

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

This chapter explores the review of related Linguistic, which has a relationship with psycholinguistics, especially with first language acquisition and her focus on phonological process, discusses the supporting theories. this chapter is divided into some parts, they are first language acquisition theory, child phonology theory, articulatory phonetic theory and phonological process theory.

#### **2.1 First Language Acquisition**

Yule (2010: 170-174) says that first language acquisition is remarkable for the speed with which it takes place. In addition to the speed of acquisition, the fact that it generally occurs, without overt instruction, for all children, regardless of great differences in their circumstances, provides strong support for the idea that there is an innate predisposition in the human infant to acquire language. We can think of this as a special capacity for language with which each newborn child is endowed. By itself, however, this inborn language capacity is not enough.

He assumes by the age of two, whether the child is producing 200 or 300 distinct 'words', he or she will be capable of understanding five times as many, and will typically be treated as an entertaining conversational partner by the principal caregiver. Caregiver speech is also characterized by simple sentence structures and a lot of repetition. If the child is indeed in the process of working out a system of putting sounds and words together, then these simplified models

produced by the interacting adult may serve as good clues to the basic structural organization involved. Moreover, it has generally been observed that the speech of those regularly interacting with very young children changes and becomes more elaborate as the child begins using more and more language. Several stages in the early acquisition process have been identified. Yule added that between two and two-and-a-half years old, the child begins producing a large number of utterances that could be classified as “multiple-word” speech.

In other word, Field (2004: 144) states all infants pass through the same stages in the acquisition of a first language; but they progress at different rates. Two-word stage (1;6 onwards) sometimes described as telegraphic speech because of the absence of most function words. One factor that seems to be important in the child’s acquisition process is the actual use of sound and word combinations, either in interaction with others or in wordplay, alone.

From the definition above, child’s language acquisitions are not only influenced with their stages but also children learn language as they interact with people in conversation in their daily life whereas children need to be practiced to interact and communicate with others in order that they will speak up and use of sound continually. Their word combination will be happened independently. Clark (2009: 21) says that the infants are born into a social world, a world of touch, sound, and affect, a world of communication. They develop and grow up as social beings, immersed in a network of relationships from the start. It is in this social setting that they are first exposed to language, to language in use. This language forms part of the daily communication around them and to them.

Moreover, Lust (2006: 6) explains after introducing basic issues in the area of first language acquisition, biological foundations of language and the role of environmental input in children's acquisition of language, she will consider each of the subsystems of language knowledge which are acquired and which have been researched extensively, within each specific linguistic subsystem of language knowledge (phonology, syntax, and semantics). Therefore the writer considers all aspects of language development are not only syntax, but also phonology and semantics as well. This research focuses on the process of phonological acquisition and uses some phonological theories.

## **2.2 Child Phonology**

One of the tasks facing a child learning his or her language is to figure out the sound system. This involves learning how to distinguish all the linguistically important differences, and also how to produce them. It's rather easier to record what small children say than to determine what they understand, so most systematic research has examined production (Radford et al, 2009: 96). They explain that children are also innately disposed towards producing speech sounds. In the early months babies babble, that is, they produce a whole series of speech-like noises. These often contain a host of sounds which are not part of the language surrounding the baby. Moreover, it is clear that the child isn't learning to produce these sounds from the speaking population surrounding it.

Furthermore, Clark (2009: 12) states that children need to learn the sound system, the phonology. In other word, Fikkert in Lacy stated that child phonology

was about defining the (ordering of the) constraints that characterize children's productions and child phonology traditionally studies patterns in child language production data. She also says these data have revealed three simple facts that have to be accounted for. First, children do not speak like adults. Second, children's speech often differs in a systematic fashion from that of adults. Third, child language develops gradually towards the target language. It has proven difficult to explain these simple facts (2007: 538). From above sentences are very obvious that children can articulate and acquire their words while they use their sound system.

Stampe's Natural Phonology suggested an approach to this problem, he proposed that children are born with an innate set of phonological rules, which must be suppressed in order for children to acquire the phonology of the language of their environment (Bybee, 2004: 66). In other hands, Lacy states that the traditional view in phonology is that rules of phonetic implementation would specify the exact place of articulation of a coronal segment (2007: 325).

