



# First Language Acquisition: Phonological Development

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## ABSTRACT

**Objective:** Language acquisition is a process by which children acquire the ability to receive and comprehend languages as well as to produce and use words and sentences to communicate. **Methodology:** Once of the fundamental systems which a language acquisition is supposed to comprise is its phonology. **Results:** the purpose of this paper is to study how children acquire this fundamental system and casts a brief glance at the theories of first language acquisition and the process of acquiring language sounds. **Conclusion:** Most feel that the first vocalization of the new born baby and its first cries at birth are the beginning of language. Children begin with whole, undifferentiated sounds within 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.

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## 1. Introduction

Once of most important areas of debate is "How do children come to control a language?" "How do they accomplish it?" Learning a language is an amazing feat-one that has attracted the attention of linguists and psychologists for generation. (Lightbown, & Spada, 2013). Children do not learn the language in the way that they learn other subjects such as geography, physics and chemistry. All normal children acquire their mother tongues without any formal teaching. They acquire it in environment through exposure. Infants are not conscious of each sound or word they utter or the sequences of the sounds or words. They are surrounded by the language and highly motivated to learn a language in order to communicate or interact with their families and friends. Babies babble, coo and cry to send messages but no meaning attached to these early utterances. As they reach the end of their first year, they try to imitate heard sounds or words. Around this stage, he utters the first word. About 18 months of age, by combination of simple words, children produce utterances which are referred to as "telegraphic" utterances. For example, "bye-bye Daddy". At the age of three, the child can comprehend an incredible quantity of linguistic behavior and at school age, he not only learns what to say and how to say, but what not to say as well. I mean, he/she learns to speak not only correctly but also, to some extent, appropriately (Carroll, 1953).

A brief look at the theories of First Language Acquisition

- a) Behavioristic position: The behaviorist psychologists consider language as "a fundamental part of total human behavior" (Brown 1980). According to this theory the child is born with a "tabula rasa", a clean slate bearing no pre-conceived notions. This hypothesis says that at birth the infants' mind is a blank slate to be written by experience. Behavioral theory assumes that children imitate what they hear, they learn language through conditioning and habit formation. "This theory gives great importance to the environment as the source of everything the child needs to learn."(Lightbown & Spada, 2013) Behaviorists propose that the child's environment is the most important factor in first language acquisition and if a child is exposed to 'rich language', then good habit formation will occur. Parents teach their children by playing the roles of a model and correcting their mistakes. The child is considered to be a passive participant in the process of language acquisition. So,

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the theories of first language acquisition suggested by the behaviorist psychologists overlooked the complex mental process (Fairclough, 2013).

- b) The generative theories claim that the child comes into the world with some "built-in system", knowledge about the nature of the language. The child then, as an active participant and knowingly, acts upon his environment by developing his body of knowledge (Brown, 1973). Crystal (1976) maintains that children must be born with an innate capacity for language development: the human brain is 'ready' for language, in the sense that when children are exposed to speech, certain general principles for discovering or structuring language automatically begin to operate. These principles constitute a child's "language acquisition device" (LAD). The child uses its LAD to make sense of the utterances heard around it, deriving from this primary linguistic data- hypotheses about the grammar of the language what the sentences are, and how they are constructed. This knowledge is then used to produce sentences that, after a process of trial and error, correspond to those in adult speech: the child has learned a set of generalization, or rules, governing the way in which sentences are formed. Noam Chomsky who is one of the most influential figures in this field believes that children are born with an inherited ability to learn language (Ellis, 1994). He claims that certain linguistic structures which children use so accurately must be already imprinted on the child's mind. He states that every child has a 'language acquisition device' which encodes the major principles of a language and its grammatical structures into the child's brain. He contends that a child could not possibly learn a language through imitation alone. Mistakes such as, over generalization, 'I goed instead of I went' seems to prove his theory. Critics of Chomsky's theory believe that even though it is obvious that children do not acquire their native language through imitation alone, this does not confirm that they must have a LAD.

