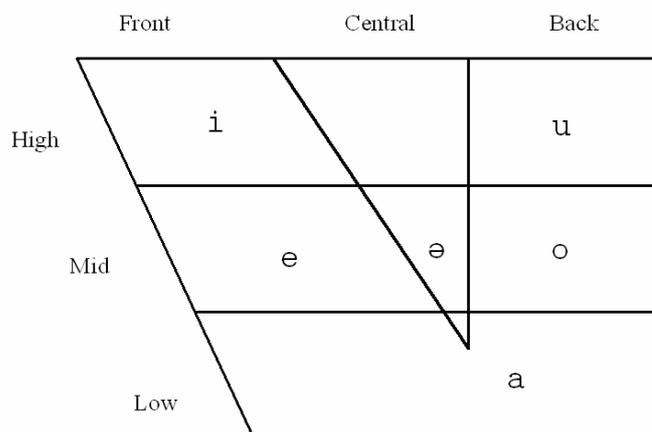
### LITERATURE REVIEW

#### 2.1 Review of Related Theories

##### 2.1.1 Indonesian Vowel System

The first language that the writer discusses in this study is Indonesian. As other languages, the sounds in Indonesian are divided into vowel and consonantal sounds. In the following explanation the writer concentrates on Indonesian vowels because this study only focuses on vowels.

Indonesian has six vowel phonemes that consist of two high vowels [i] and [u]; three medium vowels [e], [ə], and [o]; and one low vowel [a] as illustrated in Figure 2.1 (Alwi et al., 1998/2003, pp. 56-57).



**Figure 2.1 Indonesian vowel system**

From the illustration above, the writer gives examples of Indonesian vowels in words which are put in initial, medial and final positions:

- High vowels: [ i ] ⇔ *ikan* [ikan], *tiba* [tiba], *padi* [padi]

[ u ] ⇔ *upah* [upah], *jumpa* [jumpa], *pintu* [pintu]

- Medium vowels: [ e ] ⇔ *ejaan* [ejaan], *nenek* [nenek], *sore* [sore]

[ ə ] ⇔ *entah* [əntah], *lemper* [lɛmpɛr], *tante*

[tante]

[ o ] ⇔ *obat* [obat], *balon* [balon], *biro* [biro]

- Low vowel: [ a ] ⇔ *aku* [aku], *kantor* [kantor], *pita* [pita]

In addition, the vowel system also includes diphthong. When two vowels qualities can be perceived as one syllable, they can be called diphthongs. There are four diphthongs in Indonesian; they are [ ai ], [ au ], [ oi ], and [ ei ]. These two vowels represent one vowel sound that cannot be separated (Alwi et al., 1998/2003, p. 62). The examples of Indonesian diphthongs can be seen in words as follows:

○ [ ai ] ⇔ *sungai* [suŋai]

○ [ au ] ⇔ *harimau* [harimau]

○ [ oi ] ⇔ *sekoi* [sekoi]

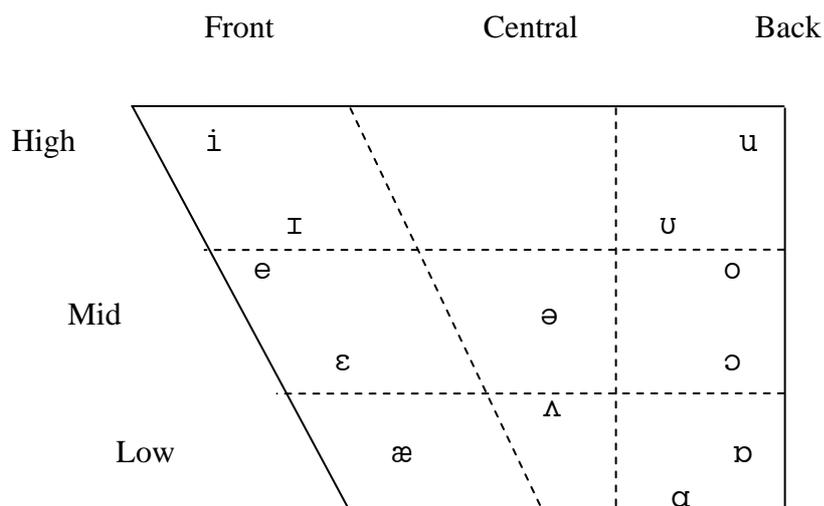
○ [ ei ] ⇔ *seprei* [seprei]

## 2. 1. 2 English Vowel System

English is considered as a foreign language in Indonesia. This language also consists of vowel and consonantal sounds. However, unlike Indonesian, there are many variations occur in English sounds, especially the vowels. The following explanation is about English vowels.

