

## FIRST LANGUAGE ACQUISITION

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### Abstract

*Children use language in order to communicate their ideas or to symbolize what they have in mind, and also to talk about complex states of events. A lot of research has been done on language acquisition and the different stages of linguistic and cognitive development have been pointed out, too. There are different theories concerning how a child processes the linguistic input. Current views contend that the child comes to the language learning task with both factual and conceptual resources. And also the child's desire to express new ideas energizes the search for specific linguistic patterns. The following article intends to discuss very briefly the different theories concerning language acquisition, and also to explain the different stages of language development. As many teachers assume that learning First Language (L<sub>1</sub>) and Second Language (L<sub>2</sub>) or Foreign Language (FL) are isimilar processes and accordingly they try to carry over the L<sub>1</sub> findings into L<sub>2</sub> or FL situations, this article may provide some insights in this regard.*

### Introduction.

In recent years, many foreign language teachers have tried to justify the classroom procedures on the basis of first-language acquisition (LA). There are also a few questions which have occupied language teachers for centuries. One of these questions perhaps the most fundamental one is "How does a person come to control a language?" Anyway, we all achieved this difficult task with our first language (L<sub>1</sub>), and many of us have gained some ability in another language (L<sub>2</sub>) by studying it in school. The term 'acquisition' is sometimes used for the former, and 'learning' for what goes on in the classroom. There has been considerable debate about whether these two processes (language acquisition and language learning) are basically the same or not.

Recent research findings indicate that probably the same kind of acquisition we see in children can continue well into adulthood- perhaps throughout life. However, it is becoming clear that adults and adolescents do have availa

ble to them at least two modes of gaining control of a new language.

In this article we will discuss first-language acquisition and our analysis will include the psychological and linguistic theories on which it is based. We hope that this analysis may have some implications for the foreign language teachers.

### The Development Of Language

The study of language development is based on a very common, unsurprising fact that most children learn to talk without any difficulty. We do not expect to discover any astonishing new facts; rather we will try to explain the facts. And the more we examine the phenomenon the more astonishing it becomes.

The process of learning to talk has fascinated parents, and other observers of children for centuries. The nature of the acquisition and use of language were also at the heart of the great philosophic debate between the rationalists (who believed that the structure of language is specified biologi-

cally to a great extent) and the empiricists (who believed that language is learned entirely through experience) during the seventeenth and eighteenth centuries (Chomsky 1966).

But empirical studies of children acquiring language did not begin until the very end of the eighteenth century. Educators, philosophers, and others all began to observe carefully young children and study the different stages of language development and the strategies that children use in their initial organization of language.

In recent years there has been an increasing interest in studying and analyzing first language acquisition process. Roger Brown (1973), a pioneer in the field, states that: "All over the world the first sentences of small children are being as painstakingly taped, transcribed, and analyzed as if they were the last saying of great sages" (p.93).

Recent research findings on language acquisition process make us realize more than before the magnitude of the child's accomplishment. And we realize that language development, because of its complexity, is a crucial case for the study of human development.

Two fundamental concepts underlie the most recent research on language development. The first is the realization that the child does not merely speak a garbled version of the adult language around him. Rather, he speaks his own language, with its own characteristic patterns. Thus, in order to get some insight into the nature of language acquisition process it is appropriate to study and describe the structure of the child's language by means of a "grammar" - that is, an explicit statement of the patterns, or rules, of the language. We should observe the sequence of changes in the child's language as he brings it into closer approximation to the surrounding adult language.

The second concept (suggested by Burt and Dulay) is that the child himself must act as a linguist: He is exposed to a finite number of utterances: From these utterances the child must extract the underlying rules in order to use the language creatively. Therefore from a linguistic point of view language acquisition is a matter of hypothesis formation and hypothesis testing. In other words, language acquisition is an active process. The child continually formulates and tests hypothesis by attempting to use them to understand speech and also to construct his own utterances. Such hypothesis formulation is shown quite clearly in what appears to be grammatical mistakes.

In this article we are concerned with language development in normal children. Our description will include sequences of language growth and some theoretical aspects of language acquisition.

