CHAPTER II

REVIEW OF RELATED LITERATURE

Imitation has always been thought as one of the ways children acquire a language. This is concluded based on the general similarities in children's language production as a result of a successful imitation assuming that there is a relationship between adult's speech and that of a child.

Many studies had been conducted as to find out the role of imitation in language acquisition. This issue had been widely discussed and opinion regarding this matter ranges from suggestions that imitation plays a very limited role to the views that imitation could be indeed a critical element for language learning; this depicts conflict in opinions among researches regarding the role of imitation in language acquisition.

Past studies (e.g., Ryan, 1973; Bloom, Hood and Lightbown, 1974; Moerk, 1977; Stine and Bohannon, 1983; Reger, 1986) indicated that the concept of imitation varied from one study to another. The outcome of imitation seems to depend on the definitions employed by each researcher in their respective studies. Therefore the concept of imitation is a vital element which determines the findings of studies on imitation.

The term imitation has been given numerous definitions. Among the definitions employed in past studies on first language acquisition is that imitation was concluded to have taken place when a child was able to do an immediate and exact copying of the utterances they heard from adults experimenter. This was the definition employed by researchers who conducted studies on imitation following Chomsky's (1957) transformational grammar position (e.g., Fraser et al., 1963; Lovell and Dixon, 1967; Brown and Bellugi, 1964; Brown et al., 1968).

Bloom et al (1974) defined imitation as to include only those utterances that repeated all or part of the model. Rees (1957) perceived imitation more broadly including behaviours that have less correspondence to the modelled behaviour, for example, in what is termed observational or social learning. Modern investigators, however, restrict their use of the term imitation to the process in which there is a functional link between the behaviour of the model and the subsequent similar behaviour of the observer. This has been pursued by the psycholinguists in many different ways.

The possible role of imitation in child learning a second language, particularly its contribution to the development of comprehension competence, acquisition of grammar and lexical development have not been as widely discussed as it is for the first language development.

Comprehension competence is a vital ingredient in language learning especially in an older child as suggested by Felzen and Anisfeld (1970) that the effect on semantic relation in language learning increases with age. Being able to imitate structurally does not mean that the imitator comprehends what is being uttered. Without a real understanding of what is being said , imitation could merely play a parroting role in language learning. Many researchers (e.g., Fraser et. al., 1963; Brown and Bellugi, 1964; Brown et al., 1968; Harris and Hassemer, 1972), however, have suggested that imitation has played its role in syntax acquisition without attributing proper consideration on the compatibility of surface structure and deep structure as suggested in the model utterances in their studies.

A large amount of effort had been contributed to studying the issue of imitation in regard to the acquisition of syntactic skills instead of simultaneously focusing on both the imitation of grammar and content as well as vocabulary expansion.

Despite the long history of controversies on the issue of imitation in language learning, the exact function of imitation in language development has not yet been established. The literature review to follow will examine studies which have generated various views regarding the role of imitation in first language acquisition.

Among the studies is by Bandura and Harris (1966) on normal second-grade children involving modelling of passive construction and prepositional

phrases. An immediate brief experiment was conducted as a subsequent study following their 1972 study. Bandura and Harris focused on the similarity of subjects' reproduction to model utterances. They concluded that in normal environment children's acquisition of syntactic skills could be due to interactions similar to those produced by their procedures. Bandura and Harris, however, did not lend any attention on whether or not the subjects had produced sentences carrying the same intended meaning as suggested by the model utterances. According to Whitehurst and Vasta (1975) some authors who studied the same issue commented that many of the utterances produced by children following modelling, even though similar in structure to those of the model but were always different in content. Thus, the acquisition of syntactic skills in the alike cases could actually be merely parroting.

Similar findings have been produced in the study of simple modelling of verb tense by Caroll et al. (1969) and Rosenthal and Whitebook (1970). The subjects in each of these studies were exposed to certain aspect of syntax which were modelled by an adult using sentences which varied in content. After listening to the model, subjects were asked to describe a different set of stimulus. The subjects' description showed similarity in the structure but was different in content.

