

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Theoretical Framework**

In order to know, What Indonesian language consonant and vowel sounds are pronounced incorrectly by native Chinese speakers in Surabaya and why they are pronounced incorrectly that occurs on native Chinese speakers in Indonesian language. The writer used some theories that support this research. First of all the, the writer used the second language acquisition. Then, the writer used on phonology study which focused phonological processes.

##### **2.1.1 L1 and L2**

L1 refers to second language or other language to first language and L2 refers that was learned subsequent to mother tongue. Second language is the language acquired by a person after having acquired the basic L1 system. L2 acquisition refers to all the aspects of language that the language learner needs to master (Ellis, 2010, p.5). In this study, the writer described of how language learners learn an additional language after they acquired their mother tongue (L1). Ellis (2000, p. 4) explained language learner is the language that learner produce when they are called on to use an L2 in speech or writing.

##### **2.1.2 L1 Influence on L2**

First language learning is complete as compared to second language learning in the sense of language learner. L1 transfer refers to the influence that the learner's L1 exerts over the acquisition of an L2. Ellis (2000, p. 51) explained

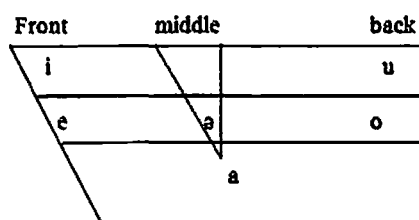
that term of L1 transfer is the role of consciousness, processing operation and communication strategies. There are two kinds of transfer, namely positive transfer and negative transfer. Positive transfers occur when the L1 habits facilitate the L2 learning. In this situation, negative transfer occurs when the L1 interference the L2 learning. Therefore, negative transfer is usually considered as the influence. Many factors influence the literacy development adult learning. Those factors are age, motivation to read, instructional, living, and working environments, sociocultural backgrounds; socioeconomic status; and learning abilities or disabilities. (Burt, Miriam, Joy. K.P and Rebecca Adams, 2003, p.7)

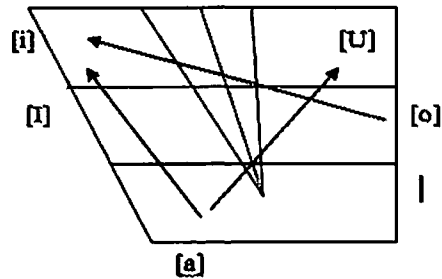
## 2.2 Indonesian Language Sounds

The first language that the writer discussed in this study is Indonesian language. The sounds of Indonesian language are divided into two segmental features that consist of the vowel and consonant sounds. A brief explanation about those sounds is given below.

### 2.2.1 Vowels

In vowel sounds, Indonesian language has six vowel sounds that consists of two high vowel sounds /i/, and /u/, three medium vowel sounds /e/, /ə/, and /o/ and one low vowel sound /a/ as illustrated in figure 2.1 (Alwi et al,1998/2003,pp.56-57)



**Figure 2.1** Vowel Monopthong in Indonesian language**Figure 2.2** Vowel Diphthong in Indonesian language

From the illustration above, the writer gave example of Indonesian language vowels in words which are put in initial, medium and final position, such as:

- High Vowels

/i/ → *ikan* (fish) [ikan], *pinta* (asking) [pinta], *padi* (rice plant) [padi]

/u/ → *upah* (pay) [upah], *tunda* (delay) [tunda], *maju* (progress) [maju]

- Medium vowels

/e/ → *ekor* (tail) [ekor], *nenek* (grandmother) [nenek], *sore* (afternoon)

[sore]

/o/ → *obat* (medicine) [obat], *balon* (balloon) [balon], *toko* (shop) [toko]

/ə/ → *emas* (gold) [əmas], *tante* (aunt) [tantə], *lemper* (Indonesian traditional food) [lempər]

- Low vowels

/a/ → *anak* (son) [anak], *kantor* (office) [kantor], *pita* (ribbon) [pita]

In addition, the vowel sounds also include diphthong. When two vowel qualities can be perceived as one syllable, they can be called by diphthongs. There are three diphthongs in Indonesian language, namely [ai], [au], and [oi]. These two vowels represent one vowel sound that cannot be separated. For example, [ai] → *sungai* (river)[sunai], [au]→ *harimau* ‘tiger’ [harimau], [oy]→ *sekoi* ‘wahing’ [sekoy], and [e] → *sprei* ‘bedsheet’ [spei]. ( Alwi et al,1998/2003,p.62)

**2.2.2 Consonants**

Indonesian language has twenty two consonants namely /p, b, m, w, f, t, d, s, z, n, r, l, c, j, š,y, ñ, k, g, x, ŋ. h/. Based on the articulation, consonants are categorized into three: state of the vowel cords (voiced or voiceless), place of articulation and manner of articulation (Alwiet,al.1998/2003,p.66).

