

CHAPTER 2

REVIEW OF LITERATURE

2.1 Child Development

The study of child development had a long history. It could date back to the philosophers of 18th century- John Locke (1632-1704) and Jean Jacques Rousseau (1712-1778). At that time, children were first recognized as a proper subject of inquiry and concern. Nearly 100 years after Rousseau, it was Charles Darwin (1809-1882) who really made the method for studying children scientific. In the 20th century, child developmental psychology became a science. There were many well-known theories of development such as behavioristic view (John B. Watson- 1878-1958), psychoanalytic theory (Sigmund Freud-1856-1939), and interaction, structural theory of children's cognitive development (Jean Piaget- 1896-1980). The study of child development has always focused on physical, cognitive and personal growth. The physical growth includes the body, brain and motor development. The cognitive growth involves understanding, perceptual, memory and language development. And the personal growth deals with social, personality and emotional development (Lansdown, 1984).

2.1.1 Physical Growth

The physical growth includes the body, brain and motor development. In this part, only motor development is focused on.

Motor development refers to the development of control over bodily movements through the coordinated activity of the nerve centers, the nerves and the muscle. There are two kinds of motor development- gross motor and fine motor skills. The former involves the large areas of the body used, for example, in walking or swimming. The latter concerns about the smaller muscles and includes skills such as grasping, catching and writing. The motor development of normal children in the first year of life (Gesell, 1928; Clarke-Stewart, Friedman, and Koch, 1985; McManis, Stollenwerk, and Zheng-Sheng, 1987; and Owens, 1992) can be summarized as below:

Table 1 The Motor Development in the First Year of Life

Ages	Motor Development
at birth	turn head from side to side and lift chin while lying on back; no control over arm movements.
3 months	support head when in prone position; weights on elbows; hands mostly open; no grasp reflex.
6 months	sitting: bends forward and use hands for support: can bear weight when put into standing position, but cannot yet stand without holding on. Reaching unilateral.
9 months	Stands holding on, creeps efficiently; takes side-steps, holding on; pulls to standing position. Grasp with thumb opposition; picks up pellet with thumb and finger tips.
12 months	Walks when held by one hand; walks on feet and hands- knees in air; mouthing of objects almost stopped; seat self on floor.

2.1.2 Cognitive Growth

The study of cognition refers to the study of knowing or understanding (see detail of Piaget's cognitive development theory in section 2.2.4). It also includes the area of perception, memory, attention, intelligence and language. In this part, I will focus on the area of perception and language development of children.

2.1.2.1 Perceptual Development

Perception involves the awareness of what is happening outside ourselves such as seeing, hearing, smelling, touching and tasting. Investigations on infants' perceptual and sensory capacities used many techniques to measure this awareness in infants, for example, head turning towards the test or controlled stimuli, eye movements, heart rates, and sucking rates when presenting with stimuli.

Regarding to infant's vision, Stern (1977) reported that newborns can not only see but also follow and fixate a moving object. Visual acuity is poor at the start of life but develop rapidly during the first year. The study on visual perception showed that ten hours to five days old infants prefer complex stimuli over simple stimuli, i.e., a human face versus newsprint (Fantz, 1963). Moreover,

infants' depth perception and size constancy seem to develop in the two-month-old (Bower, 1966).

Infants also respond differently to different kinds of auditory stimuli. Newborns prefer their mother's voice to that of other female (DeCasper and Fifer, 1980). At the age of 1 month, infants can discriminate phonemes that differ in voicing- /b/, /p/ and /d/, /t/ (Elimas, Siqueland, Jusczyk and Vigorito, 1971; Trehub and Rabinovitch, 1972) and can also discriminate phonemes that differ in their places of articulation- /b/ and /g/ (Morse, 1972). The latter author also found that infants could discriminate different intonation, i.e. rising and falling intonation.

In addition, newborns can discriminate different tastes such as water, milk, sweet (Ganchrow, Steiner, and Daher, 1983). They can also distinguish pleasant and unpleasant odors (Lipsitt, Engen, and Kaye, 1963).

2.1.2.2 Language Development

a) Prelinguistic Development

Crystal (1987) proposed that during the first year there are a great deal of progress in infant's sound production which cannot be ignored. In the first stage (0-8 weeks), a baby's sound reflects its biological state and activities which are reflexive noises (e.g. the crying because of hunger, pain or discomfort) and vegetative noises (e.g. sucking, swallowing, and coughing). Between 8 and 20 weeks, the first cooing sounds occur. These cooing sounds are low pitch and more musical than crying. Later in this cooing stage the cooing sounds are strung together and the first throaty chuckles and then laughing emerges. In stage three (20-30 weeks), the sounds of vocal play are much steadier and longer consisting of consonant plus vowel like sequences. They are usually at a high pitch level. The sounds of the vocal play are a vast range of consonants including nasal and fricative sounds. During 25 to 50 weeks, babbling becomes more speechlike. A small set of consonant like sounds is used quite frequently. The rhythm of the utterance and the syllable length are much closer to that found in speech. In the last stage of prelinguistic development (9-18 months), there occurs variations in melody, rhythm and tone of voice. However, the variety of sounds produced by the child decreases. The first words are constructed from a very restricted set of sounds.

b) Phonological Development

According to Crystal (1976), children begin to produce the phonemic contrasts of their language around nine months and can master them around seven years of life. Before learning the sound system of a language, they begin to develop the articulatory movements needed to produce the distinction of speech. As we can see from their babbling period, several sounds have been used. However, they are not used contrastively. Locke (1983) have proposed that there

are cross-linguistic similarities in the babbling produced by children acquiring Hindi, English, Arabic, Japanese, Mayan, and Luo. He reviewed and concluded that all languages used the same set of sounds. That is, children in all languages produce /p/, /b/, and /m/ but they do not produce /tʃ/, /dʒ/, /f/, and /v/ in babbling. So, it seems that early babbling is independent of language specific characteristics. In Thai, the babbling was studied by Tuaycharoen (1977, 1979). She proposed that the vocalizations of the child were restricted and systematic, and there is a gradual transition from babbling to speech. In addition, the characteristics of vocalization in the early babbling stages of the child in her study is similar to those findings in other languages.

The development of the phonemic system is a very complicated process and difficult to tell precisely when a contrast has been acquired. Jakobson (1941, in the Keiler translation, 1968) proposed the most striking theory in explaining the order of phonemic acquisition. He suggested that there is the relation between linguistic universal and the development of phonology. That is to say, the child will acquire the universal contrasts first such as oral-nasal (/b/ versus /m/), labial-dental (/p/ versus /t/, and stop-fricative (/p/ versus /f/), while the child will distinguish the contrastive sounds of his or her own language from the the sounds in other languages later.

In Thai, Luksaneeyanawin (1976) observed some phonetic characteristics on the speech of 28 children (aged 3-4 years). She found that the errors made on consonants and vowels are both articulatory and acoustically related such as the replacement of diphthongs by long monophthongs ([a:] for [ai], the substitution of some sounds ([tʃ], [tʃh], and [th] for [s]) throughout the utterance. Moreover, the consonant sounds [p], [t], [tʃ], [k], [ʔ], [m], [n], [ŋ] are the most commonly found in the speech errors of Thai children. It can be said that these sounds do not have limited distribution except [tʃ] which have limited distribution occurring in the error as a substitute of [s].

c) Suprasegmental Development

Limited work has been done on the acquisition of suprasegmentals: intonation, stress, tone, rhythm, etc. Concerning intonation, it is evident from Crystal's extensive studies (1975, 1976) on the subject of child intonation that the development of suprasegmental features of the child toward the adult system can be stated systematically as the following:

Stage I (0-7 months): This is a Prelinguistic Stage. It contains two periods. In the first period, the child has undifferentiated biologically determined vocalization. In the second period, he has differentiated vocalization with different affective interpretation only.

Stage II (7-10 months): There is the development of shorter more stable discrete vocalization which gives the impression of more control. Both

segmentals and non-segmentals are present. Particular segments occur with particular non-segmental features.

Stage III (9-18 months): This is a Primitive Sentence Stage. It can be divided into two substages. During 9-12 months the child becomes aware of the primitive prosodic unit and contrasts between non-segmental features emerge such as pitch range, duration, intensity and rhythmicity. During 12-18 months contrasts emerge involving 2 or more non-segmental parameters occurring simultaneously.

