CHAPTER II

REVIEW OF LITERATURES, CONCEPTS AND THEORETICAL FRAMEWORK

2.1. Review of Literatures

This study was conducted by reviewing some relevant studies concerned with the theories which were applied in this study. Those theories are phonetic transcriptions and contrastive analysis. There were four theses and one international journal that being reviewed.

The first thesis entitled “Pronunciation Problems of English Segmental Sounds among the First Graders of SMA Islam Malang” by Siti Fatimah (2009). This study discussed about the pronunciation problems of certain significant English segmental sounds among the first graders of SMA Islam Malang and in what position of words the problems occur. The transcription which was used in this study is based on IPA OXFORD Advanced Learner's Dictionary seventh edition by A. S. Hornby (2005). In developing the instruments, the researcher used Syafei’s book (1988) as the guidance for the most problematic sounds to be pronounced.

In order to know one of the reasons of the most mispronounced sounds, the research compared the charts of vowels of English and Indonesian pronunciation. Both studies also apply Robert Lado’s theory of Contrastive analysis in order to compare both English and Indonesia phonetics features and using IPA Oxford
Advanced Learner's Dictionary Seventh edition by A. S. Hornby (2005), as the guidance for the official English transcriptions.

In the other hand, the thesis’ writer focused in analyzing problems which occurred in Senior High School student, in Malang to be more precise. Also, the theses are concentrating on analyzing and comparing English and Indonesia vowels. This thesis provides adequate information for the other researchers to decide what point should be discussed in the paper. It has a good source of references about contrastive analysis by R. Lado.

The second thesis is by Adi Wicaksono which entitled “A Comparative Analysis of Phonetic Transcriptions of Vowels in the Al Bhed Language in Final Fantasy X: International Version” in year 2010. This thesis is quite unique as its data source is from a video game. The study is about comparing the English phonetic transcription of vowel with imagery language “Al-Bhed” which is exists in the game.

The researcher tried to list all the Al-Bhed vocabulary by playing the game until the end, record the conversation in the game by using hand-held camera and then compare those words which contains vowels in it. The purpose of the study is to define the same vowels that maybe exist between English and Al-Bhed. Also the writer intended to widen the other student point of view related to a different language by undergoing this study and research of language.

This thesis is using Oxford dictionary as the guidance in English transcriptions and the theory of English vowel transcription by Roach (1991) and Aitchison (1992) to analyze and comparing both language. The thesis gave a lot of
new idea to the researcher about how one should analyze a language and then compared it to the other. There is also another thesis by Ni Putu Ika Yuniati (2000) from Udayana University, “Contrasting Between English and Indonesian Segmental Phonemes” which applying the same contrastive analysis approaches to analyze Indonesian and English segmental phonemes.

In her study, the writer focused on the identification of English segmental phonemes that are absent in Indonesian. The analysis conducted under Larry M. Hyman (1975) about phonology. In his book, Larry stated that “Two languages can have the same phonetics segment and yet these segments have different phonological properties in the languages.”

This thesis is only analyzed and discussed about the phonological differences and only doing a library research without any field research conducted. This thesis gave a good example of phonemes differences between English and Indonesian. Also this thesis gave many good sources and references about analyzing phonology between two or more languages.

Dian Mahayani from Udayana University also conducted a research about pronunciation error in 2009. Her thesis entitled “The Analysis of English Pronunciation Error Made by 6th grade Students in SD Saraswati 2 Denpasar” and the research was done to fulfill the undergraduate thesis requirements. In this thesis, the researcher applied a few theories to analyze the error made by elementary school students. The first theory is about English pronunciation by Roach (1998) who defines the aspects of pronouncing; voicing, manner of articulation and place of articulation.
Error analysis is the other theory applied in this undergraduate thesis. In the book *Error Analysis: Perspective on Second Language Acquisition*, Richard (1974) stated that “Errors are frequent regardless of the learner’s language background.” This book provides the theory of Error Analysis system that can help researcher on identifying errors by made a list of word in one language and comparing the correct pronunciation with the student’s.

The researcher has conducted the field study in SD Saraswati 2 Denpasar and 20 students were involved. The result was satisfying in terms of finding out and analyzing the error made by those students. This thesis gave an example on how to conduct a field research about students’ pronunciation error or problems.

There is also an article entitled “*A Phonological Contrastive Analysis of Kurdish and English*” by Massoud Rahimpour and Majid Saedi Dovaise which is included in the International Journal of English Linguistic published by Canadian Center of Science and Education in year 2011. This study is an attempt to compare and contrast the sound systems of Kurdish and English for pedagogical aims.