### Theories of First Language Acquisition

All of us admit that the child has an astonishing ability to transmit a large number of messages and also receive even more messages. At the end of the first year, the first word appears. A few months later, more and more words are uttered and children begin to use these words in combinations. This process of language development continues and the child, by the age 3, can understand and produce an incredible number of utterances. Brown (1980) states,:

This fluency continues into school age as the child internalizes increasingly complex structures, expands his vocabulary, and sharpens communicative skills. At school age, the child not only learns what to say, but what not to say, as he learns the social functions of his language.

The main issue now is to explain this fantastic journey of language acquisition, "from a cry at birth to adult competence in a language" (Brown 1980). As a matter of fact, one can adopt either of the following positions:

a) The behaviouristic position which has a considerable tradition in psychology. According to this theory the child is assumed to imitate just what he hears. Parents teach their children by correcting their mistakes. The child is considered to be a passive participant in the process of language acquisition. Such "passive models of syntactic development, like imitation and reinforcement, appear to be inadequate. In addition, they seem, to almost any observer of a young child who is learning to talk, to miss the sense of activity, of trial and error, of continual creation on the part of the child," (Dale, 1972)

b) The generative theories claim that the child comes into the world with some built-in system, knowledge about the nature of language. The child, then, as an active participant and knowingly, "acts upon his environment by developing" (Brown 1980) his body of knowledge.

In the sections to come we will discuss these (extreme) positions. It is quite obvious that both of the positions are far from being easily accepted. Nevertheless they shed a great deal of light on the complex phenomenon of LAD and there are also possible positions in between. Now let us consider these different positions.

### Behaviouristic Theories

The behaviourist psychologists consider language as "a fundamental part of total human behaviour" (Brown 1980). These scientists, put heavier emphasis on the outside forces acting upon the child. To many of these scholars the

development of language was seen as the reinforcement of thought in this direction: Of these we may name B.F. Skinner as one of the latest as well as one of the most prominent exponents of the function of reinforcement in linguistic development. Skinner is commonly known for his experiments with animals and also his contributions to the field of education. According to Skinner's theory, language learning occurs through **operant conditioning**. That is, "a human being emits a response, or operant (a sentence or utterance), without necessarily observable stimuli" (Brown 1980). By means of reinforcement the operant is strengthened. Consequently, if the verbal behaviour is followed by reinforcement and reward it would be maintained. On the other hand, if a given operant (verbal behaviour or utterance) is not reinforced or rewarded, or even prohibited, it will gradually disappear from the child's performance.

The genesis of language was also one of the main preoccupations of Pavlov because of its far reaching relationship with all aspects of human behaviour. He considered "language as the 'second signal system', established by the conditioning of primary conditioned reflexes" (Minnis 1973).

"Psychologists interested in learning have, to a great extent, moved from simple Pavlovian and Skinnerian responses in recent years" (Dale, 1972). It is not intended to discuss the pros and cons of the Skinnerian model of language learning in any detail. But it would be appropriate to mention that today many linguists and psychologists believe that the Skinner's model of language behaviour does not adequately account for the language acquisition process. The essential feature of this kind of learning is that stimulus occurs in the presence of a response that it does not ordinarily elicit and acquires the property of eliciting the response (Travers, 1972). Such a theory fails to explain the fact that any sentence used by a speaker, in oral or written form, may be a novel sentence-never used before by you or anyone else. However, the speaker and the hearer are able to comprehend and process these novel utterances.

The modified versions of behaviouristic theory propose some solutions to the problem. One of these is the S-S learning theory (that is, one stimulus is associated with another). We can view language learning as an instance of S-S learning. But such learning would not explain anything. Through this theory we are not accounting for how the organism learned to associate the two stimuli out of a great many stimuli he is exposed to everyday. Therefore, we should look for a model of language acquisition which accounts for the child's comprehension of the linguistic

input that he encounters.

Another attempt within the behaviourist framework suggests that the child may acquire frames of a phrase structure grammar. In this theory imitation and the associations between stimulus and response are considered to be important.

But the theory does not deal with the process of generalization and the innovative aspect of language use. As we know, the number of all possible utterances one can produce in any language is infinite. Mathematically speaking, no one can learn all these utterances in one's life span. Therefore, a child who is acquiring his mother tongue would not be able to go too far and would run out of time.