Imitation theory and research was also reviewed by Kuhn (1973) where she included in her review the theoretical perspective of Piaget which had been omitted from earlier reviews (e.g., Flanders, 1968). She concluded that when a child imitates, he plays the active role while the environmental stimuli was the passive

element. The relationship between the imitator's cognitive level and the cognitive level of the model plays a vital role in motivating the child to imitate even though obstacles to immediate assimilation are inevitable.

Piaget (1962) considers initial mental representations to be internal imitations; external aspects were omitted when sensorimotor movements take place mentally establishing a relationship between the external world and the child's internal representation leads to continued vocal imitation during language development.

Maratsos (1975) views imitations as assimilatory if imitators rephrase the model sentences and as long as the rephrased utterances suggest some semantic interpretation of the model sentences. This definition suggests that in the absence of similar surface structure as presented by model, imitation was still concluded to have taken place through similarity in content.

Baratz (1969), worked with older children who demonstrated an important element in the imitation process. According to Baratz, the amount of semantic interpretation by the child between model and imitation can be extensive

The data gathered by Bloom et al. (1974) in their longitudinal study of six children contributed to the critical issue of the role of imitation for progress in language development.

Many studies (e.g., Fraser et al., 1963; Lovell and Dixon, 1967; Brown and Bellugi, 1964) on imitation in language acquisition carried out by the psycholinguists have been influenced by Chomsky's (1957) transformational

grammar position. The restricted meaning of imitation to only immediate and exact copying seems to be the definition employed by the researchers in the early era of grammar-related imitation in language learning studies. Studying immediate and exact copying obviously neglects the importance of understanding meaning.

Among the studies of this nature was one by Fraser et al. (1963) who believed that imitation could be an important function in language acquisition. They compared 3-year-old children's responses to ten grammatical contrasts in three tasks namely imitation task, comprehension task and production task.

In the imitation task, the experimenter recited the sentence pairs and after each asked the child to repeat it. In the comprehension task, the experimenter recited both sentences and presented both pictures, although not necessarily appropriately paired. The experimenter then repeated the sentences and, in turn, asked the child to point to the correct picture. This comprehension task involved no verbal imitation.

The production task also stated with unpaired presentations of pictures and sentences, after which the experimenter pointed to each picture and asked the child to describe it. For all ten grammatical features, the imitation scores were substantially higher than the comprehension scores, which were higher than the production scores.

This indicates that it is fairly easy for a child to imitate without understanding. A lower comprehension scores compared to imitation scores also implied that the children in this study could imitate well (immediately and exactly)

without understanding what they uttered. It is undeniable that imitation perfectly took place but its role in aiding the child in language learning is rather doubtful especially when we look at the production scores which suggest that the children were less able to imitate when the task required them to present a package of imitated utterances together with the suggested meaning by the model.

This study was replicated by Lovell and Dixon (1967) with normal 2- to 6-year-olds and retarded 6- to 7-year-olds. They found the same relationship whereby imitation exceeded comprehension, which exceeded production. The low production scores in both studies indicate that the children were unable to pair structure and content. Thus, the children's successful immediate and exact mimicry in the imitation task cannot be concluded as that they have acquired the exposed syntactic skills due to their inability to produce the same syntactic rules in the production task. This leads us to derive a reasonable conclusion that regardless of a learner's age, imitation could be an effective tool in language learning if a learner could be successfully made to imitate both structure and content.

The above findings, however , were objected by Ervin (1964), who claimed that those data could not be extended to language acquisition in the normal environment.

According to her in the Fraser et al.'s (1963) procedure, the children had been asked to imitate, while the issue for language acquisition is the relationship between spontaneous imitation and comprehension-production. Even though there were several problem in her study which made the findings questionable but her

argument on the issue for language acquisition is rational and perhaps true for normal environment. The low comprehension and production scores in the Fraser et al.'s (1963) and Lovell and Dixon's (1967) studies as discussed reasonably supported her argument.

Apart from Ervin's study, there were other observations related to the implications of the original Fraser et. al. study.

Brown and Bellugi (1964) and Brown et al. (1968) studied data on the frequency of imitation by children of particular ages which they concluded as relevant to the role of imitation in language acquisition. Based on their rough estimate, children between the ages of 28 and 35 months imitate about 10% of the adults' utterances they hear. By the age of three years the percentage of imitation drops to 2-3%. According to Whitehurst and Vasta (1975), the assumption can be reasonably made that the percentage drops further as the child's age increases.