Place of Articulation Manners Of Articulation		Place of Articulation					
		Bilabial	Labiodental	Dental/ Alveolar	Palatal	Velar	Glotal
Stop	Voiceless	p		t		k	
	Voiced	b		d		g	
Affricative	Voiceless				c		
	Voiced				j		
Fricative	Voiceless		f	s	š	x	h
	Voiced			z			
Nasal	Voiceless	m		N	ñ	ŋ	
Trill	Voiced			R			
Literal	Voiced			L			
Glide/ semi vowels	Voiced	w			y		

**Table 2.1** Consonant in Indonesian Language

According to those categories, Indonesian language consonant sounds consist of bilabial stop /p/ and /b/, for instance *kapar* ‘floatsam’ → [kapar] and *kabar* ‘information’ → [kabar]. Alveolar stop /t/ and /d/ for instance *tari* ‘dance’ → [tari] and *dari* ‘from’ → [dari]. Velar sounds are /k/ and /g/ such as *kalah* ‘lose’ → [kalah], and *galah* ‘spear’ → [galah]. Voiceless fricative sounds /f/ for labiodentals fricative, /s/ for alveolar fricative, /ʃ/ for palatal fricative, /x/ for velar fricative and glottal /h/ and one voiced alveolar fricative /z/, such as *vas* ‘vase’ → [vas ], *saya* ‘I’ → [saya], *syarat* ‘requisite’ → [ʃarat], *tarikh* ‘calculation year’ → [tarix], *habis* ‘finish’ → [habis] and *lazim* ‘usual’ → [lazim]. Nasal sounds /m/, /n/, /ŋ/, and /ŋ/, such as *makan* ‘eat’ → [makan], *nama* ‘name’ → [nama ], *nyiu* ‘wind’ → [ ŋiu ], *karangan* ‘opus’ → [karaŋan]. Then, Alveolar trill /r/ in word *sabar* ‘patient’ → [sabar] and lateral [l] in word *lampu* ‘light’ → [lampu]. Moreover, there are two semivowels in Indonesian language, bilabial /w/ in word *waktu* ‘time’ → [waktu] and palatal /y/ in word *kaya* ‘rich’ → [kaya ]. Palatal affricative /c/ and /j/ for example, *catur* ‘chess’ → [catur] and *jambu* ‘guava’ → [jambu]. According to Chaer (2003, p.84) Indonesian language has 26 consonants cluster, as follows: /br/, /bl/, /by/, /dy/, /fl/, /fr/, /gl/, /gr/, /kl/, /kl/, /kr/, /ks/, /kw/, /pr/, /ps/, /sl/, /sp/, /spr/, /sr/, /st/, /str/, /sw/, /sk/, /skr/, /tr/, and /ty/.

### 2.3 Standard Chinese Sounds

Standard Chinese consists of consonants, vowels, semi-vowels and diphthong. A Standard Chinese syllable tends to one to three constituents: the first nucleus is usually a consonant, the onset is a vowel or diphthong and the coda is commonly consonant [ŋ], and [n]. In writing system, Standard Chinese is

commonly using pin yin. Pin yin is Chinese system writing for transliterating Standard Chinese.