We can conclude that the theories of first language acquisition suggested by the behaviourist psychologists overlooked the complex mental process involved in first language acquisition process. So we need further investigation within a framework or frameworks which would not contradict the facts which have been discovered already.

### The Generative Theories

Strictly speaking, the activities of the language learner and those of the linguist are very different. The former is acquiring competence (in Chomsky's terms), while the latter is trying to describe, characterize or give an account of this competence. But the activities of the child and linguist, from a formal point of view, can be thought of as almost the same. It means that both the child and the linguist are engaged in a complex task of 'theory construction'. The linguist does not list all the utterances which he encounters. Instead he attempts to formulate a grammar (or theory) of the language under investigation. The linguist hopes that this grammar will both account for the listed utterances and predict new ones. Similarly, the child does not simply memorize or catalog the utterances he hears. He tries to use these utterances for the construction of a (real) grammar. But the linguist is in a position to make use of many different kinds of evidence in determining what he considers to be the best form of grammar, including (1) similarities among the languages of the world and (2) facts about language history.

On the other hand we have no obvious reason to believe that a child has access to such information. What the child has at his disposal, in fact, are the uncontrolled and defective utterances which happen to come his way. We should also add the cultural situations to these primary linguistic data.

The child's responsibility is to discover from such data the grammar of his mother tongue (Chomsky, 1968). So

while the basic task of the linguist and child may be looked upon as similar, the linguist can take advantage of larger number of facts toward finding a solution that the child can. We should admit that the child and the linguist are operating in two very different ball parks.

### Chomsky's Model Of Language Acquisition

The model of language Acquisition which Chomsky associates with his theory of transformational - generative grammar can be illustrated as follows:

Primary linguistic data → LAD → G (Grammar)  
AD represents a 'hypothetical language acquisition device' which can provide as 'output' a grammar (G) which describes adequately the language under investigation. Chomsky believes that the device AD should be language-independent. That is, we want it to enable us to learn any human language. The internal structure of the device AD is assumed to constitute the innate equipment which the child brings to the language learning situation.

It is obvious that some relevant innate endowment exists in human beings, and needs not be questioned. As we know genuine 'language' is an apparent 'species - specific' (Lenneberg 1964) trait of the human race alone. No other species appears capable of mastering a communication system like that of human beings.

We all agree that in order to learn a (human) language one must first be a human being - which is another way of saying that the human being has innate characteristics of some kind. So, the issue here is not whether some sort of innate endowment for language exists, but rather its precise nature, 'the nature of the internal structure of the device 'AD' (Chomsky 1964) is attempted to be analysed.

Slobin (1966) refers to this model of language acquisition as a 'content' view of the AD. This means that the child is believed to be born with the entire set of linguistic universals (plus evaluation procedures, built-in) and that the child uses this linguistic ability to filter the language he happens to hear around him. Slobin himself favors what he calls a 'process' approach. This means that the child is not born with a set of linguistic categories, but with some sort of process mechanism.

Here, we are confronted with what appears to be an interesting question with important implications for the study of language: Does the child come equipped with a full set of linguistic universals plus evaluation procedures or, instead, with a special technique for performing linguistic analysis or perhaps with a little of both? Whatever the answer to these questions, at least three things seem certain:

(1) not all of these alternatives can be correct or true,

(2) the matter is empirical in nature, and

(3) the correct answer, whatever it is, is not going to be an easy one to discover.

## Stages Of Language Development

### A. Introduction

One of the important areas of debate is how first language acquisition is related to cognitive factors. We know that language development depends on the concepts which children form about the world and the concepts which they feel stimulated to communicate. Slobin (1979) showed how children in several communities use two-word utterances to express a similar range of meanings. There is also evidence from later stages of language growth that there exists a close relationship between cognitive and linguistic development. The data gathered from the early utterances produced by children reveal that the English perfect tense (he has gone, etc.) is not used before the age of four and a half, despite the fact that the form is frequent in parents' speech and consists only of simple elements which were well within the children's capacity. It has been found that the present perfect does not appear until the children have acquired the underlying concept of present relevance.

