



CHAPTER II

LITERATURE REVIEW

2.1. THE BRAIN AND LANGUAGE

Gazzaniga in 1986 (Cited in Santrock, 1998) stated that a substantial portion of language processing occurs in the brain's left hemisphere and there are two areas of the left hemisphere that are especially critical. These are Broca's area and Wernicke's area.

Based on the function, "Broca's area" can be defined as an area of the left frontal lobe of the brain that directs muscle movements involved in speech production. On the other hand, "Wernicke's area" can be defined as an area of the brain's left hemisphere involved in language comprehension (Santrock, 1998:321). The locations of Broca's area and Wernicke's area are shown in figure 2.1.

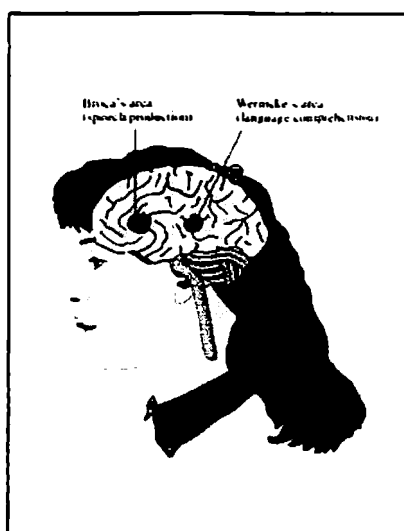


Figure 2.1
Broca's area and Wernicke's area (Santrock, 1998:321)

Besides, Smith (1998) in "Psychology Science and Understanding" explains the possible differences in Hemispheric functions. It can be seen in figure 2.2.

TABLE 2.2 Possible Differences in Hemispheric Functions

Left Hemisphere		Right Hemisphere	
Verbal	Understands and uses words to name and define	Nonverbal	Minimally uses words
Abstract	Uses symbols or concepts to represent objects, e.g. \$ stands for money	Concrete	Sees objects as they are at the moment
Rational	Uses logic to draw conclusions from information	Nonrational	Uses nonlogical processes to draw conclusions
Analytical	Takes things apart to understand them	Holistic	Perceives complete structures and overall patterns

Reading

Listening

Left brain

Right brain

Figure 2.2

Differences in Hemispheric Functions (Smith, 1998:91)

2.2. THEORIES OF LANGUAGE DEVELOPMENT

There are three major theories that support this present study. The first one is about the theory of thought and language, proposed by Lev Vygotsky. The second one explains about "Cognitive Development" as proposed by Jean Piaget.



The third one deals with the theory of "Infinite Generativity" by Elizabeth B. Hurlock.

2.2.1. VYGOTSKY'S THEORY

Vygotsky in 1962 (Cited in Solso, 1995:388) said, "The development of thought in the child is evident in language development". He further said, that "language is a merger between outer speech the child hears and inner speech he thinks with". On the other hand, in written expression, language is a merger between word-form the child sees and inner word processing. It means that there are two principles that govern the combining of thought and language. First, Children see a written expression before they focus inward on their own mental processes and second, children must process a word inward on their mental processes before they make transition from internal to external. In short, we can see the processes in the figure below.

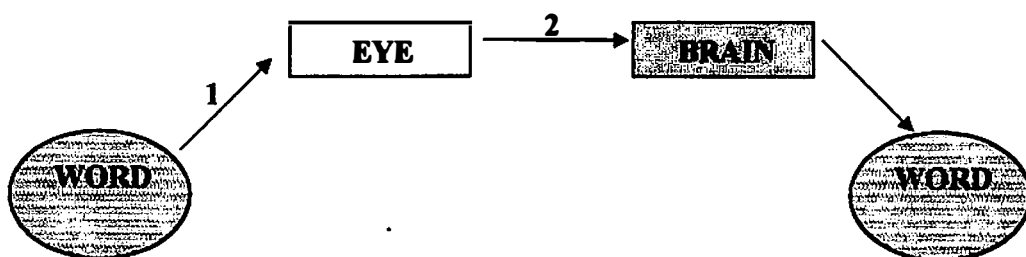


Figure 2.3
Mental Processes proposed by Vygotsky



2.2.2. PIAGET'S THEORY

According to Jean Piaget (1980), Comprehension is one of the Cognitive processes. He proposes a term called "Cognitive development". There are four stages in Cognitive Development (Cited in Solso, 1995:379):

1. The Sensorimotor period (birth to 2 years)

In this period, intelligence is demonstrated through motor activity without the use of symbols. Knowledge of the world is limited because it is based on physical interactions/experiences. Children acquire object permanence at about 7 months of age (memory). Physical development (mobility) allows the child to begin developing new intellectual abilities. Some symbolic (language) abilities develop at the end of this stage.