The consonants, vowels, stress and intonation of the two languages are described using the same model-taxonomic phonology- and then compared and contrasted to find the similarities and differences between the two systems and hence the potential areas of difficulty in teaching English to students whose native language is Kurdish. Forty four phonemes of BBC English have been described and compared with the thirty eight phonemes of Sorani Kurdish. The nature and
function of stress and intonation in the two languages have also been compared and contrasted.

2.2. Concept

This undergraduate thesis focused on the pronunciation problems that encountered by non-native English learners. Therefore, this study is related to the concepts of English phonetics and phonology. Phonetics and phonology is a branch of study which concerned with sounds and sound systems of language. This thesis also related to the contrastive analysis which concerned with comparing between two different languages. The concepts used to support the discussion of this study were in detail explained as follows;

2.2.1 Pronunciation

Based on Oxford dictionary of English, pronunciation is the way in which a word is pronounced. While based on Peter Roach (1998: 43), pronunciation which is called the speech production in his book, is the way a word or a language is spoken, or the manner in which someone utters a word. A word can be spoken in different ways by various individuals or groups, depending on many factors, such as: the duration of the cultural exposure of their childhood, the location of their current residence, speech or voice disorders, their ethnic group, their social class, or their education.
2.2.2 Consonant

A consonant is a basic sound in which the breath is at least partly obstructed and which can be combined with a vowel to form a syllable, based on the Oxford dictionary of English. Meanwhile, based on Roach (1998: 74) a consonant is a speech sound that’s not a vowel. The sound of a consonant is produced by a partial or complete obstruction of the air stream by a constriction of the speech organs. In writing, a consonant is any letter of the alphabet except a, e, i, o, u, and sometimes y.

2.2.3 English as Foreign Language

According to Richards (1974: 87), English as Foreign Language (EFL) is the learning of English in countries where English is studied as a foreign language in formal setting (such as school) and where English is not normally a language of instruction but simply a branch of study. Such as English in Japan, France, Indonesia, Russia and so on, is a purely cultural object of study and is not involved in societal functions.

Supporting Richards, Mckay (2002:9) maintains that the various role of English serves in different countries of the world are best conceived of in terms of three circles; (1) the inner circle; where English is the primary language of the country such as in Australia, Canada, the United States and the United Kingdom; (2) the outer circle; where English serves as a second language in a multilingual country such as in Singapore, India and Philippines and (3) the expanding circle;
where English is widely studied as a foreign language such as China, Japan and Korea.

Figure 1. “Three Circles” in Mckay (2002:10) categorization of countries in which English is used (from crystal 1997:5).

2.3. Theoretical Framework

Some theories were used in discussing the topic and investigating the problems of this study which either acting as main theory or as supporting elements. Since two languages were involved in this study discussion, therefore both phonological systems were chosen as the main ideas; they were the theory of English phonology proposed by Roach (2000) and Indonesian phonology by Abdul Chaer (2009). There is also contrastive analysis, serves as a supporting theory. The theory of contrasting two languages is firstly proposed by Robert Lado in 1957. As phonetics and phonology both deal with sounds, and as English spelling and English pronunciation are two very different things, it is important that you keep in mind that we are not interested in letters here, but in sounds.

2.3.1 Theory of English Phonological System by Roach

Whereas syntax is about sentence formation, and semantics about sentence interpretation, phonetics and phonology cover the field of sentence utterance. Phonetics is concerned with how sounds are produced, transmitted and perceived
therefore we will only look at the production of sounds in this study. While the phonology is concerned with how sounds function in relation to each other in a language. (Roach, 1998: 20)

Phonetics is a descriptive tool necessary to the study of the phonological aspects of a language. According to Roach (1998: 23), it is proposed the theory of detailed phonological system of English language. Schematically, we can divide the sounds as follows:

The diagram above shows us that the sound production systems of humans can be divided into various groups depending on the criteria we use. In this study, we mainly focused only on the consonant sounds. Consonant made with the airstream from the lungs being totally blocked in the mouth are called stops. Those which were not completely stopped and bring about a slight friction called fricatives. These two groups of sounds are commonly referred as obstruent. Those which are neither stops nor fricatives are called sonorants.

Consonant are often classified by being given a so-called VPM label, VPM stands for Voicing, Place and Manner:
1. Voicing means that the vocal folds are used; if they are not, the sound is voiceless (note that vowels always imply the use of vocal folds).