As conceptual development leads to language development, it is likely that language development helps conceptual development: For example, the fact that present relevance is embodied in the perfect tense helps to stimulate the English speaking child to form this concept.

On the other hand, the second language learner has normally formed his basic concepts about the world, so that there cannot be the same link between language and cognitive development. Nonetheless, the link between language and concepts remains of major importance, since the second language will sometimes require the learner to develop an awareness for new concepts of distinctions (eg. for the two kinds of personal pronouns 'he' and 'she' and their Persian equivalent).

There is a second way in which cognitive factors influence first language acquisition. We have seen how children create order in the language data they encounter. For example, they form rules and, in some cases, over-generalize these rules to contexts where they do not apply (resulting in errors such as "goed" in English or "pazid" in Persian).

Here, cognitive factors are determining not what meaning the child perceives and expresses, but how he makes sense of the linguistic system itself.

## B. Phonological Development:

The baby's crying is the beginning of his language. On his very first day, as soon as he cries and his mother comes to him, we have the simplest form of communication between two people - one person utters sounds and another responds. It is on his first day also that a child often shows that he is already aware of sounds. (Minnis, 1973). Recent investigations have demonstrated, as early as this, an "auditory orienting reflex" - a movement of the child's head toward the source of a sound. Within a couple of weeks this usually becomes more specific: the child responds more readily and more regularly to a high-pitched human voice than to any other auditory stimulus. And of course the most frequent high-pitched voice is his mother's.

During these early days a child not only cries but also coos. When he is hungry or uncomfortable he cries; When he is content and comfortable he coos. During the cooing period, the sounds a baby produces are primarily consonants formed at the back of the mouth, such as /k/ and /g/, and nonlow vowel sounds, such as /i/, /ɜ/, and /u/. The cooing period varies from one baby to another, but by the age of five months, most children have entered into the babbling stage, characterized by an ever increasing variety of sounds (Falk, 1978). During this stage of sound production the baby utters strings of sounds, repeating them with rhythm; and intonation, apparently for the pleasure of making them. He cries or coos or babbles; to each of these his mother is likely to respond in a specific way. He cries and she tries to alleviate his discomfort; he coos and she comes and smiles and perhaps pets him; he babbles and she may well encourage him by joining in, imitating him in fun, that in turn he imitates her.

The simple pattern of interchange is enlarged as the child begins to respond to speech in its situation. These are the rudiments of comprehension. His earliest response to 'Baby, Milk!' may be to his mother's voice as an auditory stimulus specific to him as a human infant. From this there will be a transition to the time when he responds to the phonemic form of 'milk' in the situation in which he hears it, the context of circumstances, even when he can see neither the speaker nor the milk.

While these are rudiments of meaning in what a child hears, there are also rudiments of meaning in what he utters. From the beginning, his crying and cooing have their own interpretations, discomfort, distress when he cries, contentment when he coos. This, of course, is not to say that at the beginning he is aware of the connection between his crying and discomfort, or his cooing and contentment. But we who are with him have to recognize, from a very

early moment, the rudimentary semantic content of his crying or his cooing. His babbling has another place in his development: he plays, practices, experiments.

Falk (1978) contends that the crying and cooing do not play any significant role in the acquisition of language. Whatever language spoken in the environment, all children produce the same string of sounds during these periods. The babbling stage goes on from the age of four or five months until the child is almost one year old. During this stage the child produces a large number of sounds. Babbling seems to be instinctive, since even deaf children do babble in much the same way. The quality of the sounds produced in this stage is not determined by the language spoken in the child's environment. For example a baby in a Farsi speaking environment does not necessarily produce the particular sounds of Persian, nor does a baby in an English speaking environment produce the particular sounds of English. However, it is significant to know that babies can and do produce many sounds during the babbling period which may be non-existent in their own mother tongue.

Carroll's study (1960) shows the development of the ability of children to learn phonetic distinction. This study shows that 90% of one-year old children can discriminate and articulate among the phonemes /p/ /b/, /t/ /d/, /k/ /g/, /w/ /h/, /m/ /n/ /y/ - 70% can handle /f/, /s/, /l/, /y/ - and 50% can handle /c/ /j/, /v/, /s/, /i/, /r/. He points out that all phonetic distinctions are not made this early or this easily. He mentions that even six-year olds have difficulty with /s/ /z/, /ʃ/ /ʒ/, and /j/ /c/.