Slobin (1968) who summarised the data produced by Brown and Bellugi (1964) and Brown et al. (1968), found that between the ages of 2 and 3 years about 50% of the imitative utterances produced by each individual of the three children studied resulted from the expansion by the parents. Expansion-imitation provides a passage for the addition of some important grammatical characteristics to the child's original utterance. This illustrates the crucial role of adult involvement in making imitation to well play its role in language learning. As suggested by Vygotsky (1978), adult's participation in children's language environment would provide the children a language model and simultaneously a

cognitive structure of language to children provided there is interaction between the adult and the children.

The effectiveness of expansion-imitation inevitably would depend on certain affecting factors such as congruity between a child's intended meaning in his utterance and the meaning suggested by adults in their expansion. Another factor is agreement in perception between children and adults especially when a visual element is involved in the interaction. According to Piaget, a child is egocentric in his thoughts and actions. Any child would normally see the world only from his point of view, assuming that his thoughts are correct and not acknowledging the existence of other perspectives (Flavell, 1968; Wadsworth, 1971).

In another study, Cazden (1965) contrasted expansion with conversational replies. Her subjects were 2 ½ -year-old children whom she divided into three groups comprising two experimental groups and a control group respectively. All the subjects' pre-grammatical scores were obtained prior to the main experiment. The first group was treated by receiving expansion from the experimenter for every comment made. The second group's individual comment was responded by a conversational replies whereas the control group received no treatment. Based on the comparison of the pre- and the post-grammatical tests scores, Cazden found children receiving conversational replies showed a dramatic gain in the post-test compared to the group treated by expansion. However, both treatment group improved more than the control group. In contrast with Slobin's (1968) findings,

expansion-imitation as indicated in Cazden's (1965) study seems to play a less significant role in syntax development in normal environment.

Whitehurst et al. (1972) conducted a study on the role of verbal imitation in language learning. They collected data on a physiologically normal child with severely delayed speech development. The data presented in this study were solely based on the comprehension score. The fact that their subject was able to obtain score within the normal range suggested that syntactical development can occur without verbal imitation.

The role of imitation in language acquisition had also been studied by several researchers (e.g., Skinner, 1957; Sloane and MacAulay, 1968). This group of researchers focused on modelling and reinforcement in their studies. The interesting point in these studies is that imitation was intentionally made as a bridge in helping learners to be finally able to independently produce the appropriate verbal response non imitatively in the absence of modelled speech and environmental stimuli. However, this could only be achieved if the intended imitation could be firmly established. This imitation method was evident to be successful as demonstrated in some studies (e.g., Risley, 1966; Sloane and MacAulay, 1968) on language deficit children, but its relevance on normal children is still unclear.

Whitehurst (1971) found that imitation could also well function in enhancing language learning through modelling and reinforcement on normal children. In his study, Whitehurst employed a nonsense syllable language which he

created and used it on his 2-year-old normal subjects. The children's ability to respond with the appropriate grammatical form without the involvement of modelling after the modelling and training trials period suggested that imitation through reinforcement could be an effective tool in syntax acquisition.

In the subsequent study, Whitehurst (1972) conducted another research, again on normal 2-year-old children using the same imitation-reinforcement procedure. In this study, he found that modelling and reinforcement was restricted by stimulus control. According to Whitehurst, although the syntactical rules were reinforced on the child through modelling, the child might not be able to apply the same grammatical rules on the new stimulus if the new stimulus requires the child to readjust the same grammatical rules as to fit them to the new situation. This is due to the child being restricted to the reinforced structure which resulted in the child's lack of control in manipulating the applicability of the structure to a slightly different situation. One possible example is control on word ordering which changes depending on the circumstances on how words should be arranged in a sentence. Since this study used younger children, whether or not the same problem would arise when using older children is a question to be considered. Although a child may lack versatility in applying syntactic rules, nevertheless, his acquisition is still an outcome of imitation.

Children ability to imitate complex and long sentences was studied by Harris and Hassemer (1972) on second- and fourth-grade children. Their subjects were asked to listen to a model who produced simple and complex sentences in

response to some pictures. The children then described the pictures after listening to the model and were allowed to add their own description.