Standard Chinese has four tones which changes to meaning of Standard Chinese's words. The mark tones are written in above Standard Chinese's words. Standard Chinese vowel can carry one of four tones to distinguish meaning in Standard Chinese words for instance, the first tone is high, Flat and Constant tone → 妈妈 māmā = mother. The second, Rising tone, similar to "what" → 麻 má = hemp. The third, Deep down and rise similar to "land" in island → 马 mǎ = horse. The last is Falling Tone, similar to "No" → 骂 mà = scold. Here, the writer did not focus on the tones of standard Chinese. The sounds of Standard Chinese are divided into two segment features that consist of vowel and consonant sounds. A brief about those sounds is given below:

### 2.3.1 Vowels

Standard Chinese has monophthong and diphthong vowel sounds. In Standard Chinese, monophthong vowel sounds have five sounds that consists of three high vowel sounds /i/, /y/ and /u/, one medium vowel /ə/ and one low vowel sounds /a/ (Duanmu, 2007, p.35)

According to Ashby & Maidment (2005, pp.73-74), the location of a vowel refers to the part of the tongue which is highest in the production of the vowels. Front vowels are produced by raising the front tongue towards the hard palate. Central vowels are produced by raising the centre part of the tongue towards the junction of the hard and soft palate. Back vowels are produced by

raising the back of the tongue towards the soft palate that illustrated in figure 2.3 (Lee, 2003, p.109).

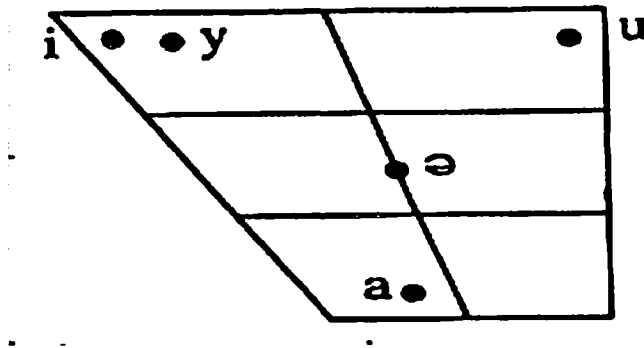


Figure 2.3 Vowel systems in Standard Chinese

From the illustration above, the writer gave example of Standard Chinese vowel sounds in Standard Chinese' words which are usually located after consonant, such as:

- High Vowels:        /i/ → 衣服 (yīfú = dress) [i:fu]  
                              /u/ → 五 (wǔ = five) [wu]
- Medium vowels:     /ə/ → 哥哥 (gē ge = older brother) [kə:kə]  
                              /o/ → 我 (wǒ = I) [uo]
- Low vowels:         /a/ → 妈妈 (māmā = mother) [ma:ma]

Here, the combination pure vowels and diphthong vowels of standard Chinese:

Pinyin	IPA	
Ai	[aɪ]	Ai

Ei	[eɪ]	Ei
Ao	[ɑu]	Ao
Ou	[ɔu]	Ou
An	[an]	An
En	[ən]	En
Ang	[aŋ]	Ang
Eng	[əŋ]	Eng
Er	[ɑ]	Er
<b>Finals beginning with i- (y-)</b>		
I	[i]	Yi
Ia	[iɑ]	Ya
Ie	[iɛ]	Ye
Iao	[iɑu]	Yao
Iu	[iɔu]	You
Ian	[ien]	Yan
In	[in]	Yin
Iang	[iɑŋ]	Yang
Ing	[iŋ]	Ying
<b>Finals beginning with u- (w)</b>		
U	[u]	Wu
Ua	[uɑ]	Wa
uo, o	[uɔ]	Wo
Uai	[uai]	Wai
Ui	[ueɪ]	Wei
Uan	[uan]	Wan
Un	[uən]	Wen
Uang	[uɑŋ]	Wang
Ong	[oŋ], [uəŋ]	Weng
<b>Finals beginning with ü- (yu-)</b>		
u, ü	[y] (listen)	Yu
ue, üe	[yœ]	Yue
Uan	[yen]	Yuan



Un	[yn]	Yun
long	[jɔŋ]	Yong

**Table 2.2** Vowel System of Standard Chinese

### 2.3.2 Consonants

Standard Chinese has twenty one consonant sounds, (Yang, 2006, pp 10-14). The consonant sounds are specified by five factors; state of vowel cords (voiced or voiceless), place of articulation, central or lateral articulation, velic closure (oral or nasal) and manner of articulation (Ladefoged, 1993, p.24).