2. The Pre-operational period (2 to 7 years)

In this period, intelligence is demonstrated through the use of symbols, language use matures and memory and imagination develop, but thinking is done in a non-logical, nonreversible manner. Egocentric thinking predominates.

3. The Concrete -operational period (7 to 11 years)

In this period, intelligence is demonstrated through logical and systematic manipulation of symbols related to concrete objects. Concepts of the concrete words are more easily comprehensible than the abstract ones. Egocentric thought diminishes.



4. The Formal -operational period (adolescence and adulthood)

In this period, intelligence is demonstrated through the logical use of symbols related to abstract concepts. Early in the period, there is a return to egocentric thought.

In short, the stages of "Cognitive Development" as proposed by Piaget (Cited in Solso, 1995:379) can be seen in the table 2.1.

Table 2.1

The Four Stages of "Cognitive Development" by Jean Piaget

No	Age	Stage
1.	Birth-2 years	The sensorimotor period
2.	2-7 years	The Pre-operational period
3.	7-11 years	The Concrete-operational period
4.	Adolescence & adulthood	The Formal-operational period

In this study, the writer focuses on the third period: **the concrete-operational period.**

2.2.3. ELIZABETH'S THEORY

We know that children do not wake up one morning with fully formed grammar in their heads or with all rules of linguistic knowledge. Children recognize their linguistic knowledge within a process of language development through time. This theory explains about the production process of sentences.



Based on Elizabeth B. Hurlock (1978) statement, elementary students' ability in producing sentences is influenced by *infinite generativity*, an individual to generate an infinite number of meaningful sentences using a finite set of words and rules, which make language a highly creative enterprise. Sometimes there are changes in the vocabulary and grammar when they are producing sentences. They become more analytical in their approach to words, it means that they try to associate the words with perceptual dimensions and action.

2.3. WORDS CATEGORY

Clayton E. Samels (1990) stated that words could be categorized into four groups: general, specific, abstract and concrete words. Furthermore, the writer gives the example of *Indonesian* words based on this category.

1. **General:** a word is more general than another word if it somehow "contains" the other word. For example, the word *binatang* (animal) is more general than the word *anjing* (dog) because *binatang* can mean *anjing*, but it can also mean *kucing* (cat), *kuda* (horse) and many others.
2. **Specific:** a word is more specific than another word if the other word somehow "contains" it as well as others. For example, the word "*burung*" is more specific than the word "*binatang*" because "*burung*" is contained by "*binatang*". The word "*Nuri*" is more specific than "*burung*" because it is contained by "*burung*".
3. **Concrete:** a word is concrete if it refers to an item that can be apprehended by one of the five senses. For example, the word "*meja*" is concrete because it



refers to an item that you can see and touch. The word "*kucing*" is also concrete because it refers to an item that you can see, hear and touch. Because concrete items can be more easily visualized or imagined directly, the children understand them more easily.

4. **Abstract:** a word is abstract if it refers to an item that can not be apprehended by one of the five senses. For example, an idea or concept like "*senang*" is abstract because you can not see and touch "*senang*". Since you can not see or hear directly another person's thoughts or feelings, those thoughts and feelings are abstract.

The division of words based on the Clayton (1990) can be seen in the figure below.