Stage IV (18-2.5 years): This stage the two word sentences appear. The range of sequential non-segmental patterns increases. In addition, the grammatical structure has specific prosodic interpretations.

Crystal claimed that the period for the emergence of such features was most likely around seven months. Unlike Crystal, Halliday (1975) investigated child intonation by looking at the attempts of children to establish a system of their own using suprasegmentals for meaning contrast. Although most children have begun to use some intonation patterns such as rise and fall intonation very early, other complex intonation patterns such as the combination of rise and fall or fall and rise are mastered quite late (Cruttenden, 1974).

The studies of tone acquisition in many languages have been summarized by Clumeck (1980) such as Mandarin Chinese (Chao, 1973; Li and Thompson, 1977), Cantonese Chinese (Tse, 1978) and Thai (Tuaycharoen, 1977). These studies reported that children would acquire the tones around 18-28 months. So there are consistencies between languages that tone is acquired before segmental contrasts. However, when investigating tone acquisition in particular languages, different orders of acquisition are found. While the Chinese-speaking child acquired the high-level and falling tones before rising tones, this was not the case for Thai-speaking child. That is to say, the mid-level and low-level tones were first acquired at the age of about one year and the rising tone was acquired soon after. The child acquired the high-level and falling tones last in his production. Tuaycharoen (1979: 275) suggested that the two opposed findings are probably related to the nature of the system of tones in the two different languages. It seemed that children would learn the gross contrasts of the language first, and then gradually learn the tones which have phonetic similarity. In Mandarin there are two rising tones, i.e. rising tone and low-rising tone; these two tones are difficult to discriminate and cause problems for production. While in Thai the low and the falling contrast was less clear than the low and rising contrast. Thus the rising tone was acquired before the falling tone.

d) Morphological Development

About morphological aspect, children's word structures mostly consist of a single root morpheme. After that, inflectional and derivational morphemes appear. Brown (1973) studied three English children to investigate the

developmental sequence of grammatical morphemes, the present progressive-*ing* of 'He is running.', the third-person singular in both its regular form (the *-s* of 'She walks.') and its irregular form (the *has* of 'She has the light.') etc. He found that the development of these morphemes is in an orderly sequence-(1) the inflection-*ing*, (2) prepositions-*in, on*, (3) plural-*s*, (4) irregular past, (5) possessive-*'s*, (6) determiner-*the, a*, (7) regulative past, and (8) third person singular-*s*. This developmental sequence is not related to the frequency of the different morphemes in speech heard by children. For example, the determiner *the* and *a* are the two linguistic forms most frequently used to the children, but they are acquired very late. Brown also proposed that the order of acquisition of the grammatical morphemes of English is determined in part by grammatical complexity and in part by semantic complexity.

e) Syntactic Development

At the end of the first year of life, children can produce one-word utterances. They gradually master the syntactic rules for sentence formation in their language. The syntactic developmental process can be roughly divided into 4 stages; (1) One-Word Stage or Holophrases, (2) Two-Word Stage, (3) Telegraphic Stage and, (4) Sentence Formation Stage (Fromkin and Rodman, 1978; O'Grady, Dobrovolsky, and Aronoff, 1989). The process takes place in orderly sequence as below.

At One-Word Stage or Holophrases, children begin to produce one word utterances between twelve and eighteen months. Utterances such as Dada, Again, and Here don't seem like grammar at all. But children use them as a single unit. For example, they say 'Dada' to mean 'I saw daddy'. It seems that children in this stage have a strategy in choosing the most informative word that applies to a specific situation. For example, using the word *candy* instead of *want* in the situation of a child who wants a candy. The examples in Thai are such as [mam] 'to eat', and [ʔɔʔ] 'to go out' (Tuaycharoen, 1979).

A Two-Word Stage, about eighteen months, children begin to produce two-word sentences as in, 'Doggie bark' to mean 'The dog is barking'. In this stage, the children have not acquired syntactic categories such as noun, verb, and adjective. For example, 'Mommy *busy*' and 'Mommy *push*', they treat the word *busy* and *push* as the same category. The lack of inflectional affixes such as plural and the past tense are also the features of the two-word stage.

At Telegraphic Stage, children around two years of age begin to produce longer and more complex grammatical structures. Sentences usually contain nouns, verbs, and adjectives and bound morphemes and lexical categories such as prepositions, auxiliary verbs, articles etc. are omitted. This kind of sentences is similar to those found in telegrams. Therefore, this stage is often called telegraphic stage. For example, a two-year-old says 'I see truck' for 'I can see the truck'.

In the Sentence Formation Stage, children will gradually master all types of rule of sentence formation in their language such as negation, interrogative

sentences and passivization. For negation during the second and third years of life, children seem to acquire basic structure of negation using *no* and *not* involving three stages. In stage one, there is the use of *no* at the beginning of the sentence as in 'No the sun shining'. Then the negative element *no* occurs sentence internally without auxiliary verb- 'The sun no shining'. And the last stage, the forms not and n't appear sentence internally with auxiliary verb.

For interrogative sentences, they emerge gradually between the age of two and four involving three stages (Bellugi, 1965). In the first stage, children use a rising intonation at the end of the sentence without inversion- See hole? or Where that?. In stage two, the auxiliary verb appears and undergo inversion only in yes-no question. Inversion is applied both in yes-no and Wh questions.

More advanced grammatical constructions such as passive construction is acquired relatively late up to age seven or so.

f) Semantic Development

It seems that the study of semantic development in children has received less attention than phonology and grammar. The common method to measure semantic development is to examine the vocabulary growth (McCarthy, 1954). The vocabulary grows very rapidly. By eighteen months, the average child has a vocabulary of fifty words and by age six most children have mastered about five thousand words. It can be said that vocabulary growth tells us very little about semantic development. It does not determine whether there are certain kinds of meaning that emerge earliest in language. Nelson (1974) has studied the first fifty words of eighteen months children and found uniformity vocabulary in the early vocabulary. Nominals (e.g. ball, doggie, snow) are predominant in the child's early vocabulary, with action verbs and modifiers being the next most frequent category types. Clark (1973) stated that the child acquires word meanings by overextending a word to include perceptually similar objects, i.e., the word *dog* is overextended to include horses, cows etc.

In case of Thai children, Tuaycharoen (1977, 1993) reported that the first fifteen to twenty words occurred around 11-16 months. The child whom she did a longitudinal study overextended words in production to compensate for his limited vocabulary. For example, the word [pǔ:] used for *the doll's head* was also extended to include *the ball*. Tuaycharoen (1984) also studied the acquisition of classifiers by Thai children from the aged of 24 months to the age of 5. She proposed five stages in acquiring classifiers. The first stage is the early attempt strategy which the children around 24 months perceive the existence of classifiers, but cannot produce them. Then, from the age of 2 to 2 1/2, the children use the same noun to indicate the classifier such as *pǎu 2 pǎu* 'two pockets'. The third stage is the use of identical noun deletion strategy when the child is not sure about the form of classifier, i.e. *mǎ sǎ:ŋ* --- 'dog two'. By the age of 3 - 3 1/2 the children overextend the use of classifiers such as *ironing-board 1 khūŋ* instead of

2a11. The last stage is the trial and error strategy in using classifiers with the unfamiliar objects which occurs during the age of 4 1/2 to 5. She found that classifiers are acquired very late and not yet complete by the age of 5.

2.1.3 Personal Growth

Lansdown (1984) has proposed that personal growth of children depends on many factors such as bonding and attachment, social, emotional and personality development.

In early years of children, the role of mothers has a great impact on the child's personal growth. The study of bonding by Klaus and Kennell (cited in Lansdown, 1984: 155) has shown that if no bonding takes place between mother and baby, it could lead not only to the two not getting on very well but to excess of child abuse.

Mother also shows an attachment which is an affectionate reciprocal relationship between mother and child to her baby. This is an example of the interactive nature of child development.