Vowels are known as sounds that are produced with little obstruction in the vocal tract and that are generally voiced. (O'Grady, Dobrovolsky & Katamba, 1996, p. 735).

In the production of vowel sounds none of the articulation come very close together; thus the passage of the airstream is relatively unobstructed. The vowels can be described in terms of three factors: (1) the height of the body of the tongue; (2) the front-back position of the tongue; and (3) the degree of lip rounding (Ladefoged, 1993, p. 13). The following figure is an illustration of English vowel sounds.



**Figure 2.2 English vowel system**

According to the Figure 2.2 above, the writer describes the English vowels as follows:

- [ɪ]: high front unrounded
- [e]: mid front unrounded
- [æ]: low front unrounded
- [ʌ]: low central unrounded
- [ə]: mid central unrounded
- [ʊ]: high back unrounded
- [ɔ]: low back rounded
- [i]: high front unrounded
- [ɑ]: low back unrounded
- [ɔ]: mid back rounded
- [u]: high back rounded
- [ɛ]: mid central unrounded

In addition, the diphthongs of English vowel include [eɪ], [oʊ], [aɪ], [aʊ], [ɔɪ], [ɪə], [ɛə], and [aə].

One of the difficulties in describing vowels in English is because English speakers do not all have the same ones. Such variation is in part to do with the regional origins of the speaker and in part to do with sociolinguistic factors like social class and age. In fact, there are some twenty or so vowels in most accents of

English, and their sound qualities can vary enormously from accent to accent. The vowels of American English, for instance, are obviously different from those of British or Australian, and the vowels can differ significantly from those of British or Australian, and the vowel can differ significantly from one typical locality in any of these countries to another. Indeed, the distinctiveness or the varieties of the sounds happen due to a particular accent.

There are two accents which are widely accepted in English language teaching environment, i.e. Received Pronunciation and General American. The term RP (“Received Pronunciation”) refers to a socially determined accent and traditionally associated with the English upper middle classes; meanwhile, the expression “General American” (GA) refers to a pronunciation of English common in North America ( Roca and Johnson, 1999, p. 119). The set of vowels found in English in Table 2.1 account for especially the sounds use in RP (Received Pronunciation) and General American.

**Table 2.1** Received Pronunciation and General American

Words	Received Pronunciation	General American
Bee	i :	i :
Bit	ɪ	ɪ
Bet	ɛ	ɛ
Bat	æ	æ
Cart	ɑ :	ɔ :
Bath	ɑ :	æ
Cot	ɒ	ɑ :
Caught	ɔ :	ɔ :

Cook	ʊ	ʊ
Shoe	uː	uː
Cut	ʌ	ʌ
Curt	ɜː	ɝ
About	ə	ə
Butter	ə	ɝ
Bay	eɪ	eɪ
Bite	aɪ	aɪ
Now	aʊ	aʊ
Boy	ɔɪ	ɔɪ
Go	əʊ	oʊ
Beer	ɪə	ɪ̃
Bear	eə	ɛ̃
Poor	ʊə	ɔ̃

The main differences from the table above in comparing the RP accent and General American accent are the lack of the monophthong [ɒ] in GA and three schwa final diphthongs simultaneously are changed with a consonant [r], such as [ɪ̃], [ɛ̃], and [ɔ̃] due to GA is being rhotic; therefore, those are realized as r-colored vowels. In addition, the total numbers of vowels in RP are twenty vowels; meanwhile, fifteen distinct vowels are found in GA. In addition to those accents and the result of the varieties of English vowel, many phoneticians believe that all vowels have certain properties in common which distinguish them from the consonants.

### 2. 1. 3 Intelligibility

The most desirable achievement of those who learn English is to be able to speak English with an ‘intelligible’ accent (Lee, 2004, p. 7). Kenworthy (1987, p. 16), also argues that native–like pronunciation may be a goal for particular learners, but for majority of learners a far more sensible goal should be ‘comfortable intelligibility’.

The definition of intelligibility then provided by some linguist (e.g., Nelson, 1982; Kenworthy, 1987) on their studies as follows; ‘Intelligibility is being understood by a listener at a given time in a given situation’ (Voegelin and Harris, 1951, in Lee, 2004, p. 7).

Lee (2004, p. 7) argues that communication between speaker and listener cannot be separated with personal, situational and social factors. Thus, making oneself understood is not just a matter of accurate and clear articulation but also related to the question “Intelligible to whom?” or “Which factors affect getting our meaning across successfully?”. Dalton and Seidlhofer state that the various factors that affect intelligibility as follows:

...whether an utterance is accessible or not will be determined not only by the accuracy and clarity of the speaker’s enunciation, but also by the listener’s expectation and attitude, such as experience with, and tolerance of, low practice or foreign accents. On the other hand, whether the interlocutors find each others’ pronunciation acceptable will largely depend on the value they attribute to each others’ accent, and on whether they regard these as appropriate to the occasion and to their respective roles and status in society.