Standard Chinese consonants consist of bilabial stop /p/ and /b/ in initial position, for instance /p/ sound is pronounced as [p<sup>h</sup>] in word <piān> 篇 ‘writing’ → [p<sup>h</sup>i:an] and /b/ sound is pronounced [p] in word <bā> 八 ‘eight’ → [pa:]. In initial position, /t/ and /d/ Alveolar stop, /t/ sound is pronounced [t<sup>h</sup>] in word < tā> 他 ‘he’ → [t<sup>h</sup>a:] and /d/ sound is pronounced as [t] in word <duì> 对 ‘correct’ → [tui]. In initial position, /k/ and /g/ velar sounds, /k/ sound is pronounced [k<sup>h</sup>] in word <kǒu> 口 ‘mouth’ → [k<sup>h</sup>u’o] and /g/ sound in initial position is pronounced [k] in word 哥哥 gē ge ‘older brother’ → [gə; kə]. /j/ and /c/ sounds for palatal affricative for instance /j/ sound is pronounced as [tʃ] in word <jiā> 家 ‘home’ → [tʃia:] and /c/ sound is pronounced as [tʃ<sup>h</sup>] in word <cuò> 错 ‘wrong’ → [tʃ<sup>h</sup>uo]. In initial, there are two nasal sounds namely /m/ and /n/ sounds. First, /m/ sound for bilabial nasal is pronounced [m] such as <māma> 妈妈 ‘mother’ → [ma:ma:]. Then, /n/ dental nasal is pronounced [n] such as <nú> 奴 ‘cow’ → [nu:]. For

labiodentals fricative, /f/ sound is pronounced [f] as <fei> 飞 'fly' → [fe'i]. For alveolar, there are two fricative sounds, namely /s/ and /r/ for instance /s/ sound is pronounced [s] as <si> 四 'four' → [si] and /r/ is pronounced [ʃ] as <ri> 日 'hot' → [ʃi]. For velar, /x/ is [ɣ] but it is similar to [s] consonant sound in Indonesian Language such as <xué> 学 'study' → [ɣiɛ]. For glotal, /h/ is pronounced [h] as <hui> 会 'go home' → [hu'i]. Alveolar lateral, /l/ sound is pronounced [l] as <liù> 六 'six' → [liu]. There are two semi vowel sound /w/ and /y/. /w/ sound is pronounced like vowel [u] as <wǔ> 五 'five' → [u] and /y/ is pronounced like vowel [i] as <yīfú> 衣服 'dress' → [i:fu]. (ŋ) occurs in final position such as <Zhōng> 中 → [tʂoŋ] (Yang, 2006, pp 10-14).

According to Yang (2006, p.14), Standard Chinese has only three consonants cluster, they are /zh/, /sh/ and /ch/ which are always located in initial position and pronounced as monophthong consonant. /zh/ sound is pronounced [tʂ] as <Zhōng> 中 'center' → [tʂoŋ], /sh/ sound is pronounced [ʃ] as <shàng> 上 'up' → [ʃaŋ] and /ch/ sound is pronounced [tʂʰ] as <chi> 吃 'eat' → [tʂʰi]. The consonant of Standard Chinese will illustrate in table 2.3.

	Labial	Dental	Retroflex	Velar	Glotal
Plosive	p p <sup>h</sup>	t t <sup>h</sup>		k k <sup>h</sup>	
Affri Cate		ts, t <sup>h</sup>	tʂ, tʂ <sup>h</sup>		
Nasal	m	n		(ŋ)	

Fri Cative	f	s	ʃ r	x	h
Literal approxim ant		l			
Glide/ semi vowel	w		y		

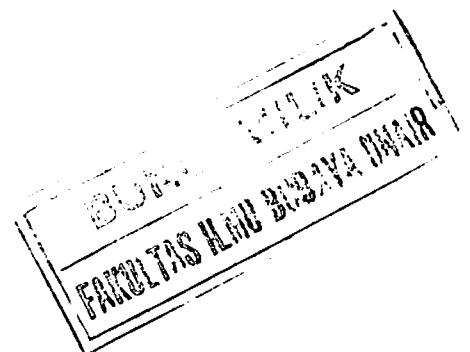
**Table 2.3 Consonant System in Standard Chinese**

## 2.4 Consonant Classification

The writer uses some English theories that support to analyze the data. The writer analyzed the mispronunciations of Indonesian by participants. Consonants are often classified by being given a so-called VPM-label. VPM stands for Voicing, Place and Manner. Forel, Claire A & Genoveva Puskás (2005, P. 7) described voicing means that the vocal folds are used; if they are not, the sound is voiceless. Place of articulation is the place where the air flow will be more or less obstructed. Last, manner is concerned with the nature of the obstruction.