Concerning social development, the children must acquire the ability to behave in accordance with social expectations. The pattern of socialization in the early first year show that neonates interest only in their own bodily comforts. Until about three weeks children begin to show some awareness of others; for example, waving and kicking in response to mother's arrival, ceasing to cry when picked up and smiling. Around the fourth month, laughing appears in responding to stimulation. Children can also show affection physically. For example, the gaze is fixed on the mother's face, movements of arms and legs. Within a few months these are developed into an active cuddling back in response to an adult's embrace. By twelve months, they can react to other children participating in some rudimentary play.

The children also show the feeling state such as pleasure, fear, anger, anxiety etc. In early childhood the most common fear producing stimuli are loud noises, animals, high places, sudden movement, the dark, pain, and strangers, and strange places and objects.

The child development in physical, cognitive and personal growth in the first year of life was summarized in Table 2 (adapted from Landsdown, 1984).

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Table 2 An Overview of Development by Age, adapted from Lansdown (1984: 247-251)

Development /Age	Posture and Large Movement	Vision and Fine Movement	Hearing and Speech	Self-help Skills	Personal-Social and Play
1 month	<ul style="list-style-type: none"> - Largely, jerky limb movements, arm more active than legs. - When child placed downwards on tummy head turn to side. 	<ul style="list-style-type: none"> - Turns head and eyes toward light. - Notices dangling object 6-8 inches away when shaken or rattled. 	<ul style="list-style-type: none"> - Startled by sudden loud noises. - If whimpering can be soothed by human voice 	-	-
3 months	<ul style="list-style-type: none"> - Movement more smooth and symmetrical 	<ul style="list-style-type: none"> - Visually alert, pays attention to nearly human face. - Watches movements of own hands - Makes eager welcoming movements at breast or bottle 	<ul style="list-style-type: none"> - Vocalizes when spoken to or when content. - Quietens to rattle or bell or spoon in cup sounds - Many turn head towards sound. 	<ul style="list-style-type: none"> - Can hold rattle for few months 	<ul style="list-style-type: none"> - Has begun to smile responsively - Responds with pleasure to friendly handling. - Holds rattle for short time.
6 months	<ul style="list-style-type: none"> - Raises head from pillow when lying on back. - When held sitting head is firmly erect and back straight. May sit unsupported for a few moments. - Feet bounce up and down when child held appropriately on hard surface. 	<ul style="list-style-type: none"> - Eyes move in unison. - Uses whole hand to grasp. - Reaches for object. 	<ul style="list-style-type: none"> - Vocalizes using single and double syllables: ka, muh, adah. - Shows evidence of understanding different tones of voice. - Turns immediately to mother's voice. 	<ul style="list-style-type: none"> - Takes everything to mouth. 	<ul style="list-style-type: none"> - Begins to find feet interesting. - Can reach for and grasp dangling toys. - May show some shyness with strangers.
9 months	<ul style="list-style-type: none"> - Sits alone for 10-15 minutes 	<ul style="list-style-type: none"> - Stretches out to reach and grasp objects. - Manipulates object and passed them from hand to hand. 	<ul style="list-style-type: none"> - Shouts to gain attention. - Babbles using string of sounds: bab-bab-bab-, etc. - Understand 'no' and 'bye-bye' 	<ul style="list-style-type: none"> - Holds and chew biscuit. - Tries to grasp spoon, puts hand round up or bottle. - May still take everything to mouth. 	<ul style="list-style-type: none"> - Distinguishes stranger, may cling to known adult. - Plays peek-a-boo.
12 months	<ul style="list-style-type: none"> - Moves about the floor rapidly. - May stand alone for a few moments. - Can rise to sitting position from lying. 	<ul style="list-style-type: none"> - Picks up small objects with thumb and first finger. - Watches people and cars out of doors with apparent interest. - May show preference for one hand 	<ul style="list-style-type: none"> - Turns to own name, understand some words in context. - Babbles tunefully and incessantly. - May hand common objects to adult on request. 	<ul style="list-style-type: none"> - Drink from cup with little assistance. - Helps with dressing by holding out arms. 	<ul style="list-style-type: none"> - Shakes bell and puts objects in and out of box. - Likes to be with adults. - Demonstrates affection.

2.2 Language Acquisition Theories

Language acquisition theories differ on their theoretical position on acquisition versus learning. The two major oppositions are the rationalist theory which is more concerned with acquisition, whereas behaviorist theory believes that language is learned, and the learning process is a process of imitation and reinforcement. The ability to acquire language is specific to human. One of the most intriguing question is "How does a child acquire his language so well in a short time?". The attempt to investigate the process of a child acquiring his language could date back before 610 B.C.E. The Egyptian Pharaoh Psametichus carried out the research on the two infants brought up in complete in isolation to determine the type of language they would acquire on their own (Waterman, 1963). The study of language acquisition has advanced considerably since that time. Different theoretical approaches to understanding language acquisition have provided us with different insights. The language acquisition theories can be classified into four major theories, i.e. behaviorist, rationalist, functionalist, and cognitive development theory.

2.2.1 Behaviorist

The behaviorist approach focused only on observable data, and devoted its theoretical effort to the elaboration of operational methods without using the concept like mind or mental behavior. The behaviorist believed that children come into the world with a *tabula rasa* which is a clean slate bearing no preconceived notions about the world or about language, and they are shaped by their environment (Brown, 1984). In other words, language learning is a process of imitation and reinforcement. They will adapt their own production until they match the language of adult models.

One of the best known of a behavioristic approaches was Skinner's stimulus-response theory (1957) which stated that human and animal behavior could and should be studied in terms of physical process only. Language was a learned behavior and part of total human behavior. Skinner studied the animal behavior serving for the explanation about human behavior which he called operant conditioning. He believed that children learn language according to the principle of operant conditioning. It was the condition which an organism (e.g. a child learning his first language) produce an action (e.g. an utterance) for achieving a purpose. Children learn to produce correct sentences by being positively reinforced (say something right) or negatively reinforced (say something wrong). According to this theory, the acquisition of language occurs as a result of this learning process.

However, there were many criticisms against this view. Especially, Chomsky (1959) has made a strong critical review of Verbal Behavior. The main point of his argument was that language is a creative and generative system. There are a vast number of word combinations and children cannot learn throughout the

process of imitation and reinforcement process. Instead they learn rules which govern the construction of sentences.

In addition, many utterance types produced by children do not closely resemble the structures found in adult speech such as plural form (e.g. *foots, *mouses), past tense (e.g. *goed, *taked) and negative construction (e.g. *Nobody don't like me.). Even when adults do attempt to correct these errors, this seems to have no effect (McNeill, 1966).

2.2.2 Rationalist

The rise of transformational generative grammar in linguistics which was proposed by Chomsky (1957) had a great influence on psycholinguistic research from 1960 to 1969. As a linguist, the main purpose of Chomsky in studying language was to construct a theory of language which was a theory of competence. It was the purely grammatical knowledge of an ideal speaker-hearer that allows speakers to produce infinite sentences in their languages. Chomsky (1965) believed that the child is born with an innate capacity for language development which explains why the child masters his native language in quite a short time without difficulties. That is to say, there was something about the human mind that equips the child to acquire language which is called 'Language Acquisition Device' (LAD). Crystal (1976) proposed the model of language acquisition as below:

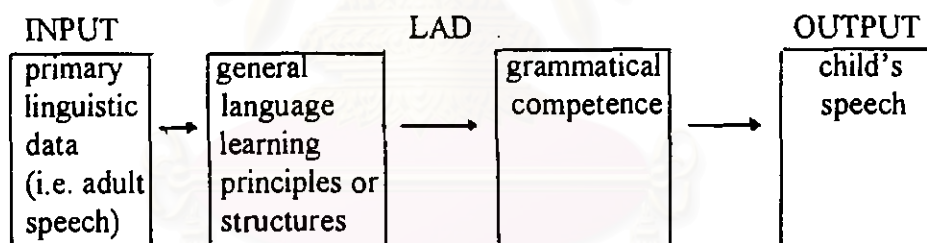


Figure 1 Generative Model of Language Acquisition

This model of the rationalist view on language acquisition shows that adult speech which is the speech pattern in the child's environment is only the input to the child acquisition system. LAD suggests how the child operates on this input. The child forms hypotheses on the basis of the input received and then tests those hypotheses. The hypotheses will continually be revised until the child's output is identical to the input.