We can conclude that children begin with whole, undifferentiated sounds within the first two months of life, begin to distinguish among these sounds between the 6th and 12th months, and actually begin the production of morphemes by putting the phonemes together at about 18 months. Within ten more months, rapid and clear distinctions are being made among a large proportion of phonetic sounds.

## Morphological and Syntactic Development

The phonological distinctions lead to holophrastic or one-word utterances. By around 12 months, most children have come to produce at least one word (unit) with a stable pronunciation and regular interpretation (Crystal, 1976). Crystal mentions that it is misleading to think of this first word as the place where language development starts. So far, a great deal of language production has been taking place, especially in learning the phonological patterns within which the word will be uttered. Another point needs to be mentioned here. From the point of view of com-

prehension the child has been acquiring his language for several months before. Anyhow, the identification of the so-called first words depends a lot on the abilities of the parents. The early pronunciation attempts of the child at words like 'dada' or 'baba' (Farsi) may be completely unlike the correct pronuniations. Some partents seem to be quite good at guessing and interpreting such "proto-words "; while others may be very poor.

The "first word" is hardly a word at all. Our conception of a word, as given in a dictionary, is quite different. These units of meaning often correspond to stretches of speech that to the adult would be more than one word, eg. "allgone, gimme", and "restego" (one child's attempt at the jumping game "ready-steady - go" played with his father, which he subsequently used as a verb - "you stego with me now.") Also, the meaning of the first words is not necessarily similar to the adult's meaning. On the contrary, it has a much wider semantic scope than that of parents. For example, "dada" cannot simply be interpreted as my "male parent". The child may use this utterance while pointing at his daddy. However, this word may be used in other contexts as well, eg. referring to the milkman. On the basis of such usage, it is clear that the word is being used in a very broad sense, expressing more a sense of 'want' or 'pleasant' experience' than that of 'father'. Another example is the word "door", said while pointing to the door. The child might not mean 'door' at all. He may use this word for pointing at the drawer, and also to the pocket into which a handkerchief has just been placed. Later it will become clear that the meaning of "door" is "shut away" - only shut, closed or hidden things are 'doors'. The child has actually given the word a sense that is almost of a very - referring more to an action than an object.

The length of holophrastic stage - "expressing an entire sentence in one word," which begins with the production of the first word varies from child to child. Normally it may be between three and nine months. Relatively, little is known about what a child learns during this stage of language growth. Analysing the child's utterances at this stage has revealed that the child begins to acquire sounds of his language (cf. to previous section). A lot of research has been done on the order in which children learn sounds and phonological rules. Probably at this stage children begin to learn meaning and the rudiments of syntax.

The end of one-word stage is often a transitional stage. i.e., that of "one word at a time" and that of true multiword utterances. Sequences of two or three words are produced but with distinct intonation contours. That is, with pauses between them. For example a child would say "door, open"

as she passes through a door which is open, or "daddy, door" when daddy comes home, and both "daddy, car" and "car, daddy" when daddy leaves to take the car (Crystal, 1976). As these examples illustrate, there are no constraints on the order of combination of words. This contrasts with the next stage of development and, along with the distinct intonation contours, provides the justification for not viewing these sequences as single sentences.

However, it is difficult to describe these sentences precisely in grammatical terms (Crystal, 1976). In a given situation a child may see his father leave the house in his car. The child already knows the lexical items, daddy, go, door, car, but he may come out with any order, depending on which items he feels to be most important. Similarly, a Persian child seeing his father driving away in his car, might come up with several pairs as follows: /baba daedæ/, or /baba, daer/, or /baba mašin/, and many other possible pairs. After some time, certain patterns will become more predictable than others (eg. agent before action in English). By the end of this stage the situatioin has usually improved, and it becomes more possible to see clear contextual or formal clues as to the sentence meaning which would enable us to give a grammatical analysis. Now some inflections have begun to emerge (eg. -s, -ing, -ed), and word order contrast is more stable. But one should always keep this point in mind that we cannot give a precise grammatical analysis of the child utterances at this stage of language acquisition.

