CHAPTER II
AN OVERVIEW OF SPEECH PRODUCTION AND SPEECH ERRORS

2.1 The Relationship between Linguistics and Psycholinguistics

The scientific study of language is called *Linguistics*, while the people who focus their research on language are called *linguists*.

The word *Linguistics* derived from the Latin *lingua*, which means *language*. It is to describe and explain the structure of language used by a group of people but what we are talking here is apparently about general linguistics, which generally studies about language in detail. Linguistics itself is divided into two parts known as macro and micro linguistics.

Psycholinguistics is a field that combines methods and theories from psychology and linguistics to derive a fuller understanding of human language. From psychology, it inherits experimental methodology and a body of knowledge about process in perception, memory, attention, learning, and problem solving. From linguistics, it derives detailed descriptions of specific languages, rigorous accounts of the shape of grammar, and ideas about the nature of human language. The basic issue that motivated the establishment of psycholinguistics as a separate field of the study was the problem of the ‘psychological reality’ of linguistic concepts. For example, speakers of English can form the plural of noun by adding the suffix-s. This process allows us to form the plural *chandeliers* from *chandelier*. But do we actually use a productive rule to produce this plural or do we simply retrieve the plural chandeliers from our long-term memory as a unit? Psycholinguistics research shows that, in fact,
both rote and rule are operative at various times in language production (Pinker: 1999).

Some of linguists have made their own definitions of Psycholinguistics in different points of view:

Lackanger in (Umar and Napitupulu: 36) cites: “Psycholinguistics is the studyof language acquisition and linguistic behaviour, as well as the psychological mechanism responsible for them.” The definition above emphasizes on the limitation between language acquisition and linguistic behaviour. The acquisition of language is closely concerned with the language learning, otherwise, linguistics behaviour relates to the process of competence and performance. The process of competence and performance are at all times, with other words, the mechanism of psychology has a very important role.

Stern (1983: 296) cites: “Psycholinguistics deals directly with the process of encoding and decoding as they relate states of message to state communicators.” This definition stresses on the process of encoding and understanding to the codes delivered between speaker and listener. These processes, decoding and encoding take place in human mind. The speaker and listeners hold an important role in this case. The speaker delivers his or her messages in codes, later on, the listener will try to perceive the meaning codes. That is the reason why it needs mutual understanding between speaker and listener.

Diebold (Slama, 1973: 39) cites: “Psycholinguistics is concerned in the broadest sense with relation between messages and the characteristics of human individuals who select and interpret them.” Psycholinguistics is the broadest sense
simply talks about relationship between messages delivered and human characteristics in selecting and interpreting these messages.

Paul Fraisse (Slama, 1973) cites: “Psycholinguistics is the study of relation between our need for expression and communication and the means offered to us by a language in one’s childhood and later. “In this way, the limitation emphasizes on the relationship between our need of expression in communication and all the things offered to us through language that we have been learning in our life.

Hartlet in (Umar and Napitupulu: 35) cites: “Psycholinguistics investigates the interrelation of language in mind in processing and producing utterances and language acquisition.” What we can take from this statement is how acquisition of language works. It is the process of how we can get known the process that occurs and it has meaningful unit, which furthermore can be understood by hearer.

After having collected some linguists’ views on Psycholinguistics, we can further have some ideas on that. These ideas can be such important and even crucial in discussing about psycholinguistics. It can be summarized as follows:

1. Psycholinguistics is actually a study that talks about the relationship between language and human mind.

2. Psycholinguistics emphasizes on the language acquisition and linguistic behaviour.

3. Psycholinguistics is closely concerned with decoding and encoding process, in other words, it relates to the process of selecting and interpreting the codes.

4. Psycholinguistics examines language change, language knowledge, and language use.
5. Psycholinguistics talks about the process which occurs between the hearer and the speaker concerning with language.

As mentioned earlier psycholinguistics discusses the process of how people produce language. In interpreting a language, people generally have and follow a set of accepted rules that is concerned with sounds and meanings. If we want to perceive the meanings of listening and speaking, we get perceive also the meaning of relation between language structure and the process of listening and speaking. The accepted rules of language structure are usually called Grammar.

Grammar helps the study of listening and speaking: therefore, it has been so important for the psychology of language. These rules summarize regularities in the behaviour of people speaking language. Grammatical rules will then lead us toward the understanding of basic law of thought and the nature of human intelligence. Noam Chomsky got to divide this into two. They are competence and performance.