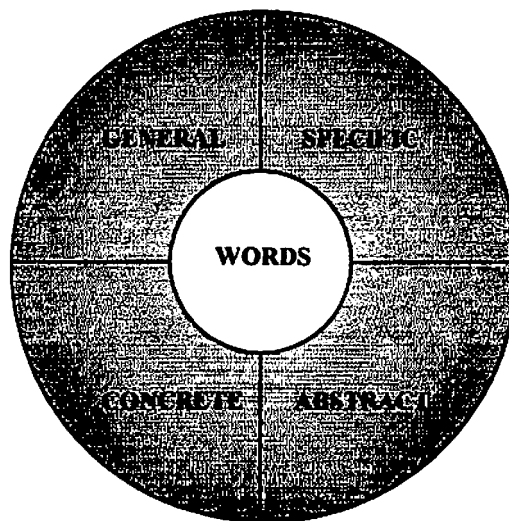


Figure 2.4

Group of words by Clayton

Based on the explanation above, the writer decides to focus on "concrete" and "abstract" words. She chooses the words randomly. Below is the list of words, which are used in the research.



Table 2.2

The List of "Concrete" and "Abstract" Words

#	Words around the house	
	CONCRETE	ABSTRACT
1.	<i>Meja</i> (table)	1. <i>Nyaman</i> (comfortable)
2.	<i>Televisi</i> (television)	2. <i>Jenuh</i> (bored)
3.	<i>Ibu</i> (mother)	3. <i>Takut</i> (afraid)
4.	<i>Ranjang</i> (bed)	4. <i>Sepi</i> (quite)
5.	<i>Lampu</i> (lampu)	5. <i>Rapi</i> (in order)
#	Words around the school	
	CONCRETE	ABSTRACT
1.	<i>Kursi</i> (chair)	1. <i>Ramai</i> (noisy)
2.	<i>Guru</i> (teacher)	2. <i>Nakal</i> (naughty)
3.	<i>Papan Tulis</i> (blackboard)	3. <i>Pintar</i> (smart)
4.	<i>Seragam</i> (uniform)	4. <i>Malas</i> (lazy)
5.	<i>Murid</i> (student)	5. <i>Tamak</i> (greedy)
#	Words around the playing ground	
	CONCRETE	ABSTRACT
1.	<i>Sepeda</i> (bicycle)	1. <i>Gembira</i> (happy)
2.	<i>Bola</i> (ball)	2. <i>Seram</i> (horrible)
3.	<i>Boneka</i> (doll)	3. <i>Ramah</i> (kind)
4.	<i>Badut</i> (clown)	4. <i>Curang</i> (dishonest)
5.	<i>Karcis</i> (ticket)	5. <i>Sedih</i> (sad)



2.4. INDONESIAN SENTENCE PATTERNS

To understand whether the children can comprehend the words properly, the writer asked the children to apply one word in a sentence. From that sentence, the writer analyzed whether they comprehended the word properly or not. Furthermore, the writer tried to find whether there was a change in grammar or not. Since she chose Indonesian as the object of the study, it was necessary to explain the Indonesian sentence patterns. Since the writer realized that the sentence patterns in *Indonesian* are too large, she tried to limit them.

The writer used the Indonesian sentence patterns, as proposed by Udiati Widiastuti (1995). In her book "Kalimat Efektif Bahasa Indonesia", she divided the Indonesian sentence patterns into three groups. The sentence patterns can be seen in the table below.

Table 2.3
The Indonesian Sentence Patterns by Udiati Widiastuti (1995:43)

STRUCTURE	PATTERN	ENGLISH
1. S-P	KB-KB	N-N
	KB-KK	N-V
	KB-KS	N-Adj.
	KB-K. BIL	N-Card. Number
	KT-KB	Det -N
2. S-P-O	KB-KK-KB	N-V-N
	KB-KK-K. BIL	N-V-Card. Number
	KB-KK-KK	N-V-V
3. S-P-O-K	KB-KK-KB-KB	N-V-N-N
	KB-KK-KB-K. BIL	N-V-N-Card. Number
	KB-KK-KB-KS	N-V-N-Adj.

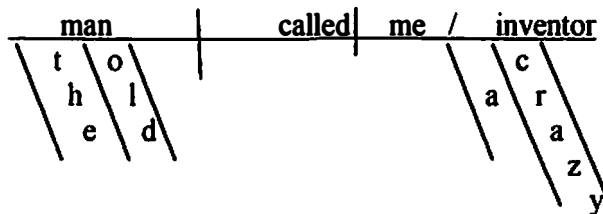


2.4.1. THE APPLICATION OF THE PATTERNS

In order to make the reader understand the patterns, as proposed by Udiati Widiastuti (1995), the writer gives the example of the sentence with the patterns above with the "Reed & Kellogg" diagrams.