In addition, Radford et al consider that the three attributes of voicing, place of articulation and manner of articulation provide a convenient three-term description for many sounds. Thus, [dʒ] is a voiced palato-alveolar affricate, [f] is a voiceless labiodental fricative, [ŋ] is a voiced velar nasal and so on (2009: 34). Based on a book that is written by Muslich (2011: 95), entitled 'Fonologi Bahasa Indonesia', there are 21 Indonesian consonants. Below is the table of Indonesian consonants:

Place of articulation Manner of articulation		Bilabial	Labiodental	Dental	Alveolar	Palatal- Alveolar	Palatal	Velar	Glottal
		Stop/plosive	Voiceless	p		t			
	Voiced	b		d					
Affricates	Voiceless						c	k	
	Voiced						j	g	
Fricatives	Voiceless		f		s			x	h
	Voiced				z				
Lateral	Voiced				l				
Retroflex	Voiced				r				
Nasal	Voiced	m			n		ɲ	ŋ	
Semi Vowels	Voiced	w					y		

**Table 2.2.1 Indonesian consonants**

### 2.3 Articulatory Phonetic Theory

Bickford and Floyd (2006: 1) say that articulatory phonetics is only one of several disciplines dealing with the production, perception, identification, and categorization of speech sounds. Speech sounds are produced by a moving and vibrating stream of air that is shaped and altered in various ways by the vocal tract. There are many parameters by which speech sounds can be identified and classified. In addition, Field says that an articulatory learning theory suggests that an infant has no perceptual capacity at birth and that the phonological system is entirely acquired through exposure to input.

As Bybee (2004: 202) proposed that children acquiring their first language often make substitutions of one sound for another similar sound, usually replacing

a more marked segment with a less marked one. Nasalized vowels are usually produced first as non-nasalized, front rounded vowels are produced as front unrounded, fricatives are produced as stops, and so on. In fact, child language acquisition is often cited as a possible source of phonological change. He considers that first; the set of phonological substitutions found in child language is quite different than that found in sound change or in adult phonologies (Drachman 1978). Take consonant harmony, in which the consonants of a word are produced at the same place of articulation. This phenomenon is common in child language, as in [g\_g] for bug, [gɔg] for dog, and [b\_b] for tub, but does not occur in adult phonology or in sound change.

Meanwhile, Ladefoged also states that consonants can be classified according to the place and manner of this obstruction. The primary articulators that can cause an obstruction in most languages are the lips, the tongue tip and blade, and the back of the tongue. Speech gestures using the lips are called labial articulations; those using the tip or blade of the tongue are called coronal articulations; and those using the back of the tongue are called dorsal articulations (2010:10).

### **2.3.1 Manner of Articulation**

Speech sounds involve a moving and vibrating stream of air that has something happen to it as it moves along. one thing that can happen is for the airstream to be impeded (blocked) to some degree by some part or parts of the vocal mechanism. this alters the shape and size of the resonance cavities also. The

manner of articulation of a sound describes the degree of impedance of the airstream and the type of closure that produces that impedance. If the airstream is blocked altogether for a given sound, it is said to be completely impeded. Such sounds, all of which are consonants, are called stops (or occasionally plosives), for example, /p/, *t*, and *k*.

If the airstream is blocked quite a bit but not completely, audible turbulence is introduced into the airstream. The airstream for a sound characterized by audible turbulence is said to be greatly impeded, and the sound is called a fricative. (The term fricative resembles the word "friction," and we can think of a fricative as a sound with audible friction.) Examples of fricatives include *s*, *f*, and *z*. All fricatives are consonants as well.

### **2.3.2 Place of Articulation**

Sounds are also described according to their place of articulation. To understand the term "place of articulation", the place of articulation is not the place where the active articulator comes in contact with some other part of the vocal apparatus (for example, alveolar ridge or velum); such a place is called the passive articulator. Rather, the "place of articulation" is actually the relationship (or "mapping" or "pairing") between the active and passive articulators as they shape or impede the airstream. The only difference between the pronunciations of the words *lip*, *lit*, and *lick* is the place of articulation of the final sound: *p* is bilabial, *t* is alveolar, and *k* is velar.