### 2.2 Competence and Performance

Every speaker of language has tacit knowledge of the grammar of his language. It is likely about tacit knowledge of how to keep a recognized rhythm, how to ride a bike, etc. Grammar is set of principles that govern the formation and interpretation of words, phrase and sentences.

Korrosy (1993) extended the theory of knowledge structures by separating competence and performance. Competence means kills or abilities that enable a person to solve a problem, and cannot be observed directly. Performance is the behaviour, e.g. the answer that is given can be observed.
Of course, competence, demands, and performance are related. However, competences are properties of persons, while demands are properties of problems. While a demand requires a competence to fulfill it, the relationship is not a one to one relation. For example, the demand “add to natural numbers” may be met by adding mentally, by adding with the people of paper and pencil or by operating a pocket calculator. Similarly, when a performance of a person is observed, it is not obvious what underlying competences have contributed to the solution.

Thus Korossy introduced two spaces: a competence space on a set of (elementary) competences, and performance space on a set of items. These spaces have the same properties as knowledge spaces, and also prerequisite and surmise relation exist. A state in the competence space describes the competences a person has, while a state in the performance space is given by set of items that a person can master.

By identifying the relationship between competence and performance on the items, an interpretation function and a representation function can be defined. The interpretation maps a problem or item to the set of all competence states that allow for the solving problem. Vice versa, the representation maps a competence state to the set of problems, which can mastered with the competence of this state (Korossy, 1993).

Schrepp (1993) goes one step further than Korossy and investigates not only the competences of a person, but also the underlying cognitive processes. A model for these processes also allows deriving the competence structure, and by means of the representation function the performance structure can be obtained. The necessary actions when a new item arises depend on whether the model of the cognitive
processes can we explain how a person masters the item. If so, the new structures can be derived easily. Otherwise, the cognitive model has to be extended which may require further research.

A distinction is introduced by Chomsky (1964) into linguistic theory but of wider application. Competence refers to a speaker’s knowledge of his language as manifest in his ability to produce and to understand a theoretically infinite number of sentences most of which he may have never seen or heard before. Performance refers to the specific utterances, including grammatical mistakes and non-linguistics features like hesitations, accompanying the use of language. Competence like organization describes the potentiality of a system. Performance like structure describes the forms actually realized as a subset of the conceivable.

2.3 Speech Planning and Execution

Speaking and listening are two activities of human beings that are sometimes included as basic activities in communication. These activities have become the observation of psychologist purposed for mental activities. We can listen to everyone’s ideas, get particular information to shape up our way of thinking, and make up our ideas through the words, while in speaking, we can freely deliver our ideas into words and expresses our feeling and way of thinking. These activities have become two fundamental things in communication.

In speaking, people can convey some ides, knowledge, and information. That is why speaking is a fundamentally instrumental act. Speaking, therefore, shows up to be divided into two types of activity---planning and execution.
Speaker first plans what they want to say based on how they want to change the mental state of their listeners. They then put their plan into execution, uttering the segments, words, phrases, and sentence that make up plan. The division between planning and execution, however, is not a clean one. At any moment speakers are usually doing a little of both. They are planning what to say next while executing what they had planned moments before. It is impossible to say where planning leaves off and execution begins. Despite these problems, planning and execution are convenient labels for the two end of speech production. The considerations that come into planning an utterance can generally be distinguished from those that go into execution. (Clark: 1977: 224).

Here are some processes of how speech is planned and executed as proposed by Clark (1977: 224). In rough outline the process will simply look like this:

1. **Discourse Plans.** The first step for the speakers is to decide what kind of discourse they are participating in. It is the case that they are telling a story, conversing with other people, giving instructions, describing an event, or making a pledge. Each kind of discourse has a different structure, and they must plan their utterances to fit. Each utterance must contribute to the discourse by conveying the correct messages.

2. **Sentence Plans.** Given the discourse and their intention to produce a sentence with the correct message, speaker must select one that will do this. They must secede on the speech act, what to put as subject, and given new information, and what to subordinate. They must also decide how they want to convey their messages directly, by means of the literal meaning of a sentence, or directly, by means irony, understatement, or other indirect rhetorical devices.
3. **Constituent Plans.** Once the speakers decide on the global characteristics of a sentence, they can begin planning its constituent and put them in the right order. Although they may have planned the global form of sentence, they normally select specific words only phrase by phrase.