**Dalton and Seidlhofer (1994, p. 10)**

From the above quotation, listener-oriented factors can be picked out that determine what is accessible (i.e., intelligible) and what is concerned with the question, “being intelligible to whom?” However, the question has been oriented only to the native English speakers. In fact, linguists have found that English is now used for international communication and spoken by more non-native speakers than the native speakers (Brown, 1989; Jenkins, 2000). Then, Jenkins claims that the focus consequently has moved towards listener variables and contributing factors such as background knowledge or processing skills.

In relation to the factors contributing to intelligibility, Nelson (1982, p.59) argues in his study that the extent to which they share characteristics of cultural background, as well as the extent to which their languages share phonological and grammatical features, will determine the degree to which they find one another “intelligible”. However, Lee claims that Nelson’s point is not an easy matter because the term ‘intelligibility’ has been poorly defined in the literature and there is as yet no general consensus on a definition of the term. Intelligibility in previous research on non-native speaker’s accent often to be viewed in some very narrow sense and is over simplified in most research.

Smith and Nelson (1985, p. 334) found that in the literature, particularly on the subject of the international intelligibility of English, the term ‘intelligibility’, ‘comprehensibility’, and ‘interpretability’ were often used interchangeably. In order to make the term ‘intelligibility’ more precise, they proposed that the term ‘intelligibility’ be restricted for word and utterance recognition; ‘comprehensibility’ could then be used to refer to the understanding

of the words and utterances; and ‘interpretability’ to refer to the understanding of the meaning behind the word and utterances. Unfortunately, the terminological confusion of intelligibility still seems to be unsolved. Lee believes that it would be reasonable if it is the case that in order to communicate successfully, both linguistic competence and sociolinguistic competence are necessary as a whole system of ‘intelligibility’.

As regards to this, Jenkins (2000, p.76) says that L1 speakers have a substantial degree of shared socio-cultural knowledge through the socialization processes as well as have a high degree of linguistic knowledge. She assumes that in the interaction between L1 speakers of English and L2 speakers of English as a foreign language, L2 speakers could also have some degree of socio-cultural knowledge of the target culture and society through prolonged contact, cultural studies, media, etc. on the other hand, in an interaction between interlanguage speakers of English, she argues that there is neither shared socio-cultural knowledge nor a high degree of linguistic knowledge. Thus, when there is a miscommunication, ‘listeners are continually forced back on the language itself, in particular, on the pronunciation. Based on the statement above, Jenkins claims that the recognition of phonological level is fairly important to the interpretation of the term ‘intelligibility’ particularly in interlanguage talk.

However, this view conflicts with Smith and Nelson’s (1985, p. 335) claim that ‘the most serious misunderstandings arise more often at the level of ‘comprehensibility’ and ‘interpretability’ than ‘intelligibility’. Lee (2004, p.20) finally concludes that there is still no universally accepted way of assessing

intelligibility. The apparent contradictions in all of the studies may be at least partially explained about intelligibility.

#### **2. 1. 4 The Role of Phonology in affecting Intelligibility**

Several researchers which have attempted to stress the role of pronunciation in determining intelligibility. Hinofitis and Bailey (1981, in Lee, 2004, p. 14) for example, they investigated native's reactions to non-native speech and the results showed that pronunciation was the single most important factor in the evaluation. Similarly, Gynan (1985, in Lee, 2004, p.14) found that listeners judged that the phonology of Spanish non-native speakers of English impeded with comprehension to a greater degree than grammar did.

Jenkins (2000, p. 87) provides 40 examples of communication breakdown data between interlanguage speakers. She claims that 'the high proportions of instances of communication breakdown are caused by pronunciation errors'. The following is an extract taken from Jenkins (2000). The interlocutor A is a Swiss-German and B is a Japanese.

**A** I didn't understand the let cars. What do you mean with this?

**B** Let [ let ] cars?. Three red [ red ] cars (very slowly).

**C** Ah, red.

**B** Red.

**A** Now I understand. I understood car to hire, to let. Ah, red, yeah I see.

(Jenkins, 2000, p. 81)

The Japanese interlocutor pronounced [led] for [red] because usually Japanese learners of English have a difficulty in distinguishing [l]-[r] since these are separate phoneme in English, but not in Japanese. And the German interlocutor perceived the [led] as [let] because when [b, d, g] sounds occur at the end of a word in English, German learners tend to substitute [p, t, k] instead of [b, d, g] due to the word-final devoicing rule in German phonology (Kenworthy, 1987, p. 137). Therefore, Jenkins (2000, p. 88) assumes that most of these errors were caused by the transfer of L1 sounds, thus the L1 sound transfer is responsible for more than twice the other causes' (e. g., speed rate, grammar, lack of knowledge, etc.).