According to Chomsky, children acquire languages by forming rules and constructing a grammar. They acquire generative grammar for their language which helps them produce sentences which they have never encountered before. That is to say, language acquisition is innately determined. The children are born with the device that helps them to acquire their language without difficulties.

There were many phenomena in language acquisition supporting this view. For example, the increasing complexity of one child's negative sentences. Children progress from simple rules to more complex rules- No want some food > I no want some food > I don't want no food > I don't want any food. Moreover, the incorrect use of irregular verbs and nouns show that children form the rules by extending their understanding of the regular patterns of the language. Another evidence to support an innate predisposition or innateness theory came from Lenneberg (1967), he proposed that children learn language easily and can learn several languages at once without special training. Lenneberg argued that there is a critical period for language learning which is between about two years and puberty. This evidence was supported by Newport (1996: 543) who suggested that language development occurs under maturational constraints, operating successfully only during a maturationally bounded period. For example, learners who begin to learn a language in childhood reach more systemic levels of performance in the language than those who begin in adulthood.

Rationalist view has not been without critics. It was argued that a mentalistic construct were abstract and unobservable. Moreover, it was hard to infer from this unobservable and underlying level (Brown, 1984).

2.2.3 Functionalist

Toward the end of the 1960s, there was a shift in language acquisition research from the rational approach to functional one. The rationalist approach which deals only with the forms and rules of a language seems to be inadequate because it failed to account for the meanings or functions of language. The functional approach had the roots in the tradition of British linguist J.R. Firth (1935) who viewed language as interactive and interpersonal.

Functionalist view on child language acquisition puts the emphasis upon the functions which a child employs to set up a system of making meaning rather than the structure. Bloom (1970) pointed out that it was impossible to evaluate children's language without examining the context in which they use. For example, the utterance "Mommy sock" had at least three possible underlying relation: (1) agent-action (Mommy is putting the sock on), (2) agent-object (Mommy sees the sock), (3) possessor-possessed (Mommy's sock)

The major work in child language acquisition under this approach is of M.A.K. Halliday (1973, 1975). In his works 'Explorations in the Functions of Language' (1973) and 'Learning how to Mean' (1975), Halliday proposed that a child who is learning his first language is learning how to mean. Language development is the mastery of linguistic functions or learning the meaning potentials associated with the uses of language. He also suggests the child's model of language which is a set of functions in which a child first learns to mean as below:

1. The instrumental mode or 'I want' function Language is a means of getting things done e.g. I want a banana.
2. The regulatory model or 'do as I tell you' function The child's use of language as a means for exercising control over others and their behavior.
3. The interactional model or 'me and you' function Language serves the interaction between the self and others e.g. Hello (greeting)
4. The personal model or 'Here I come' function The child becomes aware of language as a form of individuality and of its process in the development of personality.
5. The heuristic model or 'Tell me why' function Language serves to explore the child's environment and investigate reality.
6. The imaginative model or 'Let's pretend' function Language is to create his own environment.
7. The representational model or 'I've got something to tell you' Language is a means of the communication of content, (expressing propositions, and conveying a message with specific reference to processes, persons, objects, abstractions, qualities, states, and relations of the real world.

The child first tends to use language in just one function at a time. Eventually, utterances become functionally more complex. They serve several functions which depend on their contexts.

The functionalist view on language acquisition pays more attention to the social process as well as the communicative process. This view believes that children learn not only grammatical rules, but also communicative competence that includes the native speaker's capacity to produce and understand utterances appropriate to the specific context (Hymes, 1972). The functionalist view also supports the importance of maternal speech which the child must involve in his language environment.

2.2.4 Cognitive Development Theory or Interactionist

The Swiss Psychologist, Jean Piaget, made the most significant contribution to the area of cognitive development. Piaget (1955) suggested that cognitive development influences language acquisition. By cognitive development, he means the infant's growing knowledge of the world around him. Two mental processes guide this development throughout life, i.e., organization and adaptation. The former is how the child combines and integrates separate schemes. The latter is how people extend and modify schemes doing so through two functional

processes: *assimilation* and *accommodation*. Assimilation is the process of taking the new events and adjusting them to its internal structure. In contrast, accommodation is changing the internal structure to become more like the external event. The major stages are the sensorimotor stage (from birth to 2 years), the pre-operational stage (2 years to 7 years), the concrete operational stage (7 years to 11 years), and the formal operational stage (11 years and over).

Sensorimotor stages

Piaget's sensorimotor development was proposed to cover development from birth to around two years. Piaget (1952) outlined the characteristics of six stages of sensorimotor development as below:

Stage 1: The use of reflexes or reflexive stage (birth to 1 month). Infant shows reflexes that are the foundation of future development such as sucking, grasping.

Stage 2: The first acquired adaptations and the primary circular reaction (1 to 4 months). The first primitive acquired behaviors appear as assimilation and accommodations begin to operate separately, e.g. occurrence of crying appears to be connected with behavior patterns of expectation and disappointment; new behaviors under acquisition are repeated as they are assimilated, e.g. repeating sounds for phonetic interest.

Stage 3: The secondary circular reactions and the procedures destined to make interesting sights last (5 to 8 months). The onset of some preliminary intentionality on the part of the child; objects are no longer ends of actions but used as a means to achieve other goals; e.g. swinging one's arms to make a rattle move.

Stage 4: The coordination of the secondary schemata and their application to new situations (9 to 11 months). Infant uses activities of previous stage as means to achieve ends, e.g. hitting or moving the parent's hand to move it away from an object the infant desires. Infant begins to attempt imitation of novel sounds.

Stage 5: Tertiary circular reaction (12 to 18 months). The child begins to discover new way that were not used before, although it happens through trial and error. The child can begin to use objects as means. He also has better ability to locate hidden objects, but still cannot succeed in an invisible displacement.

Stage 6: Intervention of new means (19 to 24 months). The child can picture and follow a series of invents in his mind. He has an ability to figure out invisible displacement. The concept of object permanence is fully developed.

This research studies the speech of 6 mothers of 6 infants (newborn-12 months) belong to the first half of this sensorimotor stage.

Preoperational stage

The age range is between two to seven years. After the mastering of object permanence in the sensorimotor stage, children can represent objects mentally at this stage. The thinking and speech of the child in this stage is described as egocentric which centered on the self. This is not because the child is uninterested in considering the views and needs of other people but because he does not understand that their views and needs are different from his own. The child in this stage believe in the invariance of perceiving objects. He does not have the ability to understand what changes and what does not change under various circumstances.

Concrete operations stage

Between seven to eleven years, the child will have the ability of conservation. He can organize many of the scattered schemes into structural whole and conceptualization develop. The child can reason only about physical thing not about abstractions. There is an increase in flexibility or decentration. The ability to see things from someone else's point of view.

Formal operations stage

This stage goes from twelve years to adulthood. This is the final stage of development which are the basis of adult thought. When the child is at the age of eleven or over, they can solve problems, think abstractly and make logical reasoning.

Piaget has a great impact on language acquisition theory. His work is very dominating. He has elaborated and tested the most comprehensive and systemic explanation about how human thought and knowledge develop from infant to adulthood. However, psychologists have questioned much of Piaget's experimental work. They found that many children appear to have more advanced stage of cognition at certain age than his work had suggested.

2.3 Pragmatic Theories

Past studies on the meaning of language, often called logical semantics, has focused on the truth conditions of declarative sentences. However, meaning involves more than the meaning of a sentence. The context in which it is uttered is also important. Therefore, many recent studies in the meaning of language have been devoted to how language is used in conversation. There are 4 major works which help give a clear insight to the study of the pragmatic characteristics of IDS

in this study which I will discuss below. In the first part, I will focus on Grice's (1975) rule-governed conversation which is called Co-operative Principle of Conversation: conversational rules which participants cooperate with each other. Then the second part will involve the types of acts associated with the utterance or speech acts. The theory of speech acts was first introduced by J.L. Austin (1962) who gave explicit recognition to the social function of language. One of the significant work in speech acts theory after Austin was that of J.R. Searle (1969) who coined the term 'speech act'. The other work which have made contribution to the development of speech act theories was of D. Vanderveken (1990) who have not only focused on the illocutionary acts but also on the logical forms of them. Another contribution to the theory of speech acts is the work by Verschuren (1985). He made a clear distinction between the performative acts which sometimes is called performative verbs or verbs of utterance and speech act verbs. He coined the terms Linguistic Action Verbs which he referred to the performative acts as opposed to the term Speech Act Verbs which he referred to the speech acts which are derived by the orthodox criteria of speech act theory proposed by Searle (1969). Verschuren's model has made the bottom-up analysis of the speech acts of IDS more well defined. These four major works will be discuss below.

