Chapter II

Literature Review

The present chapter discusses several headings that included the Distinctive Feature, The Production of Consonant, Concept of Consonant, Pre-school age children, The Factors that Influence Language Production, Organ of speech, and the last about Speech Mechanism. All of the headings will be investigated as follows:

2.1 Concept of Consonant

Consonants and vowels are produced differently. Regarding the topic of research which only covers consonant acquisition, researcher only explains the concept of consonants nor vowels. In the production of consonants, the parts of the mouth involved are the tongue, the lips, the teeth, the tooth ridge, the palate, the velum, and the uvula. These are called the points of articulation (Dardjowidjojo 2009, p.23). As the case with consonant sound production in general, the English consonants are produced in a similar way. There are three parameters that we must consider: (1) the point of articulations, (2) the manner of articulation, and (3) the state of the vocal folds. The point of articulation refers to the articulatory mechanism which moves in our mouth thus playing a role in the production.

It is also parallel with Sari (2011 p.18) who stated that “the production of consonants includes three dimensions, they are vocal folds, place of articulation, and manner of articulation”. The state of vocal folds in terms of whether or not they vibrate, then the place or articulation decides which parts of the mouth and the rest of the sound organs are in contact to produce a sound and, the manner of articulation establishes the kind of constriction involved, the direction where the air is flowing, and the circumstances affecting the tongue when producing a sound.
In addition, Indriani (2001 p.8-9) stated that “the International Phonetic Alphabet recognizes the following place of articulation. They are bilabial, labio dental, dental, alveolar, post alveolar, palate alveolar, palatal, velar, glottal”. Moreover, the bilabial sounds are produced when the two lips are the primary articulators. The bilabial sounds are /b/, /p/, /m/, /w/. Labio- dental sounds are produced when the lower lip articulators with the upper teeth. The sounds are /f/, /v/. Dental sounds are produced when the tongue tip and rims articulate with the upper teeth. The sounds are /θ/, /ð/. Alveolar is the blade or tip and blade, of the tongue articulate with the rear part of the alveolar ridge. The sounds are /t/, /d/, /l/, /n/, /s/, /z/. Post alveolar is the tip and rims of the tongue articulate with the rear part of the alveolar ridge. The sound are /r/. This sound seems difficult to produce by several children. Palate alveolar is the blade or the tip and blade, of the tongue articulate with the alveolar ridge and there is at the same time a rising of the front of the tongue towards the hard palate. The sounds are /ʃ/, /ʒ/, /tʃ/, /dʒ/. Palatal is the front of the tongue articulates with the soft palate. The sound is /j/. Velar is the back of the tongue articulates with the soft palate. The sounds are /k/, /g/, /ŋ/. The last sound based on place of articulation is glottal. Glottal is an obstruction or a narrowing causing friction but not vibration, between, the vocal cords. The sound is /h/.

Manner of articulation refers to the way the airstream is released. If it is released through the nose, the sounds are called nasals. If it is through the mouth, they are oral. The vocal folds play an important role as they determine whether a sound is voiced or voiceless. A sounds is voiced when in its production, the vocal folds vibrate. Otherwise, the sound is voiceless. Thus, sound such us [b] and [g] voiced, while their counterparts [p] and [k] are voiceless.
It can be concluded that all normal English words contain at least one vowel. All the sounds produced in the English are either voiced or voiceless. Voiced sounds occur when the vocal cords vibrate when the sound is produced. There is no vocal cord vibration when producing voiceless sounds. To test this, place your finger tips hand on your throat as you say the sounds. When saying the voiced sounds, you should be able to feel a vibration. When saying the voiceless sounds you sound not be able to feel a vibration. (Voice: b, d, g, v, z, th, sz, j, I, m, n, ng, r, w-x) and the (voiceless: p, t, k, f, s, th, ch, h)

2.2 The Production of Consonant

According to Dardjowidjojo (2009, p.23) Consonants and Vowels are produced in completely different ways. In the production of consonants, the parts of the mouth involved are the tongue, the lips, the teeth, the tooth ridge, the palate and the velum and the uvula. These are called the points of articulation.

Furthermore, Dardjowidjojo (2003) in his other book also explained how the consonants are produced. His said that sounds are produced by using the parts of mouth such us tongue, lips, and teeth. To produce the consonant, it is necessary to pay attention for tree factors; they are place of articulation, manner of articulation, and the vocal cord. (Dardjowijojo, 2003, pp.35-36)

2.3 Organ of Speech

In Phonetics and Phonology, it's important to know the Vocal Organs places in order to be able to pronounce correctly. Mary Freeman (1999) in her article” The Eight Parts of Human Speech Organs & Their Definitions”, mention that Lips, Teeth, Tongue, Uvula, Glottis, Alveolar, Hard Palate, soft palate/Velum.
The lips are important in speech. They can be pressed together (when we produce the sounds p, b), brought into contact with the teeth (as in f, v), or rounded to produce the lip-shape for vowels like /u/. Sounds in which the lips are in contact with each other are called bilabial, while those with lip-to-teeth contact are called labiodental. The teeth (upper and lower) are usually shown in diagrams only at the front of the mouth, immediately behind the lips. This is for the sake of a simple diagram, and it should be remembered that most speakers have teeth to the sides of their mouths, back almost to the soft palate. The tongue is in contact with the upper side teeth for many speech sounds. Sounds made with the tongue touching the front teeth are called dental.