4. **Articulatory Program.** As specific words are chosen, they are formed into an articulatory program in a memory buffer capable on holding all the words of a plans constituent at once. It contains a representation of the actual phonetic segments, stresses, and intonation pattern that are to be executed at the next step.

5. **Articulation,** the final step is to execute the contents of the articulatory program. This is done by mechanism that adds sequence and timing to the articulatory program, telling the articulatory program, telling the articulatory muscles what they should do them. This step results in audible sounds, the speech the speaker intended to produce.

### 2.4 Classification and Description of Speech Errors

Planning and execution, so the evidence suggest, are interleaved in a complex way so that extra planning may lead to delays of execution. In a talk, people always think of what they want to convey and this process involves our articulatory program. The first thing we do is to start the conversation, then pick the correct words, which can express what we are thinking of. In this way, it is the time how we start, what to get involved with, what to omit, and what words are correct to use. When we pass through this process, we may hesitate a lot and get into position of being anxious what to say next after the first utterance. Even thought what we are going to say in our mind, but we may produce speech errors in our speaking.
Based on Clark (1977: 263), common types of speech errors can be seen as follows:

1. **Silent Pause**

   A period no speech between words can be called silent pause. Speed of talking is almost wholly controlled by the sum of such pausing. People who speak slowly hesitate a lot when they speed up their rate words: they do it by eliminating the pauses, not by shortening the words. This kind of speech error is usually symbolized by [//]

   \[\text{e.g.} \] - Please close the//window!
   
   - Don’t put it near the//table!

2. **Filled Pause**

   The filled pause is the next type of speech error. We can hear this kind of error when the period no word between the speeches is filled up by the expression such as “mm”, “ah”, “uh”, “err”, or any others that filled the gap while the speaker is speaking. This second type of speech error is symbolized by […]

   \[\text{e.g.} \] - Please close the, mm, the window!
   
   - Don’t put it near the, uh, the table!
3. **Repeat**

This is must be the third type of speech errors. Repeats occur when the speakers repeat one or more words in utterance. When people talk very fast and spontaneously, this kind of speech errors will happen. Repeats can be symbolized by \[/

- e.g.  - *Please close the window / the window!*

- *Don’t put it near the table / the table!*

4. **Retraced False Start**

Retraced False Start is another type of speech errors. It simply mean the correction of a word. It also includes one or more words before the corrected words. This kind of speech error is symbolizes by \[

- e.g.  - *Please close the door \ the window!*

- *Don’t put it near the chair \ the table!*

5. **Unretraced False Start**

The next type of speech errors is Unretraced False Start. It is quite similar to Retraced False Start. It does not include the repetition of one or more words in a sentence before the words that are being corrected. There is no repetition of the words before the corrected words. What we are to do is correcting words to the right ones directly. This type of errors is usually marked by \[\]

- e.g.  - *Please close the door \ window!*

- *Don’t put it near the chair \ table!*
6. **Correction**

The category of speech error that is called corrections is quite similar to false starts. Something that makes them different is that correction is expressed in explicitly “I mean”, “or rather”, “that is”, or “well” to mark the phrases as a correction. Corrections occur when the speaker’s better utterances to say and then the corrections they make take over the place of previous words, which are considered to be misplanned. This type can be marks why they are breaking their speech. Corrections are symbolizes by [-]

    e.g.    - Please close the door – I mean the window!
           - Don’t put it near the chair – I mean the table!

7. **Stutter**

Learning to talk is not always easy. Some people have difficulty combining sounds into words. They repeat or prolong the beginning sounds of many words, which is furthermore called a disfluency, because they break up the smooth flow of speech. More specifically a people who has such a disfluency stutters, which by definition, is speech characterized by abnormal hesitations, repetitions, and prolongations that may be accompanied by gestures, grimaces, or other bodily movements indicating a struggle to speak, blocking of speech, anxiety, or avoidance of speech. It is disorder, which we have all heard and recognized, or perhaps even experienced before: it’s the most frequent type of fluency disorder.

According to Fromkin (1995), all individuals are disfluent at times, but what differentiates the person who stutters from someone with normal speech disfluencies is the kind and amount of disfluencies. The average person will have between 7-10 %
of their speech disfluent. These disfluencies are usually words or phrase repetitions, fillers (um, ah) or interjections. When a speaker experiences disfluencies at a rate greater than 10% they may be stuttering. Stuttering is often accompanied by tension and anxiety.