2.3.1 Rule- Governed Conversation

In his article 'Logic and Conversation' (1975), the philosopher H.P. Grice pointed out that he did not believe that there were the divergences in meaning between the formal devices as $\sim, \wedge, \vee, \supset$ and their counterparts in natural language, *not, and, or, if, all*. He said that the claim that divergences did in fact exist was a mistake, and the claim arose from an inadequate attention to the nature of the conditions governing conversation.

Before describing the rules governing conversation, Grice proposed two types of implicature, i.e., the conversational, and the conventional implicature. The conversational implicature has to be constricted to a considerable extent from an intuitive understanding of the meaning from the context of utterance. On the country, in conventional implicature the conventional meaning of the words used determines what is implicated. He gave two examples to make a distinction between conversational and conventional implicature as set out below:

(1) The conversational implicature: A and B were talking about a mutual friend, C, who was working in a bank. A asked B how C was getting on with his job, and B replied "*Oh quite well, I think; he likes his colleagues, and he hasn't been to prison yet*". If A looked only at the meaning of the words used, he would not understand the answer of B. But B's answer was clear in the context and A understood what B implied or meant.

(2) The conventional implicature: "*He is an Englishman; he is, therefore, brave*" In this example, the implicature is associated with *therefore*. The speaker of this sentence committed himself by the virtue of the meaning of his words: that being brave was the consequence of being an Englishman.

Grice formulated the Cooperative Principle (CP) which set out rules governing the use of language that made people behave in reasonable ways in conversation. The definition of the CP is:

“Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged”(Grice 1975:45)

Grice proposed four basic maxims that are implied in the CP. These regulate conversation and underlie the efficient use of languages. These four maxims are listed below:

1. The maxim of quantity
 - 1.1 Make your contribution as informative as is required (for the current purposes of exchange).
 - 1.2 Do not make your contribution more informative than is required.
2. The maxim of quality: Try to make your contribution one that is true.
 - 2.1 Do not say what you believe to be false.
 - 2.2 Do not say that for which you lack adequate evidence.
3. The maxim of relation/ relevance: Be relevant
4. The maxim of manner: Be perspicuous
 - 4.1 Avoid obscurity of expression
 - 4.2 Avoid ambiguity.
 - 4.3 Be brief (avoid unnecessary prolixity)
 - 4.4 Be orderly

Grice pointed out that the maxim of quality was at the heart of the system of maxims and that people valued it much more highly than the other maxims. For example, a man who expressed himself with undue prolixity would, in general, be open to milder comment than would a man who had said something he believed to be false. However, Grice noted that a participant in a conversation might fail to follow these maxims in various ways:

1. He might violate a maxim, in which case listeners would be misled.
2. He might opt out of the operation both of the maxim and of the CP.
3. He might be faced by a clash. That is to say, he was unable to conform to all maxims at once, and therefore needed to violate one maxim in order to follow the other.
4. He might flout a maxim; that is, he might blatantly fail to fulfill it.

Grice gave a number of examples in which the maxims failed to be observed. The following is an example in which a maxim was violated, but its violation was to be explained by a clash with another maxim. A is planning with B an itinerary for a holiday in France. Both know that A wants to see his friend C, if to do so would not involve too great a prolongation of his journey:

- A: Where does C live?
 B: Somewhere in the South of France.

In this conversation, it seemed that B violated the first maxim of quantity because he gave less information than was required to meet A's needs. However, he followed the second maxim of quality, 'Don't say what you lack adequate evidence for'. So B implied that he did not know in which town C lives.

Other examples involve flouting a maxim. Obvious examples of the flouting of the first maxim of quantity are tautologies such as 'Women are women', and 'War is war' which are totally noninformative. Examples in which the first maxim of quality is flouted are often found in irony, metaphor, meiosis and hyperbole.

It is quite clear that there remains some problems with Grice's conversational rules. In conversation, there are many important aspects, such as the differences between the speaker and hearer, presupposition, linguistic and non-linguistic information. Whereas Grice's conversational rules cover presupposition, and linguistic and non-linguistic information, they are deficient because they are formulated from the speaker's aspect only. Nevertheless, the conversational implicature has assisted linguists to understand the intention which the speaker tries to communicate. That is to say, it assists in the understanding of the concept of speech acts.

2.3.2 Speech Act Theories

2.3.2.1 J.L. Austin

J.L. Austin (1962), a British philosopher, was the first to introduce performative functions of utterances as part of interpersonal communication. Austin's performative hypothesis was put forward in the William James Lectures at Harvard University in 1955 which were published after his death by his students (Sbisa & Urmason) in "How to Do Things with Words".

Austin classified utterances into types which were 'constative' and 'performative'. The former were statements that convey information or describe some state of affairs and which would be judged to be true or false. On the contrary, the latter would be not judged true or false. To utter a performative utterance is to perform an action which was not normally thought of as just saying something. When someone says "I apologize...", "I promise...", "I will..." or "I name this ship...", the utterances immediately play some social functions.

Austin gave four examples to distinguish constative and performative utterances:

- a). "I do (sc. take this woman to be my lawful wedded wife)" - as uttered in the course of the marriage ceremony.

- b). "I name this ship the Queen Elizabeth"- as uttered when smashing a bottle against the stern of the ship.
- c). "I give and bequeath my watch to my brother"- as occurring in a will.
- d). "I bet you six pence it will rain tomorrow"

In the above examples, Austin pointed out that the uttering of the sentence was not to describe the doing of what was being said but to do an act of marrying, naming a ship, bequeathing, or betting.

As mentioned above, performatives are not true or false, however, they can be successful or unsuccessful. They are successful only if they are uttered in appropriate circumstances, known as 'felicity conditions' or 'happiness conditions'. For example, for naming the ship, it is essential that the person doing the naming is the person appointed to name her. If the acts were situationally inappropriate for the occasion, the utterance is said to be infelicitous or unhappy, to go wrong or misfire.

Austin pointed out that there were two kinds of performative utterances- primary and explicit performatives. Primary performatives are the utterances which are always left implicit because they do not include a significant expression. On the other hand, explicit performatives all begin and include performative verbs like 'assert', 'ask', 'order', 'promise', which can be defined as verbs which are used to perform the acts the named. Most explicit performative sentences are declarative sentences and the performative verbs ought to be in the first person singular indicative active form. The difference between primary and explicit performatives is exemplified in A and B below.

A. Primary Performatives

1. 'I shall be there'
2. 'Go'
3. 'You ought to go to class everyday'

B. Explicit Performatives

1. 'I *promise* that I shall be there'
2. 'I *order* you to go'
3. 'I *advise* you to go to class everyday'

Austin classified explicit performative verbs according to their illocutionary force into five classes. There are verdictives, exercitives, commissives, behabitives and expositives. There are 188 kinds of verbs of utterance in English.

1. Verdictives involve the giving of a verdict, an estimate, reckoning, or appraisal. For example, *acquit, estimate, value, rank, analyze, describe* etc.
2. Exercitives involve the exercising of powers, rights, or influence which include *appoint, degrade, demote, dismiss, name, order, command, direct* etc.
3. Commissives are typified by promising or undertaking. Examples are *promise, covenant, contract, undertake, propose to* etc.
4. Behabitives are involved with attitudes and social behaviors such as *apologize, thank, deplore, resent, welcome, bless, dare* etc.

5. Expositives deal with how we use words in exposition like *affirm, deny, state, describe, class, identify* etc.

Austin noted that the distinction between classes 4 and 5 was not clear cut, i.e., there is some overlap between them.

It can be claimed that Austin's classification of verbs of utterance is too broad. The categories are still not clear and unequivocal. Moreover, he did not propose any model for analyzing these performatives or illocutionary acts, and so, his classification looks just like a list of verbs of utterance.

In addition, Austin distinguished three kinds of acts which the speakers did in saying something- the locutionary act, the illocutionary act and the perlocutionary act.