2. Places of articulation are the place where the air flow will be more or less obstructed.

3. Manners of articulation are concerned with the nature of the obstruction.

### 2.3.1.1 Classification of consonants by manner of articulation

The manner of articulation has to do with the kind of obstruction the air meets on its way out, after it has passed the vocal folds. (Roach, 1998: 59) It may meet a complete closure (plosives), an almost complete closure (fricatives) or the smaller degree of closure (approximants) or the air might escape in more exceptional ways, around the sides of the tongue (lateral) and through the nasal cavity (nassals). The consonant phonemes are analyzed via phonemic oppositions and phonetic features respectively as follows:

a. Plosive

   Plosive occur when a complete closure is made somewhere in the vocal tract. Air pressure increase behind the closure and is then released explosively. Plosive sounds are also sometimes referred to as stops. The blocking is usually done using the tongue, the lips or the throat. Plosives can be voiced or voiceless. These are the English alphabet that belongs to plosive consonant sound: /p/, /t/, /k/ are voiceless plosives and /b/, /d/, /ɡ/ are voiced plosives.
b. Affricative

Affricative occur when a complete closure is made somewhere in the mouth and the soft palate is raised. Air pressure increases behind the closure and then released more slowly than the plosives. Affricative consonant sounds are /tʃ/ and /dʒ/. The way an affricate resembles a plosive followed by a fricative is mirrored in the symbols. Both consist of a plosive symbol followed by a fricative one: /t+ʃ/, /d+ʒ/.

c. Fricatives

Fricatives occur when two vocal organs come close enough together for the movement of air to be heard between them. When they produced, air escapes through a small passage and makes a hissing sound. Most language have fricatives, the most commonly found being something like /s/ sound. Fricatives are continuant consonant which means that you can continue making them without interruption as long as you have enough air in your lungs. The fricative consonant sounds are /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/, /h/.

Figures 2.

Figure 2.a. labiodental fricatives
figure 2.b. dental fricatives

Figures 2.c. palate-alveolar fricatives
d. Nasals

Nasals sound occur when a complete closure is made somewhere in the mouth, the soft palate is lowered and the air escapes through the nasal cavity. This consonant sound resembles plosives, except that there is a complete closure in the mouth, but as the velum is lowered the air can escape through the nasal cavity. Though most sounds are produced with the velum raised, the normal position for velum is lowered as this is the position for breathing (your velum is probably lowered right now when you are reading this). Based on Roach, there are three nasal sounds, they are: /m/, /n/, /ŋ/.

e. Lateral

A lateral is an L-like consonant, in which the airstream proceeds along the sides of the tongue, but is blocked by the tongue from going through the middle of the mouth. Most commonly, the tip of the tongue makes contact with the upper teeth (see dental consonant) or the upper gum (the alveolar ridge) just behind the teeth (see alveolar consonant). The most common laterals are approximants and belong to the class of liquids, though lateral fricatives and affricates are common in some parts of the world. The lateral is so called because in the sound, the airflow is around the sides of the tongue. There is only one lateral sound consonant that is /l/.

f. Approximants

Approximants occur when one articulator moves close to another, but not close enough to cause friction or to stop the airflow. Note that the /w/ and /j/ are sometimes referred to as ‘semi-vowels’. This happen because they are made
without a restriction to the airflow, unlike the other consonants. But they are act in a consonant-like way. Based on Roach’s book of English Phonetics and Phonemics there are three Approximant sounds consonants they are: /r/, /l/, /w/.

With the exception of glottal, each place of articulation has a pair of phonemes, one fortis and one lenis. This is similar to what was seen with the lenis and their friction noise is louder. The discussion on consonant above can be summarized in the table below (Roach, 2000:65):

**Table 1. The English consonant based from Roach (2000)**

<table>
<thead>
<tr>
<th>Place of Articulation</th>
<th>Bilabial</th>
<th>Labio-</th>
<th>Dental</th>
<th>Alveolar</th>
<th>Post-</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>p b</td>
<td>t d</td>
<td>k q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f v</td>
<td>p s</td>
<td>s z</td>
<td>s z</td>
<td>f s</td>
<td>h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricate</td>
<td>ʃ ʒ</td>
<td>ʒ ʃ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lateral</td>
<td></td>
<td>l</td>
<td>l</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>ʋ ɹ 侥幸</td>
<td>n ɹ 侥幸</td>
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</tbody>
</table>

2.3.2 Theory of Indonesian Phonology by Abdul Chaer

According to Abdul Chaer (2003: 102), as the etymology of the term "phonology" is formed from the word "font" which means "sound" and "logy" meaning "science". Therefore, it can simply be said that phonology is the study of language sounds in general. The object of study is "fon" or the sounds of language produced by the human vocal organs.

Based on the previous description it can be said that phonology is actually the sub-discipline of linguistics that talk about the language sounds produced by
the human vocal organs and theories change the sound. Phonological also spoke of runs, the sounds of language and the analysis.

Based on his book *Fonologi Bahasa Indonesia*, Abdul Chaer (2009: 144) stated that consonants, ‘*huruf mati*’ in Indonesian, are speech sounds that created due to the air from the lungs got obstructed. There are twenty one consonants in Indonesian, namely b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, and z.