## **2. 2 Theoretical Framework**

This study examines the comparison of English vowel sounds produced by native speaker of English and non-native speaker, i.e. Indonesian speaker who shares the same L1 with the listeners.

According to the assumption of Lee (2004, p.20) that there is not still the accepted way to asses the term 'intelligibility'; therefore the writer comprehends this term as the definition given by Voegelin and Harris (1951, in Lee, 2004, p. 7) that 'Intelligibility is being understood by a listener at a given time in a given situation.

Listeners were given recorded words which represent the entire English vowel sounds test. The writer uses the words that represent all of the English vowel sounds used by O'Grady, Dobrovolsky and Katamba in their book *Contemporary Linguistics an Introduction*; the words are shown in Table 2. 3. The writer chooses those words to become the material because those words represent all of English vowel and also because the phonetic transcription of the vowels are based on the IPA (International Phonetic Alphabet).

**Table 2.2** Words of English Vowel Sounds

Words	Sounds
Fee	f i :
Boot	b u : t
Cart	k ɑ : t
Firm	f ɜ : m
Saw	s ɔ :
Fate	f eɪ t
Rice	r aɪ s
Boy	b ɔɪ
Note	n ɔʊ t
Crowd	k r ɔʊ d
Cheer	tʃ i ə
Chair	tʃ e ə
Poor	p u ə
Oar	ɔ ə
Fit	fɪ t
Let	l e t
Bat	b æ t
Cod	k ɒ d
Put	p ʊ t
Shut	ʃ ʌ t
Letter	l e t ə

## 2. 3 Review of Related Studies

There are some studies which examined speech intelligibility and observed the intelligibility of native speakers that shares different or same native languages. In the next discussion, the writer describes two previous studies which are associated with this study done by English Department of Airlangga University' students. They are Kartika Dewi Prananingrum and Nopita Trihastutie. The subjects of their studies were also the students of English Department of Airlangga University, that obviously have similarity with the subjects that the writer used in this study.

### 2. 3. 1 Kartika Dewi Prananingrum

The title of the study is *Native Language Influence on the Production of English Sounds by the Students of D3 in English Language of Airlangga*. Her study observed the interference that occurred between Indonesian to English. In her study, the subjects were the students of D3 in English Language of Airlangga University. Kartika used an elicitation paragraph to be read by six respondents who participate in her study and then she recorded it. After that, she used the phonetic transcription to identify and determine the sounds that were pronounced incorrectly by the respondents. The results demonstrate that there were seven English consonants: [k], [z], [v], [ʃ], [θ], [ð], and [d], and ten English vowels [i:], [ɜ:], [ɔ:], [u], [ɑ:], [ə], [æ], [əʊ], [ɪ], and [e] that pose respondents difficulty to pronounce. The greatest difficult consonants were [z] and [v], while the greatest difficult vowels were [i:], [ə], and [æ]. Those difficulties emerged mostly due to the interference of their native language

and also because the influence of rapid speech. In fact, Kartika has also completed her study with all the reasons why the students' native language could influence their pronunciation; nevertheless, the writer finds the weaknesses related to the number of the participants of her study. In the case that the methodology that she used is qualitative, still, the writer believes that she used a relatively small number of participants (6 respondents) that involved in her study. In addition, the writer also thinks that her choice to ask an expert in verifying the transcriptions is considered quite inappropriate. The writer believes that it would be better if she used a tool that able to analyze her data based on the IPA i.e. speech analyzer.

### **2. 3. 2 Nopita Trihastutie**

The title of her study is "*A study of the visual aids used in auditory comprehension class and their influences on understanding English spoken texts*". The study was trying to find out whether there is the influence of visual aids on the understanding of English spoken texts and whether the use of visual aids also gives effects on the level of stress and attention. Trihastutie obtained the data from 50 respondents' pre test, semantic differential scale questionnaire and post-test. She divided the respondents into two groups: experimental and control group. The experimental group was treated with visual aids while the control group was treated without visual aids. She found on the study that there is influence of visual aids on the understanding of English spoken texts and the visual aids also gives positive effects on the students' attention and stress level. Visual aids, therefore, are likely to heighten motivation and concentration. She believed that listening

comprehension would relatively difficult to be concentrated if it is contain only spoken material without giving any visual support; however, it would be far easier for the students to focus if there are visual aid given that relevant with the material.