### 2.4.1 Voicing

Voicing features are commonly two features, namely voiced and voiceless. According to Ashby & Maidment (2005, p.200) explained that voiced is produced with accompanying vocal fold vibration or for plosives produced with a short or zero voice onset time. Voiceless is produced without accompanying vocal fold vibration or for plosives produced with a relatively long voice onset time. Ladefoged (1982, p.47) explained that the sounds release of the lip closure there is a moment of aspiration which is a period of voiceless.



## 2.4.2 Place

Place of articulation refers to the location of articulation. Some of possible places of articulation are indicated by the arrow going from one of the lower articulators to one of the upper articulation. Some consonants exist and some consonants do not exist in Indonesian sounds. Here is a list of place of articulation (Ladefoged, 1993, pp: 6- 8):

### 2.4.2.1 Bilabial

Bringing the lips together (the lower lips and the upper lips) for example /p/, /b/ and /m/ in words *panas* 'hot', *baru* 'new' and *makan* 'eat' .

### 2.4.2.2 Labiodentals

Touching the bottom lips with the upper teeth for example /f/ and /v/ in words *fakultas* 'faculty' and *vase* 'vase'.

### 2.4.2.3 Dental

Inserting the tip of the tongue between upper and lower teeth, for example /θ/ and /ð/ in *thin* and *them* but the sounds do not exist in Indonesian sound.

### 2.4.2.4 Alveolar

Raising the tip of the tongue to alveolar ridge for example, /t/, /d/, /n/, /s/, /z/ and /l/ in words *tari* 'dance', *dari* 'from', *nenek* 'grandmother', *saya* 'I' , *lazim* 'usual', and *lampu* ' light'.

### 2.4.2.5 Palato alveolar

Raising the blade of the tongue to the back alveolar ridge for example, /ʃ/ and /ʒ/ in *treasure* and *measure* but the sounds do not exist in Indonesian sound.

### 2.4.2.6 Retroflex

Curling the tongue to the alveolar ridge, for example, /r/ in *row*.

#### 2.4.2.7 Palatal

Raising the front part of the tongue to point on the hard palate just behind alveolar ridge for example, /tʃ/, /dʒ/ and /j/ in words *jambu* 'guava'.

#### 2.4.2.8 Velar

Raising the back of the tongue to the soft palate or velum, for example, /k/, /g/ and /ŋ/ in words *kalah* 'lose', *galah* 'spear, and *karangan* 'opus'.

#### 2.4.2.9 Glottal

The glottis is the opening between vocal folds. In an [h], this opening is narrow enough to create some turbulence in the airstream following pass the vocal folds. For this reason, /h/ is classified as glottal for example *hari* 'day'.

### 2.4.3 Manner

Manners of articulation are other factor in which the air stream is affected on its travel from the lung and out of the mouth and nose. The manners can be divided into five categories (Ladefoged, 19993, pp.8- 11):

#### 2.4.3.1 Stop

Stop is completely stop in the oral activity are called stops. The stop sounds can occur in bilabial, such as /p/, /b/ and /m/; in alveolar such as /t/, /d/ and /n/ and in velar, such as /k/, /g/ and /ŋ/.

#### 2.4.3.2 Fricative

Sounds that produce by bringing one articulator close to another, but not touching and then making a hissing noise or friction are called fricative. There are nine fricatives in English, namely /f/, /v/, θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/ and /h/.

### **2.4.3.3 Affricate**

The stop closure characteristic is followed immediately by the show release the closure characteristic of fricative. Therefore affricate sounds are perceived as a sequence of a stop and fricative, for example: /dʒ/ and /tʃ/.

### **2.4.3.4 Approximant**

The approach of one articulator toward another without the tract being narrowed to such extent that a turbulence airstream is produced is called approximant, such as /r/, /w/ and /j/.

### **2.4.3.5 Lateral**

Lateral is the sounds produced by touching the tongue tip to the alveolar ridge in centre, there is no frication but the vocal cords are vibrating, such as /l/.