The tongue is, of course, a very important articulator and it can be moved into many different places and different shapes. It is usual to divide the tongue into different parts, though there are no clear dividing lines within the tongue. The picture of organ of speech shows the tongue on a larger scale with these parts shown: tip, blade, front, back and root. (This use of the word “front” often seems rather strange at first.) The uvula is a small fleshy finger-like flap of tissue that hangs in the back of the throat and is an extension of the soft palate. The Glottis is the term used to describe the part of the larynx that contains the vocal cords. It also includes the vocal folds as well as the spaces found between them. The alveolar ridge is between the top front teeth and the hard palate. You can feel its shape with your tongue. Its surface is really much rougher than it feels, and is covered with little ridges. You can only see these if you have a mirror small enough to go inside your mouth (such as those used by dentists). Sounds made with the tongue touching here (such as t and d) are called alveolar. The hard palate is often called the “roof of the mouth”. You can feel its smooth curved surface with your tongue. The velum or soft palate is seen in the diagram in a position
that allows air to pass through the nose and through the mouth. Yours is probably in that position now, but often in speech it is raised so that air cannot escape through the nose. The other important thing about the velum is that it is one of the articulators that can be touched by the tongue. When we pronounce the sounds /k/ and /g/, the tongue is in contact with the lower side of the velum, and we call these velar consonants. The hard palate is often called the “roof of the mouth”. You can feel its smooth curved surface with your tongue.

Based on the explanation, it can be seen that the eight articulators described previously are the main ones used in speech, but there are three other things to remember. Firstly, the larynx could also be described as an articulator ± a very complex and independent one. Secondly, the jaws are sometimes called articulators; certainly we move the lower jaw a lot in speaking. But the jaws are not articulators in the same way as the others, because they cannot themselves make contact with other articulators. Finally, although there is practically nothing that we can do with the nose and the nasal cavity, they are a very important part of our equipment for making sounds (which is sometimes called our vocal apparatus), particularly nasal consonants such as /m/, /n/.

2.4 Speech Mechanism

Speech production with a good order is predestined for human. The production of speech is commonly known as sound production. It involves many elements that we call as organ of speech. There are many elements of organ of speech but only four fundamental elements during the production of sounds. It is supported by Dardjowidjojo who stated that In order for a person to produce a sound, he needs four fundamental elements: (1) lungs, (2) vocal folds, (3) the resonators, and (4) the articulators (Dardjowidjojo 2009, p.3). Lung is important to push out the air when human wants to produce a sound. The resonator is well-
known as pharynx and the vocal fold itself is also known as vocal cord. The articulator consists of lips, teeth, tongue, and palate.

The fundamental elements work together in producing sounds. Dardjowidjojo (2009, p.3) explained that “when a human want to produce a sound, he pushes out the air from the lungs. The air passes through the larynx where it is located the vocal folds. The air may or may not be modified by vocal folds”. The function of vocal folds is, among other things, to determine whether a sound is voiced or voiceless. If the folds are wide apart, the sounds are voiceless such as /tʃ/, /θ/, /h/, /k/, /p/, /s/, /ʃ/, /t/, /f/. meanwhile, if the vocal folds are in touch with each other and vibrating, the sounds are voiced such as /b/, /d/, /g/, /j/, /l/, /m/, /n/, /ŋ/, /r/, /v/, /z/, /ð/. Based on that explanation, it can be concluded that vocal folds are very important in producing sounds.

2.5 Distinctive Feature

It is taken from Halle and Clements (1983, pp 6-8), The following features serve to distinguish between vowels and consonants:

Syllabic – the role a sound plays in the structure of a syllable. [+syllabic] sounds include all vowels, as well as nasals and liquids when they function as the basis of a syllable, as in rhythm. The semivowels, [w] and [y], are

[– syllabic].

Consonantal – a constriction (penyempitan) or occlusion of the oral cavity, [+consonantal] sounds include stops, fricatives, affricates, nasal, and liquids. Note that [h] is [– consonantal], although it has traditionally been classed as a consonants, because [h] does not exhibit the constriction that is typical of consonantal sounds.
Sonorant – the resonance of a sound. Sonorant sounds are produced with a configuration of the vocal tract cavity that allows spontaneous voicing. [+sonorant] sounds include vowels, nasals, liquids, and semivowels.

The following features serve to distinguish among consonants:

Continuant – those sounds that involve a constriction or occlusion of the oral cavity over a period time. The fricatives, liquids, and glides ([y], [w]) are [+continuant]; the stops, nasal, and affricates are [-continuant].

Strident – high-frequency noisiness. The sounds [f], [s],[ʃ], and [č], along with their voiced counterpart, are [+strident].

Nasal – those sounds produced with the nasal cavity open.