## **2.4 Phonological Process**

Phonological process is introduced by Ingram (1989) then later on is developed more in a book which is entitled 'Language Acquisition' by Fletcher and Garman. The establishment of various phonological processes in the speech of young children has been the goal of much recent research. This research consists basically of attempts to propose generalized statements to describe common substitutions in the speech of young children (Ingram in Fletcher and Garman, 1997: 223-231). Furthermore, Kreidler states (2004: 234) in describing the variant forms of function words it was convenient to refer to full forms and reduced forms and to describe the reduced forms as derived from the full forms through the application of certain rules, which are called phonological processes.

It refers to that phonological processes are the patterns that young children use to simplify adult speech. All children use these processes while their speech and language are developing. For example, very young children (ages 1 to 3) may say "atu" for "aku" or "tipi" for "tivi." Other children may leave out the final sound in words (for example, "ika" for "ikan" or "uwa" for "uang.") Up to age 3, these are appropriate productions. When children continue to apply these processes or patterns to their speech and learn new words at the same time, their speech can become very difficult to understand. Many times the children do not hear the differences in the words and will say one word to mean three different ones. Ingram's theory of phonological process is divided into three major parts:



### 2.4.1 Substitution Process

Substitution Process is sound changes in which one sound class replaces another class of sounds. A common characteristic of the phonological analysis of the speech of young children is the determination of substitutions in the child's words. This is done by comparing the child's word to the adult model and noting the correspondences between the two. Take, for example, the child who says [bat] for book. The correspondences between the first two segments in the child's form and those in the adult model are a match, so that no substitution has taken place. For the final segment, however, adult [k] has been replaced by [t]. The postulation of processes not only describes substitutions, but attempts to explain them. In this case, the difference between the two segments is one of place. The process involved can be described as one which tends to replace velar stops with alveolar ones.

By examining samples of children's words from several children both within and across languages, it is possible to isolate the more common substitutions that occur and subsequently to postulate general processes. Below are five of the more common substitution processes, with examples from a variety of children.

Stopping is the substitution of a stop consonant for a fricative or an affricate. Examples: "sail" /sel/ is pronounced "tail" /tel/; "knife" /naif/ is pronounced "knipe" /naip/. Fricatives, and occasionally other sounds, are replaced with a stop consonant. Fronting is velar and palatal consonants tend to be replaced with alveolar ones. It is the substitution of sounds in the front of the mouth,

usually alveolars, for velar or palatal sounds. Examples: “key” /ki/ is pronounced “tea” /ti/; “gate” /get/ is pronounced “date” /det/. Gliding occurs when /r/ becomes /w/ or /l/ becomes /w/ or /j/. Examples: “rail” /rel/ is pronounced “whale” /wel/; “leap” /lip/ is pronounced “weep” /wip/. Vocalization is a vowel replaces a syllabic consonant, a process particularly characteristic of English. It occurs when one of the following, /l/, /\_/, or /\_/, is replaced by a more neutral vowel. Examples: “seal” /sil/ is pronounced “sio” /sio/; “computer” /kəmput\_/\_/ is pronounced “computa” /kəmputʊ/. Vowel neutralization is nasal vowels tend to be changed into oral vowels larly characteristic of English and vowels in general are often centralized, i.e. [a] or [ʌ]; “back” /bat/.

The stopping process is widespread and is one of the more established patterns in children’s speech. Fricatives are the most commonly affected group of sounds, although resonants will also occasionally be affected. While stopping is common, the actual patterns of its application by individual children are not. Children typically will not necessarily change all of their fricatives into stops, and it is not possible to predict which ones individual children will select.

Fronting is also quite common across children, although some children prefer it more than others. It is important to realize that there are actually two processes involved here, fronting of palatal and fronting of velars. Children may show one and not the other.

We know less about the process of gliding, although it is well-documented in English. The possibility that the substitutions used in phonological processes

may be highly influenced by the child's phonological system, not just by universal tendencies.

Vocalization is common in English, where syllabic consonants often occur. For the velarized [ɹ], the most frequent substitution is a back rounded vowel, either [o] or [u]. In other cases, an [a] like vowel occurs, although the substitution may also be affected by the tendency to assimilate unstressed vowels to stressed ones. The last process, vowel neutralization that is an especially early one and is normally not characteristic of this rapid period of development.