Chaer (2009: 150) also stated that Indonesian consonants are distinguished by these four categories:

1. *Cara hambat* (manner of articulation);
2. *Tempat hambat* (place of articulation);
3. *Hubungan posisional antara penghambat-penghambat* (The positional relationship between the blocks or the relationship between passive articulator); and
4. *Bergetar tidaknya pita suara* (Whether the vocal cords vibrate or not).

### 2.3.2.1 Classification of consonants by manner of articulation

Based on *Fonologi Bahasa Indonesia* book (2009: 158), the speech sounds of consonants are divided into 4 by *cara hambat* (the manner of articulation):

a. *Konsonan hambat letup* (plosives) is consonants that occur with full air barriers and then the barrier is released suddenly. The examples of Konsonan hambat letup: /p/, /b/, /t/, /d/, /c/, /j/, /k/ and /g/.

b. *Konsonan sengau* (nasal) is consonant formed by blocking or closing the air passages of the lungs through the nasal cavity. The soft palate is
lowered and the air escapes through the nasal cavity. Examples for this consonant sound s are /ml, /nl, /ng/.

c. Konsonan paduan (affricative) the place of articulation is behind the tip of the tongue and gums. The resulting sound /ts, d/. The sound of /ts/ is “c” in Indonesian words while the sound of /d/ is similar with “j” sound in Indonesia.

d. Konsonan sampingan (lateral) is formed by closing the flow of air in the middle of the mouth so that air out through two side articulations tips of the tongue to the gums. The resulting sound is /l/.

e. Konsonan gersen (fricatives) is a consonant formed by narrowing the flow path of air exhaled from the lungs, so that the airway is blocked and found its way out by shifting. Examples of this konsonan gersen /f/, /v/, /s/, /z/, /x/, /h/.

f. Konsonan getar (approximants) is formed by blocking the air flow and exhaled from the lungs repeatedly and quickly. This occurs when a consonant active articulator which led to the dodder is the tip of the tongue and gums passive articulator. The resulting sound /r/.

g. Konsonan Hampiran, semi-vowel sounds including consonant relationship between obstacles. The resulting sound /w/ and /y/
Table 2. Indonesian consonant sound based on book entitled “Fonologi Bahasa Indonesia” by Abdul Chaer published in 2009.

<table>
<thead>
<tr>
<th></th>
<th>Biiall</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Labiovelar</th>
<th>Velarovelar</th>
<th>Dibrataal</th>
<th>Palatal</th>
<th>Retroal</th>
<th>Geratal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hambat</td>
<td>p b</td>
<td>t d</td>
<td>k g</td>
<td>?</td>
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<td></td>
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<tr>
<td>Getaar</td>
<td>f v</td>
<td>ð s j</td>
<td>ñ x h</td>
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<tr>
<td>Paduan</td>
<td>c ñ</td>
<td></td>
<td>ñ g</td>
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<tr>
<td>Senggar</td>
<td>m r g</td>
<td></td>
<td>R m</td>
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<tr>
<td>Bugaran</td>
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<td>Sampingan</td>
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<tr>
<td>Hampiran</td>
<td>w y</td>
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</table>

2.3.3 Contrastive Analysis by Robert Lado

Narrowly defined, contrastive analysis investigates the differences between pairs (or small sets) of languages against the background of similarities and with the purpose of providing input to applied disciplines such as foreign language teaching and translation studies. (Lado, 1957: 56). With its largely descriptive focus contrastive linguistics provides an interface between theory and application. It makes use of theoretical findings and models of language description but is driven by the objective of applicability.

When comparing the sound system of two languages, the contrastive analyst has to go through four basic steps (Lado, 1957: 111). Firstly, he should draw up the phonemic inventory (describe and compare vowels and consonants) of the two languages under study. Secondly, the contrastive analyst should compare the phonemes in the two languages interlingually. At this stage, the contrastive analyst
should apply the minimal pair test. Here is an example of the minimal pair test between the phonemes /k/ and /g/ in English and Arabic:

   English: came /Keim/ vs. game /geim/

   Arabic: /kelb/ ‘dog’ vs. /gelb/ ‘heart’

   Thirdly, the contrastive analyst should state the allophones of each phoneme of the two languages being compared. And fourthly, he should state the distribution restrictions of the phonemes and allophones of both languages. In the tradition of contrastive analysis, Lado predicts that careful analysis of two separate sound systems (of L1 and L2) will allow prediction, detection and correction of pronunciation problems for L2 learners. He cautions that analyst must involve many factors related to sounds systems, such as phonetics, phonemics, sequences of phonemes and intonation patterns. For Lado, the goal of such analyses was to improve foreign language instruction and create better learning materials.