Prior to listening to the model description, subjects' length and complexity of utterance were measured. The same measure was taken after the subjects hearing the model produce simple sentences, and after hearing the model produce complex sentences. The comparison among the three measurements indicated that subjects' length and complexity of sentences were controlled by model utterances even though the subjects were describing different pictures using different words than that of the model. The findings suggested that the children attempted to imitate sentence length and complexity as used by the adult, giving rise to a possibility of using imitation as an adjustable device in teaching simple and complex sentences in language learning regardless of learner's ability.

On the contrary, a number of investigators have observed that if a child is requested to imitate a sentence that is considerably longer than sentences he is currently producing spontaneously his attempt at imitation will be distorted. This distortion will take the form of conversion of the adult sentence into one or more sentences consistent with the grammar used in the child's spontaneous speech (Whitehurst and Vasta 1975). The same findings were obtained from several studies (e.g., Slobin and Welsh, 1967; Henrie, 1969; Labov et al., 1968; Menyuk, 1963). Hence, McNeil (1970) concluded that imitation did not play any role in the acquisition of new transformations.

The role of imitation in the acquisition of grammar in older children were studied by Gupta (1992). Gupta's subjects were three 6- to 8- year-old hearing impaired children. Grammatical Analysis of Elicited language-Simple Sentence Level Test (GAEL), which is designed to evaluate hearing-impaired children's use of grammatical aspects of spoken and /or signed English was administered on the subjects. The children's verbal responses to the 'imitated' component of the GAEL, whereby subjects were asked to repeat exactly what was said by the tester, were transcribed and analysed. The findings in this study pointed that imitated speech is equally long and with the same level of grammar as the non-imitated, spontaneous speech. It was concluded that children produced unique language structures to assimilate the adult form in their language by incorporating their own system of language in the process of assimilation.

Nelson et al. (1996) in their study compared relative effectiveness of imitative treatment and conversational recast treatment in 7 children (ages 55-79 months) with language impairment and 7 controls. The findings indicated that target acquisition was faster under conversational recast treatment for both groups. The findings also suggested that in terms of grammatical structures learning, language-impaired children learned grammatical structures equally well as language-normal children when input was suited to their specific developmental levels.

Rosenthal et al. (1970), studied a large number of sixth-grade children who were culturally disadvantaged. In this experimental study, the children were assigned into three experimental groups and one control group. As a baseline , each individual subject was asked to make up questions about a series of pictures. Each group then listened to a different type of question asking style modelled for them by an adult. After hearing the model, the children were instructed to ask questions related to the same pictures used previously by an adult. Using a new set of pictures, a general test containing all three types of question asking style was administered to all subjects including those in the control group, even though they were not exposed to the three types of question asking style.

The results indicated that subjects in each group showed significant increases in question asking style which they were exposed to in comparison to the base line performance. The question analysis pointed that 12% of the questions were exact imitations. This low percentage of exact imitation could be explained by the fact that 70% of the experimental subjects did not make any exact imitation at all.

As concluded by Whitehurst and Vasta (1975), a child's language can still be considered imitative even when the imitation is not an exact copy of a complete utterance produced by adults. However, a child's responses cannot be considered imitative without the presence of any similarity in the form and function between the child's utterance and adults' utterance.

Other than its role in content and syntax development, imitation could also play a role in lexical development. Many studies have been conducted in finding out the various ways in which children require lexical items.

Elicited imitation tasks have been employed in many research and clinical settings based on the assumption that elicited imitation of sentences which exceed short-term memory span reflects a child's linguistic system (Baratz, 1969; Keller-Cohen, 1974; Kucjaz & Maratsos, 1975; Lackner, 1968; Maratsos & Kucjaz , 1974; Menyuk, 1963; Smith, 1970; Zachman, Huisingh, Jorgensen & Barrett, 1977).

Elicited imitation can also be used in investigating the acquisition of lexical items. This type of imitation requires a child to repeat a model sentence immediately after the sentence is uttered by an adult experimenter. According to Menyuk (1963) and Labov et al. (1968), when the sentence used in elicited imitation is too long or complex for the child to reproduce solely based on his memory without understanding the content, the child would normally make systematic errors when repeating model sentence. These errors are due to the child's attempt to assimilate adult utterance by re-coding and restructuring it parallel to his current language system (Slobin and Welsh, 1973).