1. Locutionary acts correspond to utter a certain sentence with a certain sense or reference.

2. Illocutionary acts are at the core of the theory of speech acts, and involve the acts of the speaker that are performed by making an utterance.

3. Perlocutionary act was the particular effect the speaker's utterance had on listener. That is to say, what happen or achieve by saying something.

2.3.2.2 J.R. Searle

Austin's ideas about the performative hypothesis contributed to other the theory of speech acts as proposed by J.R. Searle (1969), the most significant work in speech act theory after Austin. Searle proposed that it was of interest and importance in the philosophy of language to study speech acts (language acts or linguistic acts). The symbol or word or sentence was not the unit of linguistic communication, but rather it was the production of the token in the performance of the speech act that constituted the basic unit of linguistic communication.

In uttering a sentence, a speaker was characteristically performing three distinct kinds of acts simultaneously:

1. Utterance acts which involve the uttering of words, morphemes, and sentences.

2. Propositional acts which involve referring and predicating.

3. Illocutionary acts involving the speaker's intention to communicate something such as stating, questioning, commanding, promising etc.

It can be seen that Searle's utterance acts and propositional acts look like Austin's locutionary acts. In addition, Searle did not include Austin's notion of perlocutionary act, an act of causing certain effect on the hearer, in his analysis because the intentional meaning of the speaker may be different from the meaning of the listener. The listener's interpretation of the actual meaning depends on many factors such as the background of the listener, the attitude of the listener towards the speaker, and the presupposed belief of the listener.

Searle also stated that to perform acts was to engage in a rule-governed form of behavior. Consequently, he proposed an analysis model of speech acts to determine whether particular speech acts are performed successfully in the utterance of a given sentence. These conditions which are necessary and sufficient for the acts that are non-defective performed were called felicity conditions and can be classified into four types of rules- propositional content, preparatory, sincerity and essential.

1. The propositional content describes the action which the speaker requires of the hearer.

2. The preparatory involves the speaker's presupposition about the truth of certain propositions in the context of his utterance or what he implies in the performance of the act.

3. The sincerity concerns what the speaker expresses in the performance of the act.

4. The essential concerns the undertaking of an obligation to perform a certain act.

Searle used these conditions to analyze many types of illocutionary acts such as request, assert, question, thank, advise, warn, greet, and congratulate. Below is an example of the analysis of an illocutionary force of request:

Table 3 Types of Rules for Request (Searle, 1969)

Types of rules in Felicity Condition	An illocutionary act of "request"
1 Propositional content	Future act A of H
2 Preparatory	1. H is able to do A. S believes H is able to do A. 2. It is not obvious to both S and H that H will do A in the normal course of events of his own accord.
3 Sincerity	S wants H to do A.
4 Essential	Counts as an attempt to get H to do A.

Since Austin's (1962) discussion of the many functions performed by part of the interpersonal communication and Searle's (1969) elaboration of speech acts, felicity conditions, and constitutive rules, there have been a great deal of attempt to show the functions and the structure of language are logically related (Vanderveken, 1990) which I will present next.

2.3.2.3 D. Vanderveken

Vanderveken's work on "Meaning and Speech Acts" (1990) also contributed extensively to the theory of speech acts. Vanderveken pointed out that there was no formal development in the trend of ordinary language philosophy until the recent work of Searle and the present author (Vanderveken) (Searle and Vanderveken, 1985). His work developed a general logical theory of speech acts providing recursive definitions of the set of all possible illocutionary forces, and of the conditions of success and satisfactory of elementary illocutionary acts.

Like Austin and Searle, Vanderveken (1990) pointed out that illocutionary acts are the primary units of meaning in the use and comprehension of natural language. He attempted to show that the function and the structure of a language are logically related. He proposed that elementary illocutionary acts of the form $F(P)$, where F was an illocutionary force and P was a propositional content are expressed in languages by elementary sentences of the form $f(A)$, where f was an illocutionary force marker and A was a clause.

For the elementary illocutionary act $F(P)$, he gave the examples such as those below:

1. "Are you coming?"
"Is it raining?"

Both utterances are interrogative sentences which have the same illocutionary force of questioning but different propositional content. On the other hand, the utterances in example 2 below occur in the context of sentences which have the same propositional content but different illocutionary forces. The former expresses the speaker's will and the latter performs an act of asserting.

2. "Long live the republic!"
"The republic will long live"

In Vanderveken's elementary sentences of the form $f(A)$, the illocutionary marker (f) is the words and other syntactic features of the sentence whose meaning determined that its literal utterance in a possible context of use had one or several illocutionary forces such as the mood of the verbs, word order, intonation or punctuation sign. On the contrary, the clause (A) of an elementary sentence consisted of the words and syntactic features of that sentence whose meaning determined its literal utterance in a possible context of use with one or several possible propositional contents such as the subjects, person and tense of the verbs.

Vanderveken proposed that there were seven types of elementary sentences which grammarians and linguists have long acknowledged. These are set out below:

1. Declarative sentences are used to say how things are, e.g., "The door is open".
2. Conditional sentences are used to say with reserve and without a high commitment to the truth of the propositional content how things would be later if certain specified or unspecified future facts exist, e.g., "He could do it, if he really wanted".
3. Imperative sentences are used to try to get the hearer to do something, e.g., "Close the door!".
4. Interrogative sentences are used to ask questions, e.g., "Are you sure?".
5. Exclamatory sentences are used to express the speaker's mental states, e.g., "How glad I am that he won!".
6. Optative sentences are used to express the speaker's wish, e.g., "If only it would rain!".
7. Subjunctive sentences are used to express the speaker's will, e.g., "Let there be rain!".

The last two types of elementary sentences are used to express particular types of mental state. Vanderveken also mentioned that elementary sentences with the same illocutionarily significant sentence type was not necessary perform speech acts with the same illocutionary force.

Moreover, Vanderveken pointed out that there are two kinds of conditions- the conditions of success and the conditions of satisfaction of speech acts, which are used to determine the linguistic purposes served by these acts in the context of use. The conditions of success of an illocutionary act are the conditions that ought to obtain in a possible context of utterance in order that the speaker succeed in performing that act in that context. If the conditions did not obtain in a possible context of utterance, illocutionary acts were said to fail to be satisfied. That is to say, the attempts to perform illocutionary acts could succeed or fail. For example, a condition of success of a promise is that the speaker commits himself a future course of action in the world of the utterance. If the speaker did not commit himself to doing something in a context of utterance, he did not make a promise. The second kind of condition are the conditions of satisfaction which ought to obtain in the world of a context of utterance in order that act be satisfied in that context. For example, a condition of satisfaction of a promise was that the speaker did what he committed himself to doing.

In the analysis of illocutionary forces, Vanderveken proposed that each illocutionary force consisted of six components which are used to determine the conditions of success and of satisfaction of all speech acts with that force. Those are the illocutionary point, a mode of achievement of an illocutionary point, propositional content, preparatory conditions, sincerity conditions, and the degree of strength. Details of these are given below.

1. Illocutionary point

The illocutionary point is the principal component of illocutionary force because it determines the direction of fit of utterances with that force. The point is the purpose which is essential to the type of speech acts that the speaker performs. There are five illocutionary points of utterances.

- a) the assertive point of representing as actual a state of affairs
- b) the commissive point of committing the speaker to a future course of action
- c) the directive point of making an attempt to get the hearer to do something
- d) the declarative point of performing an action which brings into existence a state of affairs by representing oneself as performing that action
- e) the expressive point of expressing propositional attitudes of the speaker about the state of affairs

There are four directions of fit corresponding to these five types of illocutionary point. These are listed below:

- a) The words-to-world direction of fit is for illocutionary acts with the assertive point. The speaker expresses the propositional content and as match as a state of affairs existing in general, independently in the world.
- b) The world-to-words direction of fit is for illocutionary acts with the commissive or directive illocutionary point. Their point is to get the world to be changed by the future course of action of the speaker (commissives) or of the hearer (directives) in order to match the propositional content.
- c) The double direction of fit is for illocutionary acts with the declarative illocutionary point. The world changes by the present action of the speaker to fit the propositional content by virtue of the fact that the speaker represented it as being so changed.
- d) The null or empty direction of fit is for illocutionary acts with the expressive point. Their point is only to express a propositional attitude of the speaker about the state of affairs represented by the propositional content.