### Three-Word Sentences:

The emergence of three-word sentences begins from around the age of two. Around this age the child produces sentences containing three elements, eg. daddy kick ball (English) or /baba mašin daedæ/. There are also children who have already started filling out some of the missing elements of sentence structure by adding particles to the main words, eg. daddy kick a ball (English) or /baba ba mašin daedæ/. As the language acquisition process proceeds, more inflectional endings emerge. For example, forms of the verb and noun, and also the first use of auxiliary verbs and pronouns appear (Crystal 1976). Lenneberg (1964) asserts that the omitted forms like inflections, auxiliary verbs, articles prepositins, and conjunctions belong to syntactic classes that are small and closed. The omitted words are the ones that linguists call "functors", their grammatical functions being more obvious than their semantic content.

There is more than one plausible answer to the question of "why do children omit these functors?" We all know that words like verbs, nouns and objectives are words that make

reference. Parents talk about the actions, things, and qualities by pointing at them. These are the kinds of words that children have been encouraged to practice speaking one at a time. As a result, the child has a tendency to construct sentences which only contain the content words. These sentences are sometimes called 'telegraphic' - but we understand from the above remarks that this is a misleading label, because the child has no intention of 'leaving out' itmes he could have put in (Crystal, 1976).

This process of increasing the sentence structure goes on and from the age of 3 to 3 and a half the child would focus on learning complex sentences. By the age of  $3\frac{1}{2}$  then it can be said that the child has mastered the creative feature of language use. Now the child can produce longer and longer sentences. He knows how to combine sentences by using words like 'and', or, etc. Although the child's speech at this stage, is almost always intelligible, it is not the same as the adult language. There are, however, some differences observable. The first thing to be mentioned is that the child's language has still some 'errors' and not all structures are used in his speech. We call these differences 'errors' only because they do not occur or are not acceptable in adult's language. From the point of view of the child these differences are not considered to be errors. Because as we know the child is constantly involved in the process of hypothesis construction and hypothesis testing.

The remaining learning can be discussed under two headings:

1) Learning new structures and 2) learning to comprehend familiar structures fully. Under the first heading we can mention sentence connectivity in English. Sentences are combined and linked in many grammatical ways in English. Only at about the age of 7 the child can widely use adverbs such as 'actually, frankly, really,....' The second heading 'comprehension does not refer' to the technique of checking that the sense of a passage has been understood' (Crystal, 1976). Here we use it to refer to how children interpret structures. There is evidence that children often use words and structures they do not understand. In fact, after the age of 5, the child learns 'layers in the interpretation' (Crystal 1976) of the sentences. We know that sentences do not always mean what they seem to mean. It is interesting to note that children only at this level begin to appreciate the language use - such as jokes, puns, and the like. Now the question which might come into one's mind is "when will the child master the grammar of his mother tongue?" The scientists in the field suggest that by the period of puberty the child must have acquired all the grammar of his language. Research on pre-and post-puberty speech indicates

that pre-puberty speech is homogeneous, whereas post-puberty speech is inventive and idiosyncratic. And finally, contrary to lexicon and stylistic features of language, the learning of phonology and syntax is a restricted process.

### Summary

In this article, we have briefly discussed the different stages of language development with emphasis on recent research findings in first language acquisition. We hope that this survey would lead to a more scientific and better understanding of second language learning. In this article two approaches in first language acquisition have been discussed: a) Behavioristic, b) Generative.

We have seen how the behaviourist emphasis on habit formation has shifted to a more mentally-oriented approach, which stresses the child's active participation in the learning process. We have also shown that language acquisition is, "much more than a collection of conditioned verbal responses" (chastain, 1976). It is the productive feature of language acquisition that makes it quite different from any other form of learning. This process of creative construction seems to lead children through other stages of development.

The child's real language use begins with using some sounds for specific meanings. During the holophrastic period (one-word sentences) the child begins to acquire the different aspects of the sound and semantic system of the language. The acquisition of syntax begins with two-word utterance. During this period the child learns the syntactic and semantic relations among elements of a sentence. The acquisition of certain aspects of phonology, syntax, and semantics continue until the age of ten or twelve.

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