Substitution processes will vary according to the place of the sound in the syllable. For instance, stopping of fricatives is usually lost for final fricatives before it is for syllable-initial ones. Stated differently, fricatives are easier to produce postvocally than prevocally.

#### **2.4.2 Assimilatory Process**

Assimilatory processes is sound changes in which one sound or syllable influences another sound or syllable. Another general group of processes that will result in mismatches between the child's form and the adult model is the one that is composed of tendencies to assimilate one segment in a word to another. Even if the child has acquired a particular adult sound in some words, there may be certain contexts where its production may be altered. While detailed research is necessary on this topic, the following processes are relatively common. The notion of syllable is also important in assimilatory processes. The voicing of consonants varies according to the place in the syllable. For consonant harmony, it

is known that children often have an early restriction that the consonants in CVC structures must be homorganic.

Voicing is the consonant tend to be voiced when preceding a vowel, and devoiced at the end of a syllable. Consonant harmony is consonant tend to assimilate to each other in certain predictable ways. Three frequent patterns are: Velar assimilation are apical consonants tend to assimilate to a neighbouring velar consonant. Labial assimilation are apical consonants tend to assimilate to a neighbouring labial consonant. Denasalization is a nasal consonant will denasalize in the neighbourhood of a non-nasal consonant. Progressive vowel assimilation is an unstressed vowel will assimilate to a preceding (or following) stressed vowel.

Voicing as described actually refers to two separate but related processes. One of these, the devoicing of final consonants, is well-documented as a characteristic of languages. The other, voicing of prevocalic consonants, requires some discussion. To date, this process has been predominantly observed for English. Young children show various kinds of consonant harmony or assimilation (see above for three frequent patterns). This is an area that is not particularly well documented, and one that requires more research.

The denasalization process is quite characteristic of French and shows how a specific language may have phonological characteristics that bring out particular processes. The process is not as operative in English, presumably because of the tendency to have initial stress. Since vowels develop rapidly, progressive vowel assimilation is a process that is usually lost early. Children begin quite early in

development to differentiate vowels within a word, although isolated cases of assimilation occur for several months.

With vowel assimilation and denasalization, the important factor is that a segment in an unstressed syllable is likely to ‘weaken’ or assimilate to a segment in the stressed syllable. Besides these syllabic influences, there are specific phonological processes which are directly motivated by the tendency of young children to simplify syllable structure. For most children, the direction is toward a basic CV syllable.

### **2.4.3. Syllable Structure Processes**

Syllable structure processes is sound changes that cause sounds or syllables to be reduced in number, deleted, or repeated. While it has not been explicitly mentioned, it is clear that the notion of syllable is quite important in understanding all the processes discussed so far.

Some of the more basic syllable structure processes include the following: Cluster reduction is reduced to a single consonant or is the deletion of one or more consonants from a two or three consonant cluster. Examples: “spot” /spat/ is pronounced “pot” /pat/; “clown” /klaʊn/ is pronounced “cown” /kaʊn/. Deletion of final consonants is the deletion of the final consonant or consonant cluster in a syllable or word. Examples: “soap” /sop/ is pronounced “sew” /so/. A CVC syllable is reduced to CV by deleting the final consonant. Deletion of unstressed syllables is the deletion of a syllable from a word containing two or more syllables. The deletion usually occurs in the unstressed syllable. Examples:

“computer” /kəmpjut\_/ is pronounced “puter” /pjut\_/ or an unstressed syllable is deleted, especially if it precedes a stressed syllable. The last sub-processes of syllable structure is reduplication that is in a multisyllabic word, the initial CV syllable is repeated.

The reduction of clusters is one of the most widespread processes observed. The direction of the deletion is also predictable in many instances. One of the most regular patterns is the deletion of sonorants when they occur in combinations with stop consonants. In nasal and stop clusters, stops are usually retained, although the nasal will often be kept if the stop is voiced. The deletion both of final consonants and unstressed syllables is also frequent, although the latter seems to persist longer than the former. When final consonants do begin to appear, they develop gradually, with certain sounds appearing before others. Although conclusive data still needs to be collected, there does appear to be a tendency for the appearance of final nasals to occur early. Also, fricatives tend to be easier in final position than initially, although there is individual variation.