## **2.5 Vowel Classification**

According to Vikner (1986) vowels are articulated by raising some part of the tongue body. Vowels classification is often classified to tongue position, manner and rounding (cited in Forel.Claire A&Genoveva Puskás, 2006, pp. 14-16).

### **2.5.1 Tongue Position**

Tongue position is described using two criteria: the height (how high is the tongue) and the part of the tongue involved in the production of the sound. Tongue position refers to place of the tongue which are classified as front, central, back, (which part of the tongue is the highest, with front being equivalent to palatal and back equivalent to velar).

### 2.5.2 Manner

Manner of articulation , vowels are classified vertically, high, mid, low (the distance between articulators: the higher the tongue the higher the vowel).

### 2.5.3 Rounding

Lip rounding (the attitude of the lips) results in rounded, and unrounded.

## 2.6 Phonological Processes

Phonology processes is concerned with sounds in human productions. These productions are caused by the process which is called the phonological process. In this way, the writer used O'Grady and Debrovolsky (1989) theory about phonological process for adult language learner. According to O'Grady and Debrovolsky (1989, pp. 41-44). The phonological processes include assimilation, dissimilation, addition, deletion, movement or metathesis, and vowel reduction.

### 2.6.1 Assimilation

Ashby & Maidment (2005, p.140) stated that Assimilation, where a sound becomes more like some other sound in its immediate context. He also explained assimilation is a phonological process that involves a change in a speech sound to make it more similar to same sounds in its environment. An example from English: the word *ten* in most environments may become [tem] if the following word begins with bilabial consonants, as for example in the phrase *ten book*, which may be pronounced [tem buks].

### 2.6.2 Deletion

Deletion usually occurs in fast speech. Ashby & Maidment (2005, p.141) explained that deletion is also called elision or truncation where a sound is lost

from a sequence. The speaker deletes sounds in a string segment in this phonological process. For instance, examples from English, the word *government* would be pronounced as [gʌvəmənt]; the /r/ is left out. *Library* becomes [labri:]; the repeated consonant may be deleted.

### 2.6.3 Addition

Some of the linguists called it *epenthesis*, means that the insertion or addition of a vowel or a consonant occurs within an existing string of segments. Addition process is the opposite of deletion process. Ashby & Maidment (2005, p.141) stated insertion or addition puts in a sound where none was present before. For example, *sense* is pronounced as [sents]. Here the speaker adds the voiceless stop /t/ after the nasal /n/ followed by a voiceless consonant.

### 2.6.4 Metathesis

Metathesis is a process that recorded a sequence of segment. It is heard in children pronunciation rather than adult, for instance *spaghetti* is pronounced as *pesghetti* [pəsketi:].

### 2.6.5 Dissimilation

Dissimilation is the opposite of assimilation, which is a change in sound to make it dissimilar from some sound in its environment. Ashby (2005, p.141) stated dissimilation process has the effect of preventing two similar segments occurring close together. Dissimilation is much less common than assimilation. For example the English word, in the word *fifths*, the final three consecutive fricatives are dissimilated from /fθs/ to /fts/.



### **2.6.6 Vowel Reduction**

In many languages, the articulation of vowels may move to a more central position when the vowels are unstressed. This process is known as (vowel) reduction.

### **2.7 Related study**

There was a study which examined native language influence on the production of English sounds. The researcher is Pranangirum. The study obviously has similarity with the theory that the writer used in this study. The Participants of Pranangirum's study are student of D3 in Airlangga University. The participants of my study were native Chinese speakers who live in Surabaya.

“Native Language Influence on the Production of English Sounds by the Student of D3 in English Language of Airlangga” by Prananingrum (2006), her study observed the interference that occurred between Indonesian languages to English. In her study the object were the students of D3 in English Language of Airlangga University. Prananingrum used an elicitation paragraph to be read by six respondents who participated in her study and then she recorded it. After that, she used the phonetic transcription on identifying and determining the sound that were pronounced incorrectly by the respondent. The results demonstrate that there were seven English consonants: [k], [z], [v], [ʃ], [θ], [ð], and [d], and ten English vowel [i:], [ɜ:], [ɔ:], i difficult consonants were [z] and [v], while the greatest difficult vowels were [i:], [ə], and [æ].

# CHAPTER III

## METHOD OF THE STUDY