## 2. Materials and methods

### 2.1 Phonological Development

It is believed that the first vocalization of the new born baby and his first cries at birth are the beginning of language. Experiments show that new born babies make sounds that let family member know that they are experiencing pleasure or pain. On his very first day, as soon as he cries and mother comes to him, we have the simple form of communication between two people. The baby utters sounds and then other responds. It is also on his first day that a child often shows that he is already aware of sounds (Minnis, 1971). Even in his first vocal reactions to his new and uninviting environment he is using his lungs to produce sounds. The earliest noises which a child makes are shrill, nasalized sounds. These sounds are produced in front of the mouth with a tense facial expression as a result of the baby's discomfort. These early cries are involuntary responses to hunger, pain, wet, etc.

In addition to the discomfort sounds, the baby learns to make comfort sounds which are relaxed, deeper and without a nasal quality. These sounds, like the discomfort sounds, are produced naturally as a result of the body state of the baby (Call, 1988).

A baby's scream which is unpleasant is not uttered in a way that conveys meaning although from the child's side, a scream is not a way of telling anything, his parents may understand something from it. He only screams and gets food. During these early days a child not only 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: velar consonants, such as / k / and / g / and high vowel sounds, such as / i: /, / e / and / u /. For the first or two months of life, babies cry, and their vocal performance is limited to these crying noises. In the first six months, velar consonants /k/ and / g / are predominant. (Crystal, 1989) When the child is uncomfortable, consonant sounds are produced for example "w, l, n, g, h .....".

These pre-linguistic sounds of the very early stages of child language acquisition are called cooing which varies from one baby to another. The period from about 3 months to 10 months is usually characterized by three stages of sound production in the infants developing repertoire. The first recognizable sounds are described as cooing, with velar consonants such as / k / and / g /, as well as high vowels such as / i / and / u /; these sounds can be heard by the time the child is 3 months old (Yule, 1985).

During the cooing stage, babies seem to be performing the first gross activities required for the production of speech. The tongue begins to move vertically and horizontally, and the vocal folds begin to be used in coordination with it. There is a great deal of lip movement and tongue thrusting, which it is thought may be a form of imitation.

The second stage in the development of language is generally referred as babbling which is defined as "training and preparatory period for later articulator utterance" (Chastain, 1971). During this stage, the baby really begins to practice the variation of sound system.

Children can produce many sounds during this period that they do not use in actual speech.

Falks (Falk, 1973) 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.

After feeding and lying on his back, he begins to add consonants to collection of sounds used when he is comfortable. The baby begins to make some of the back consonant sounds such as / gu /, / ga /, / ka / and / ru /. The later consonant sounds of a satisfied baby include / ma /, / na /, / pa /, / ba /, / ta / and / da /. By the age of five months, most children have entered into this stage which is characterized by an ever increasing variety of sounds. During this stage of sound production, the baby utters strings of sounds, repeating them with a rhythm and intonation apparently for 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 his mother tries to alleviate his discomfort, he cries and she comes and smiles and perhaps pets him, he babbles and she may well encourage him by joining in, imitating him in fun, so that in turn he imitates her. Babbling stage extends from the age of four or five months until the child is approximately one year old, he produces different sounds. The quality of 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. However, babies may produce many sounds during the babbling period which may be non-existent in their own mother tongue. There is a considerable similarity in infant babbling patterns, whatever their language environment is. Crystal (1989) points out that between six and nine months, alveolar sounds, t, s, d, z, become dominant. (Yule, 1985) mentions that by six months, the child can produce