Evidence from some studies (e.g., Bloom, 1974; Hood and Lightbown, 1978; Slobin and Welsh, 1973) indicated that elicited imitation underestimates the linguistic knowledge of certain children. When young normal children are asked to

imitate some of their own spontaneous utterances, their imitative responses are often less complex than their own original utterances.

According to Keller-Cohen (1981), it is difficult to evaluate the content of a child's imitation especially in terms of word substitution because there is no way to determine the actual meaning assigned by the child to the substitution. However, substitution may provide some guidelines in determining particular patterns in a child's lexical development.

Bloom et al. (1975), found that the presence of a newly learned lexical item constraints a child's utterance length. In an attempt to employ a new lexical item in a sentence, a child may end up producing a less complex utterance compared to the utterance that he is capable of producing otherwise.

When a child has to repeat a sentence containing a new lexical item which he is not yet able to internally analysed, his imitation might be deformed or deviated from the model utterance. On the other hand, a child might be more capable to imitate model utterance if the lexical item in the model utterance could be fully analysed internally upon hearing the model sentence. A child's ability to imitate might also depend on word familiarity (Love and Parker-Robinson, 1972). This view is supported by Montgomery, Montgomery, and Stephens (1978) who stated that word familiarity has been shown to be one of the variables affecting children's performance on sentence repitition tasks. In fact, in their pilot study using younger children, they found that the children were unable or unwilling to

attempt the imitative response for model sentences containing unfamiliar words suggesting imitation might not play any role in utterances involving unfamiliar words.

Nevertheless, Reger (1986) who studied imitation on Hungarian subjects, based on her findings, suggested that imitation contributed to lexical learning.

Masur (1995) who studied infants' early verbal imitation and their later lexical development, examined the relationship between infants' early verbal imitation when the ability to copy first occurred and their lexical development during the second year of life. The subjects of this longitudinal study were twenty infants at ages 10, 13, 17, and 21 months. These researchers suggested that infants' early imitation of words which were not in their repertoires could be used to predict as well as facilitating the children's future lexical development.

Increase in age has been reported to improve imitative performance (Nelson & Weber-Olsen, 1980; Keller-Cohen,1974). However, it is not clear whether this improvement is related to a higher level of linguistic skill, greater attention and co-operation or an increase in experience.

The effect of imitation related to age factor was studied by Masur (1993) by observing infants' imitation of vocalisation, words, visible motor actions and non-visible motor behaviours at ages 10, 13, 17, and 21 months. The results of their study indicated increasing imitation in a stage like fashion during a child's second year.

Linguistic imitation in children was also studied by Sokolov (1992) through a comparison of linguistic imitation between 48 children with Down's syndrome to 57 children without mental retardation. In this study, it was found that the children with Down's syndrome imitated slightly less. They concluded the difference as related to language level and the source of imitation which suggested that children with Down's syndrome develop differently with respect to linguistic imitation.

Mothers' role in infant vocalisation was studied by Pelaez and Gerwirtz (1993). The subjects were 17 three- to six-month-old infants and their mothers. This study compared the reinforcement effects of imitation to the elicitation effects of non-contingent maternal vocal stimulation. Based on the findings, it was concluded that imitative vocal responses can function as effective reinforces for infant vocalisations.

Other studies showed that imitation to be a selective and progressive phenomenon in several domains of grammatical development and in lexical learning (Ryan, 1973; Bloom, Hood, & Lightbown, 1974; Ramer, 1976; Moerk, 1977; moerk & Moerk, 1979; Stine & Bohannon, 1983), although various views emerged regarding the importance of imitation in explaining the process of language acquisition.

The various findings in language imitation studies lie in the divergences of definitions used in each study (Reger, 1986). Some dealt with imitation-reduction (e.g., Shapiro et al., 1970), imitation-expansion, imitation-reconstruction

or delayed imitation (e.g., Shapiro, Roberts, & Fish, 1970; Clark, 1974, 1977; Moerk & Moerk, 1979; Snow, 1981, 1983).

The conflicting results of the previous studies and the question of the role of imitation in language development led to the present investigation.