Anterior – those sounds formed in the anterior or forward part of the mouth.

Coronal – those sounds formed with the blade (ujung) of the tongue.

Voiced – the presence of vocal cord vibration.

The following features principally serve to distinguish among vowels:

High – with the blade of the tongue above a neutral position.

Low – with the blade of the tongue below a neutral position. The midvowels [e], [ɛ], [\textipa{\partial}] and [o] are neither high nor low and are marked [- high] and [- low].

Back – with the tongue further back than a neutral position. In utilizing the distinctive features, the central vowels [\textipa{\partial}] and [a] are considered [+ back].

Round – with the lips rounded. The vowels [\textipa{\partial}] and [a] are unrounded; thus, they are distinguished from back vowels, which are [+ round].

Tense – with the muscles of vocalization tensed. The vowels marked [- tense] are [ɪ], [ɛ], [ʌ], [a], and [ʊ]; all other vowels are [+ tense]. Vowels marked as [- tense] are frequently called lax.
vowels; the articulatory positions for tense vowels are generally maintained longer than for lax vowels. Note that consonants may also be [+tense] or [-tense], although for consonant this feature is best defined acoustically.

- Table 3.1 Distinctive Features

| English | P | B | F | v | M | t | d | θ | n | s | z | ċ | ğ | f | ʒ | k | g | ɳ | h | y | w | r | L |
| Syllabic | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Consonantal | + | + | + | + | + | + | + | + | + | + | + | + | + | - | - | - | + | + | + | + | + | - | - | - | - |
| Sonorant | - | - | - | - | + | - | - | - | - | - | - | - | - | - | - | - | + | - | + | + | + | - | - | - | - |
| Continuant | - | - | + | - | - | - | + | - | + | - | - | + | - | - | - | - | + | + | + | + | + | - | - | - | - |
| Nasal | - | - | - | + | - | - | - | - | - | - | - | - | - | - | - | - | + | - | - | - | - | - | - | - | - |
| Strident | - | - | + | - | - | - | - | - | + | - | - | + | - | - | - | - | + | - | - | - | - | - | - | - | - |
| Anterior | + | + | + | + | + | + | + | + | + | + | + | + | + | - | - | - | - | - | - | - | - | - | - | - | - |
| Coronal | - | - | - | - | + | + | + | + | + | + | + | + | + | + | - | - | - | - | - | - | - | - | - | - | - |
| Voiced | - | + | - | + | - | + | - | + | - | + | - | + | - | - | - | + | + | + | + | + | + | - | - | - | - |
| High | - | - | - | - | - | - | - | - | - | + | + | + | + | + | - | - | + | + | + | + | + | - | - | - | - |
| Low | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Back | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
Furthermore, this theory of distinctive feature has an important role in analyzing the consonant production, and it is related to this study. However, the theory of distinctive feature can help the researcher to analysis the data of this study.

2.6 The Factors that Influence Language Production

- Internal Factor (Organ of Speech and Children Behavior)

  According to Dardjowidjojo (2003, p.234 – 235) as the theory of universal grammar, every child has a language acquisition device. Each child is given the same organ of speech. Therefore, if the child has teeth Indonesia, western kids also have teeth so that it can be said that internal factors affecting Chomsky's theory that language is naturally acquired language pertaining to the organs of speech from the brain to the tongue, teeth and other parts section.

- External factor (Education, Family, and Environment)

  Moreover, the theory from Skinner, about behaviouristic, said that language production is influenced by environmental or commonly referred to tabularasa theory that determines the quality of children's language production is the environment, education, drills, exercises, parent, and so on.

2.7 Pre-School Age Children

  According to lexical definition, preschool age child or preschooler is a child who is old enough to talk and walk but who is too young to go to school or a child who goes to a
preschool (Meriam Webster, 2012, p.1). It can be concluded that a child who can be categorized as preschooler is a child who can produce a normal speech and can walk but he/she is too young to attend the school. We can also conclude that preshooler is a child who attends a special school program for children. This definition is also similar with the definition of Indonesian preschooler. In Indonesia, generally, a preschooler is a child with the age of 0 to 3 or 4 years. The age of 3 or 4 is the age of a child who does not attend a school such as early childhood education or kindergarten. Most of students of early childhood education or kindergarten are at the age of 4 to 6 years.

Moreover, from the point of view of educational process, a preschool is an early childhood program in which children combine learning with play in a program run by professionally trained adults. Children are most commonly enrolled in preschool between the ages of three and five, though those as young as two can attend some schools. Preschools are different from traditional day care in that their emphasis is learning and development rather than enabling parents to work or pursue other activities. Moreover, preschoolers depend on the instructor for the acquisition of knowledge. This early learning requires the development of factual knowledge, skills, and training.

Based on previous explanation, children should start by adopting a scheme to build knowledge of the instructor through the use of the child's sense of self. This acquisition of knowledge through kinesthetic intelligence /musical/ rhythmic and the body requires the instructor to demonstrate, manipulate, observe, measure, and modify behavior change in a certain direction, and to encourage preschoolers to discover that there is no distinction between learning and fun.