The representation of "Reed & Kellogg" diagram is a frequent practice in America schools for using a system of vertical and slanting lines to represent the various relationships in a sentence. A long vertical line marks the boundary between subject and predicate; a short vertical line divides predicate and direct object; and a short slanting line marks off a complement. Other items are drawn in beneath the main parts of the sentence. (Crystal, 1987:96).

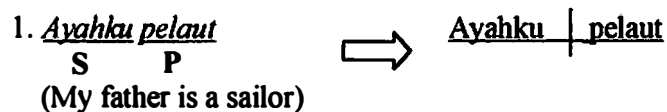
For example: The old man called me a crazy inventor.



The sentences bellow are the examples of the Indonesian Sentence Patterns by Udiati Widiastuti (1995), that will be combined with "Reed & Kellogg" diagrams.

1. S-P with the patterns:

❖ KB-KB (N-N):





2. Ibuku guru
 S P
 (My mother is a teacher)

⇒ Ibuku | guru

❖ **KB-KK (N-V):**

1. Ayah sedang membaca
 S P
 (Father is reading)

⇒ Ayah | membaca
 s
e
d
a
n
g

2. Ibu sedang memasak
 S P
 (Mother is cooking)

⇒ Ibu | memasak
 s
e
d
a
n
g

❖ **KB-KS (N-Adj):**

1. Bajuku kotor
 S P
 (My shirt is dirty)

⇒ Bajuku | kotor

2. Rumahku bersih
 S P
 (My house is clean)

⇒ Rumahku | bersih

❖ **KB-K. BIL (N-Card. Number):**

1. Mobilku lima
 S P
 (I have five cars)

⇒ Mobilku | lima

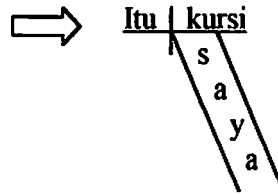
2. Adikku dua
 S P
 (I have two brothers)

⇒ Adikku | dua

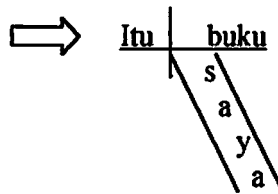


❖ **KT-KB (Det.-N):**

1. Itu kursi saya
 S P
 (That is my chair)



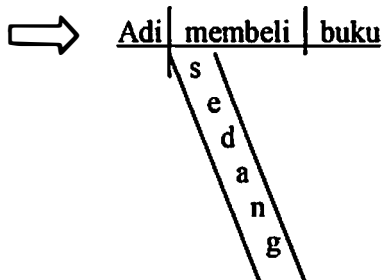
2. Ini buku saya
 S P
 (This is my book)



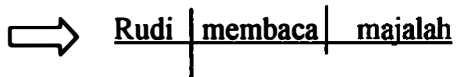
2. **S-P-O with the patterns:**

❖ **KB-KK-KB (N-V-N):**

1. Adi sedang membeli buku
 S P O
 (Adi is buying a book)

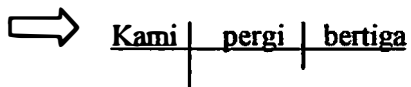


2. Rudi membaca majalah
 S P O
 (Rudi reads a magazine)

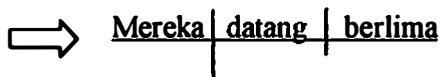


❖ **KB-KK-K.BIL (N-V-Card. Number):**

1. Kami pergi bertiga
 S P O
 (We go in a group of three)



2. Mereka datang berlima
 S P O
 (They come in a group of five)





❖ KB-KK-KB-KS (N-V-N-Adj.):

1. Dia melihat pemandangan indah

S P O K

(She looks at a beautiful landscape)

⇒ Dia | melihat | pemandangan / indah

2. Ibu memilih buah yang segar

S P O K

(Mother chooses a fresh fruit)

⇒ Ibu | memilih | buah / yang segar

CHAPTER III
PRESENTATION AND ANALYSIS OF THE
DATA

Multi Jasa