2. Mode of achievement

The mode of achievement of an illocutionary point of an illocutionary force determines how its point ought to be achieved in the propositional content in a successful performance of an act with that force. The mode of achievement of a request involves the speaker leaving the option of refusal to the hearer in making his attempt to get him to do something.

3. Propositional content conditions

Some illocutionary forces need conditions on the set of propositions that can be taken as propositional contents of acts with that force in a context of utterance. For example, the propositional content of a promise ought to show a speaker's future course of action.

4. Preparatory conditions

Preparatory conditions involve the speaker's presupposition about the truth of certain propositions in the context of his utterance. For example, the illocutionary act of blame presupposes that it was bad or reprehensible to do such a thing.

5. Sincerity conditions

Sincerity conditions are the mental state or certain psychological modes of the speaker concerning the state of affairs represented by the propositional content. For example, when we promise something, we ought to express an intention to do what we promised.

6. Degree of strength

Each speech act is expressed with different degrees of strength. This shows how strongly the speaker feels about changing the hearer's state of mind. For example, the degree of strength of a supplication is greater than that of a request because in supplicating the speaker shows a stronger desire than in requesting.

Vanderveken used this analysis model of illocutionary forces to analyze 271 English performative verbs. They were classified into five types, according to their points, as assertives, commissives, directives, declaratives and expressives. It can be seen that many important verbs; i.e. explain, count, sing, tease, comfort, call, calm, persuade etc. which were left unanalyzed included in his analysis.

2.3.2.4 J. Verschuren

Verschuren (1985, 1994: 4138) proposed the term 'linguistic action verbs' (LAVs) which has the same concept as verb of utterance and performative verbs as opposed to 'speech act verbs' (SAVs). The former term covers all verbs which can be used for the description (and sometimes the performance) of types or aspects of linguistic action or verbal behavior. The latter involves the verbs which can be used for the description (and sometimes the performance) of 'speech acts' in the sense of orthodox speech act theory as formulated by John Searle (1969). In this study, I will use LAVs to refer to the analysis of the performative acts the mother did, and SAVs to the analysis of the speech acts using the criteria proposed by Searle.

In this research, IDS will be analyzed in terms of speech acts using all speech act theories mentioned above. In other words a bottom-up method is used

by investigating the speech utterances and then classified them into the different verbs of utterance or linguistic action verbs (LAVs) in Thai derived by Pansottee (1991). Then these utterances were analyzed into speech act verbs (SAVs) using the criteria proposed by Searle (1969) and Vanderveken (1990) as mentioned above.

2.4 Motherese in Various Languages

Past studies in language acquisition have considered the child from the development of his internal ability. As we can see, the rationalist view which puts the emphasis on innateness devalued the parental input. Rationalist claimed that the primary linguistic input that the child heard is a degenerate sample containing full of false starts and ungrammatical utterances (Chomsky, 1957; McNeill, 1970). However, studies of language addressed to children showed that the linguistic input is simple, free from hesitations, errors and deviation from grammaticality.

Since 1970 a good deal of research work on the development of child language has been devoted to the investigation of the relationship between language acquisition and the kind of speech input that is addressed to young children. Such speech is often called 'Motherese', 'Baby Talk', 'Input Language', 'Parentese', 'Caretaker Speech', 'Child Directed Speech' or 'Infant Directed Speech'. This speech style is now viewed as the most important source of speech input to the child from the environment.

2.4.1 The Characteristics of Infant Directed Speech (IDS)

Many studies have tried to investigate the structure of maternal linguistic input to children by comparing mothers' speech to their children with speech to other adults. It was found that the language addressed to children has certain phonetic characteristics as well as a more simplified syntactic structure and a more restricted vocabulary (Snow & Ferguson, 1977). Among these studies, most of them has been on the interaction between mother and child of English language. Therefore, the present part I will review the characteristics of IDS in both English language studies and cross-cultural language studies.

a) IDS in English

The investigations of IDS in English did report that mother's speech differs from speech among adults. Systemic observation revealed more detail of mother-child speech and showed that it display characteristic modification of adult model, particular at the level of prosodic features, lexical features, complexity features, redundancy features, and content features. The table 4 below shows a summary of six characteristics of English IDS.

Table 4 A summary of the characteristics of English IDS

Characteristics of English IDS	Examples
1. phonetic features	- consonant substitution and consonant simplification (Ferguson, 1977; Cruttenden, 1994)
2. prosodic features	- higher pitch, greater range of frequencies, more varied intonation (Remick, 1976; Garnica, 1977; Sachs, 1977; Stern, Spieker, Barnett & MacKain, 1983; Cruttenden, 1994) - slower rate of speech (Broen, 1972; Drach, 1969; Sachs, Brown & Salerno, 1976; Garnica, 1977) - longer pauses (Broen, 1972) - whispered speech (Garnica, 1977)
3. lexical features	- special forms like potty and nano (Ferguson, 1964)
4. complexity features	- shorter mean length of utterances (MLU), fewer embedded clauses, fewer verbs auxiliary (Drach, 1969; Snow, 1972; Phillips, 1973; Furrow, Nelson & Benedict, 1979) - a greater percentage of interrogative sentences type (Broen, 1972; Snow, 1972; Remick, 1976; Sachs, Brown & Salerno, 1976; Newport, Gleitman & Gleitman, 1977) - more content words, fewer function words (Phillips, 1973) - the use of nouns instead of pronouns (Wills, 1977)
5. redundancy features	- more immediate repetition and more repetition of the same words or phrases over a period of time (Kobashigawa, 1969; Snow, 1972) - less variable in lexical content, lower type-token ratio (Drach, 1969; Broen, 1972; Phillips, 1973; Remick, 1976)
6. content features	- restriction to topics in the child's world (Phillips, 1970; Newport, Gleitman & Gleitman, 1977; Snow, 1977b)

b) Cross-Cultural Characteristics of IDS

From the studies of English IDS above, it seems that American mothers interact a lot with their children. The children in American culture can receive a great deal of input. However, there are large cultural differences in their views of the children which can influence the nature of adult-child interaction. It is often claimed that the characteristics of IDS seem to be universal. In this part, many cross-cultural data will be reported in a consideration of the universality of speech adjustments.

Ferguson (1977) has reported many studies of Baby Talk involving many languages- Arabic, Berber, Comanche, Gilyak, Japanese, Kannada, Latvian, Marathi and Romanian. He demonstrated the processes of prosody, phonology, lexical, syntactical and discourse modification found in BT. These processes are of the three major types: 'simplifying' (as in replacing difficult consonants with simple ones or reducing inflections); 'clarifying' (as in using many repetitions and exaggeration of intonation contour); and 'expressive' (as in using hypocoristic affixes or diminutives, higher pitch).

A good deal of cross-cultural IDS studies has been done on prosodic aspects especially on pitch analysis. For example, Australian English (Kitamura, 1992), German (Fernald & Simon, 1984), Mandarin Chinese (Greiser & Kuhl, 1988), Thai (Khaonoo, 1996). Comparison of pitch in IDS in different cultures- French, Italian, German, Japanese, British English and American English has also been done (Fernald, Taeschner, Dunn, Papousek, Boysson-Bardies, and Fukui, 1989). All of these studies showed higher pitch and greater range of frequencies in IDS and they all support the universal prosodic features in IDS.

However, Brenstein Ratner & Pye (1984) found that higher pitch in IDS was not universal. In their studies, they compared and analyzed speech samples of Quiche Mayan and American mothers and the result showed that the Mayan mothers did not use higher pitch to their children. Therefore, they suggested pitch-raising strategies may be sociolinguistically determined and have different functions across languages.

Other aspects- syntactic and discourse features have also been explored in different culture. Some of them has been reported below.

Harkness (1977) studied the role of both mothers and children in first language socialization of rural African children. The study showed that mothers and children in this culture also modify their speech to children learning to talk. Moreover, it seemed that mothers and older children both provided different kinds of language environment to young children. That is to say, mothers tend to use more questions than did the older children and the older children used more statements than did the mothers when talking to young children.