a number of different vowels and consonants including fricatives and nasal. This stage may contain syllable-type words such as / mu / and /da/. Around 9 months, there are recognizable intonation pattern to the consonant and vowel combination being produced. Variations in melody, rhythm and tone of voice become a major feature of child utterance towards the end of the first year. The baby, by sucking and swallowing, produces the / t, d, l, or n/ sounds. The development of vocal sounds begins in the front of the mouth or perhaps with the middle vowel " a" and produces toward the back of mouth. The consonants begin with the velar sounds due to saliva and swallowing movements. Next to develop are the labial and alveolar sounds as a result of sucking movements. The dental and palatal sounds develop last in the child's sound system. Late in the babbling period the effect of children's linguistic environments begins to appear in the sounds they make. It is at this point that children seem to recognize and understand a few of the words they hear. Carroll's study (1953) 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, n, m, n/, 70% can handle / f, s, ,l, y, and 50% can handle / tʃ, v, ʃ, r/. He points out that all phonetic distinctions are not made early or easily. He mentions that even six year olds have difficulties with/ s, z, ʒ, and /tʃ/. One child at 13 months can use only / b, d, and a/ but he is able to use these sounds to express a variety of words-for example /ba/ is used for baby, bath, and ..... (Crystal, 1989). By 15 months, he adds m, / p/ and / u / to his repertoire, and was, thus, able to distinguish a much larger number of words. He also begins to use some of these consonants at the ends or beginning of words, for example: /pu/ up. Crystal (1989) points out that consonant sounds are used correctly at the beginning of words; final consonants appear later. According to Crystal," A 1971 survey of 100 English children showed that during the second year, / p,b, k, n, f, d, g, m, and , h/ were commonly used word initially. This survey also showed that at least eight vowels or diphthongs were usually in use by the end of the second year/i, i, a, u, ɒ, ɔ:, and / aɪ/. By age 4, all the vowels and diphthongs were in use and only a few consonants are still posing problems- (θ, ð, ʒ, dʒ and ʒ) and certain uses of / l, ŋ/ t / and / z/. By age two he can, by combination of consonants and vowels, produce more than 200 words in an intelligible manner. Most English consonants begin to be acquired between 2 and 4 years of age. During the second year an effect of a process known as "reduplication"- repetition of a syllable, a morpheme, or a word- is an important feature of children's phonologies: the different syllables of a word are pronounced in the same way in a child, water was pronounced (wo wo) bottle as (bo bo). Even monosyllabic words can be reduplicated as when ball becomes (bo bo) From the age of about two, a child's mastery of language increases rapidly .It has been shown that most children have, by the age of about six, mastered all the basic pattern of their language, and have acquired several thousand words. (Wall work)As the child begins to respond to speech in its situation the rudiments of comprehension appear (Chastain, 1971). His earliest response to "Baby, Milk" may be to his mother's voice as an auditory stimulus specific to him as a human infant.

### 3. Discussion and results

When a baby acquires its mother tongue it is not aware of the process. He acquires it unconsciously. To him language is a tool to use in order to communicate and to satisfy needs.

Between birth and 12 months, a vast change takes place in a baby's producing abilities. Over the first weeks of life a baby's vocal sounds directly reflect its biological state and activities.

Most feel that the first vocalization of the new born baby and its first cries at birth are the beginning of language. Children begin with whole, undifferentiated sounds within 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.

### 4. Conclusion

The first vowel most children acquire is "a" and the first consonant is almost always a bilabial. Between 6 and 8 weeks, the first cooing sounds are produced generally when the baby is in a settled state. These sounds develop alongside crying, gradually becoming more frequent and more varied, as the child responds to the mother's smile and speech. They are quieter, lower pitched, and more musical than crying, usually consisting of a short, vowel like sound preceded by a consonant- like sound made towards the back of the mouth. Many of which have a nasal quality.

It is also suggested that phonological development covers three stages: 1) cooing, sounds without meaning 2) Babbling, preparatory stage for later articulate utterances. Babies begin to produce babbling sounds like / d, m, n/ at the age of about three or four months 3) Talking time.

At the end of the first year, rapid and clear distinctions are made among a large proportion of phonetic sounds. 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 of 3 can understand and produce an incredible number of utterances.

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