The types of disfluencies in stuttering may also be different. Sound or syllable repetitions, silent “blocks”, and prolongations (unnatural stretching out of sound) and facial grimaces (tics) can be present. Stuttering has a strong genetic link. People who stutter are very likely to have inherited their “stuttering potential” or “Stuttering predisposition” from their mother, father, grandmother, and grandfather, with 50 up to 75% of people who stutter having at least one relative who also stutters.

Here are the sub-types of Slip of the tongue:

a. *Repetition:*
   1. of sounds (t-t-t-tall)
   2. of syllables (mo-mo-mommy)
   3. of parts of two words (foot-foot-football)
   4. of whole words (pa-pa-paper)
   5. of phrases (how far-how far-is it?)

b. *Prolongation* = a vowel or consonant in a word is lengthened (rrrrr-rabit, mmmmm-me to, aaaaaask him)

c. *Blocks* = a vowel of silence person seems unable to make a sound, attempting to force words out with their mouth open or lips closed firmly (she----’s here, r----ub it out)
d. *Pitch and loudness rise* = as the person repeats and prolongs sounds or words, the pitch and loudness of his/her voice increases.

e. *Tremors* = uncontrolled quivering of the tongue or lip as the person repeats or prolongs sounds.

f. *Avoidence of talking* = unusual number of pauses: substitution of words, etc.

g. Fear as the person approaches a word that gives him/her trouble, he or she may display expression of fear: they may become upset and say things like “my words won’t come out”, or “I can’t say it”.

h. *Irregular breathing* most often heard when the person begins sentences or phrases, speech may occur in spurts as the person struggles to keep airflow and voice sound flowing.

i. *Embarrassment* = the person will have a shame because of their inability to produce a word causing the person to avoid some conversations altogether (they may wait for another person to answer the phone all the time, or they may walk around a store looking for something for an hour instead of just asking an employee where to find product).

j. Related behaviours foot tapping, eye blinks, head turns, etc. to try and avoid stuttering.

k. Variability in stuttering behaviour depends on the speaking situation, the communication partner, and the speaking task (the person who stutters might have an easier time talking to a speech-pathologists in an enclosed office than in a classroom among his or her peers, or they will be able to sing fluently but stutter when talking to a friend).

This type of error is symbolized with [---].
8. **Interjection**

Interjection is a big name for a little word. Interjection is a short exclamation like: Oh!, Um!, or Ah! They have no real grammatical value but it is used them quite often, usually more in speaking than in writing. When interjections are inserted into a sentence, they have no grammatical connection to the sentence. An interjection is sometimes followed by an exclamation mark (!) when written. Interjections are words or expressions, which are inserted into a sentence to convey surprise, strong emotion, or to gain attention. Interjections are usually placed at the beginning of a sentence. They have no grammatical connection to the sentence in which they occur: therefore, interjections may stand alone. In addition, if an interjection is mild, it is followed by comma.

If it is strong, it is followed by an exclamation point. In no instance should an interjection with comma or exclamation point be followed by period or comma respectively. Examples include words like: Oh, Darn, hey, Well. This type of error is symbolized with [*…*]. The following are two examples of the proper usage of interjections in sentence:

- **Well, I supposed I should stay home and study this weekend.**
- **Darn! I broke my fingernail.**

9. **Slip of The Tongue**

Slip of the tongue is one type of speech errors. It is usually symbolized by [→]. Slips of the tongue from repressed thoughts, which are revealed by particular errors, which a speaker makes (Freud, 1901).
There are several sub-types of slips of the tongue:

a. *Anticipation* is when a speaker intends to say “take my bike”, but says instead “bake my bike”, anticipating the “b” at the beginning of “bake” in the speaker’s pronunciation of “take”

b. *Perservation* is the opposition of the anticipation
   
e.g. *Take me to ride* → *take me to tide*

c. *Reversal* is two segments are interchanged. Reversal happens in two syllables.
   
e.g. *lighter* → *tighler*

d. In *Blends*, the speaker mixes two words together taken the first half of one and the second half of other.
   
e.g. *boys and girls* → *borls*

e. *Haplology* is the speaker leaves out a short stretch of speech.
   
e.g. *unanimity* → *unamity*

f. *Misderivation* is the speaker somehow attaches the wrong suffix or prefix to the word.
   
e.g. *enjoyment* → *enjoity*

g. *Word Substitution* is the speaker produces a word that is wrong, but typically related either semantically or phonologically to the intended.
   
e.g. *My sister went to the Grand Canyon* → *The Grand Canyon went my sister.*