Moreover, in the study of Jocić (1978) about the adaptation in the speech of Serbocroatian-speaking adults with children, several types of syntactic adaptation were found: the use of nouns instead of personal pronouns and finite verbal forms, the use of the first person plural instead of first and second person

singular (present tense), the omission of the verb copula, particles and interrogative expression, the use of specific types of imperatives, adaptation in word order and in asking question. The morpho-semantic adaptations were also found including the use of large number of diminutives and hypocoristics.

Another study of cultural differences of maternal speech is of Toda, Fogel, and Kawai (1990). The study of American and Japanese maternal speech to three-month-old infants showed that while U.S. mothers were more information oriented Japanese mothers were more affection oriented, using more nonsense, onomatopoeic sounds, baby talk, and babies' names.

Although the features of Motherese have been similarly found in most cultural groups, some cultures did not find these kinds of features. In her review about crosslinguistic and crosscultural aspects of language addressed to children, Lieven (1994) shows that in some cultures there is no Motherese to infants until the infants themselves start to talk. For example, in Samoan (Ochs, 1982), in Kalui of Papua Newquinea (Schieffelin, 1979), and in Quiche Mayan (Pye, 1986).

2.4.2 Functions of IDS

Ferguson (cited in Brown, 1977: 11) claimed that if the mothers are asked why they use IDS with their children, the most common answer is to teach the children to speak. However, many studies found that IDS is not used for pedagogic reasons only. The functions of IDS from my literature review include four aspects-facilitating language acquisition, engaging and maintaining infant attention, communicating affect and facilitating social interaction. These functions can be explained by its features.

- Facilitating Language Acquisition

Since young children have limited linguistic abilities, adults tend to adjust their speech to make children understand them better. Cruttenden (1994) reviewed many studies about the prosodic aspects of IDS. There are many prosodic features seem to be perceptually salient. It was suggested that these features help to facilitate the child's analysis of linguistic materials. For example, the frequent use of terminal rises (Ryan, 1978), longer junctural pauses (Broen, 1972) and final syllable lengthening (Brenstein Ratner, 1986) help the child to segment the stream of speech. Moreover, Newport, Gleitman & Gleitman (1977) suggested three discourse features: deixis, expansion and repetition, which seem to serve teaching function.

- Engaging and Maintaining Infant Attention

Another function of IDS is to gain and hold the infant's attention. The common use of high pitch (Garnica, 1977; Sachs, 1977; Fernald & Mazzie, 1991) and the use of rising tones (Stern, Spieker & MacKain, 1982) are always recognized to encourage children's attention. Moreover, the use of the child's name and interjections such as 'Look!' are also used to grasp infant's attention. (Richards & Gallaway, 1994)

- Communicating Affect

IDS has also been suggested to help facilitate the adult to express affection towards the child. Ferguson (1977) reported the expressive processes of modification which found in IDS in various languages such as the use of morphological devices, especially suffix to form diminutives or hypocoristics, i.e. the word *gi* (adult form) --> *gik* (baby talk) 'shoe' in Gilyak. Moreover, the use of higher pitch in addressing children is one of the most expressive feature. This feature was also found in the studies of Stern et al. (1982) and Fernald (1984) which correlated with positive emotion in the child.

- Facilitating Social Interaction

Snow (1986) says that "Mothers do not talk at children, but with them". This quotation means mothers do not just communicate information to their children but they try to engage the children in conversation. The greater percentage of interrogative sentences type used in maternal speech seem to be the way of passing conversational turn to the child (Snow, 1977; Newport, Gleitman & Gleitman, 1977). Mothers seem to offer a means of identifying the social roles which the children must learn as well as requiring differential behavior in their society; for example, words for male and female (Ferguson, 1977).

2.5 Prosodic and Suprasegmental Theories

Speech is composed of two major sound components. The first is segmentals which include consonants and vowels, and the latter is suprasegmentals or prosodies are those which extend over one or more segmentals (Lehiste, 1970). In this part, I will focus only on the theory of prosodies or suprasegmentals. Suprasegmentals are also called voice dynamics (Abercrombie, 1967). The prosodic or suprasegmental aspect of speech involves pitch, loudness, length, stress, rhythm and pause.

Pitch is an auditory terms. The pitch of a sound depends on the rate of vibration of the vocal cords. That is to say, it is high when the rate of vibration of the vocal cords per a unit of time (second) increases, and low when the rate

decreases. The acoustic correlate of pitch is the fundamental frequency of the sound wave generated at the glottis, measured in cycle per second or Hertz (Hz). Fundamental frequency (F_0) is the number of a complete cycle that take place in a given unit of time- $F_0 = 1/\text{time}$ Vocal pitch may function independently at syllable or word level and is called 'tone'. At sentence level its vocal pitch is called 'intonation'.

Loudness depends on the degree of respiratory effort. It is related to sound intensity which is proportional to the amplitude of the variations in air pressure used in speech. It is usually measured in decibels (dB). O'Connor (1973) stated that in normal speech the degrees of intensity are between 25 and 85 dB correspond to a soft whisper and a loud shout measured about a yard from the speaker's mouth.

Quantity or Length is another perceptual dimension. It is related to physical duration or time used in the production of speech. In articulatory term, quantity is a process involved the timing of articulatory movements. The amount of time is usually measured in thousandths of a second (ms). According to the temporal aspect, we can talk about the rate of speech. The articulation rate and speaking rate is usually measured. The articulation rate is measured from the speed of articulation an individual utterance. Whereas the speaking rate is done by measuring the overall tempo of a speaking- turn (Laver, 1994: 539).

Stress Luksaneeyanawin (1983) pointed out that the term accent has always been used interchangeably to refer to phonetic stress, phonological word accent, and the phonological sentence tonic. Therefore, she adopted the concept of 'accent' and 'stress' from Abercrombie (1976). Accent is a phonological term referred to the potentiality fo the syllable to be realized with stress. On the other hand, stress confine strictly to the general phonetic discussion of the quality of a spoken syllable. Stress is produced with a greater amount of air from the lungs. The more prominent syllable is said to be a stressed syllable which shows higher pitch, greater loudness, longer duration or greater articulatory excursion (Laver, 1994). There are four phonetic correlated of stress- pitch, loudness, length and segmental qualities. The prominent correlate varies from language to language. Some languages make use of these four phonetic features but some do not.

Rhythm is essentially a muscular rhythm, and the muscles concerned are the breathing muscles (Abercrombie, 1967). There are two types of rhythm- syllable-timed rhythm and stress-timed rhythm. Syllable-timed rhythm is the rhythm which is determined by syllables, a rhythmical unit composed of a certain number of syllables recurring at equal intervals of time. Whereas stress-timed rhythm is the rhythm which is determined by stresses, a rhythmical unit composed of a stressed syllable or a silent stress with or without an unstressed syllable. These

stresses recur at equal intervals of time. The acoustic study of the rhythm done in Thai by Luangthongkum (1978) suggested that Thai has both kinds of rhythm-syllable-timed in some styles of speech and stress-timed in normal conversational speech. The three components which constitute rhythm is stress, phonological pause and relative syllable lengths.

Pause is an auditory term which can be defined as periods of silence interrupting a continuous speech. The acoustic correlate of pause is called break which is instrumentally detectable in terms of a definable drop in intensity of the speech signal, or a period of acoustic silence (Luksaneeyanawin, 1988). Abercrombie (1968) proposed five functions of pause or silent stress: 1) syntactic 2) terminal 3) emphatic 4) tentative and 5) rhetorical.

2.6 Conclusion

This chapter has reviewed many areas related to this work. The first part deals with overall development of the child involving physical, cognitive, and personal development. Then, we look at the four major language acquisition theories that have had the greatest impact on language development study-behaviorist, rationalist, functionalist, and interactionist. In the third part, pragmatic theories have been examined including Grice's rule-governed conversation and speech act theories proposed by Austin (1962), Searle (1969), Vanderveken (1990), and Verschuren (1985, 1994). Infant Directed Speech in various languages has also been reviewed to describe the features of IDS in both English and cross-cultural languages ;and followed by the functions of IDS. The final part includes the theory of prosodies or suprasegmentals including pitch, loudness, length, stress, rhythm, and pause. The prosodic theories and the pragmatic theories will be used in chapter 4 and 5 respectively, but first, chapter 3 will present the research method used in this thesis.

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