# Language Acquisition Phenomenon In Biolinguistics For Children.

**A Dissertation Presented in Partial Fulfilment for the Requirements of a Master Degree in Linguistics.**

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*Dedications*

*In the memory of my sisters Hadjer and Wafaa, may Allah bless their soul;*

*to the people who gave birth, meaning and love to my life, those who gave me*

*strength, encouragement and hope: to my dear father and beloved mother;*

*to my little sister Asmaa;*

*to all my friends*

**H. Ahlem**

**I**

*Dedications*


    *To those who have spent their lives caring, helping and shaping the course of my life: to my parents;*

    *to my beloved sisters Amel and Ayat; brothers Hichem and Djelloul, and the little ones Roaa and Louay*

    *to those who have always encouraged and supported me: to my friends Siham, Sarah, Khadidja, Imen and Ahlem;*

    *to all the people who have helped me to accomplish this work*



**S. Ilhem**

# *Acknowledgement*

# Table of Contents

**VI**

## List of tables:

# List of figures:

# ABSTRACT

Language acquisition and speech disorders are the major language productions deficits that children may encounter. The early years of the child's life are the most significant in language development. If the child acquires and develops his/her language normally, he/she will not face problems in communication later in life. This research aims to investigate the language acquisition according to the biological linguistics especially for children. The objective of this research is to define the language problems exhibited due to the damage of the brain or parts of the brain. The field of the topic necessitates the qualitative descriptive type of research, the data were collected .where the questionnaire was administrated to students, in order to evaluate the awareness about the subject of the study .Whereas, the questionnaire aims to test the knowledge of student's about language disorders, from the outcomes of the research, it has been confirmed that the children with language delays do not have the required attention that they need in order to heal and fit in with society.

**Key Words:**

Language acquisition - Speech disorders - The brain - Child - Language delays

# General

# Introduction

# General Introduction

Language acquisition is the process by which humans acquire the capacity to perceive and comprehend language, and this study is aiming to investigate language acquisition according to biological linguistics. In other words, the relation between language acquisition and human brain. For children, the brain is learning and changing more during language acquisition in the first six years of life, with the help provided by Adults primarily by talking with them. This paper work introduced language in general with more precise definitions and explanations.

In the field of language acquisition for children, linguists did not agree on one unified approach that can explain the process. Instead, there was many theories. Theorists conduct different experiments to support their perspective. And this research presents four main theories of language acquisition, along with the importance of the brain development in the child's acquisition of language.

Early childhood - The period from birth to age five - is a time of huge development and improvement. However, some children face persistent difficulties in learning and using various forms of language (i.e., spoken, written, sign language). And this study conducted the stages of language acquisition, language disorders, and the causes behind them.

The field investigation of the study requires a quantitative method of research, to investigate language disorders, and the way it affects children during the process of acquiring language.

## Motivation

*The main thing that motivates us to choose this topic is our desire to present an overview of the major theoretical perspectives and factors of language and language acquisition; as related to its huge importance in the field of psycholinguistics and the biological foundation.*

*The aim of this research is to discover the relation between language acquisition and biology.*

**Theme**

*This research focuses on the domain of psycholinguistics (psychology of language) which studies the psychological and neurobiological factors that enable humans to produce and understand language and how that knowledge is put to use.*

*Humans have an innate ability that describes how language is processed in the brain; and uncovers the universal processes that governs the development, use and breakdowns of language.*

**Observation**

*As second year master students of linguistics, we notice that many researchers do not pay attention to the relationship between language acquisition and biology in different languages (French, Arabic and English), as well as the effect of the biology of the brain on linguistics.*

*We also notice that we often do not understand the reason behind language disorders that confronts the child in the early stages of speech and pronunciation.*

**Research problem**

This research aims at discovering and studying the process of language acquisition, and the relationship between the production of language and human mind.

**Questions**

1. Is the process of language acquisition related to the biological study of language production?

2. Is there a relationship between language and human mind?

3. Is language deficiency caused by a defect in the biological composition of the human body?

## Hypothesis:

1. Language acquisition is affected by the biological study of language production.

2. Human mind affects language production.

3. Some language deficiencies are caused by a defect in the biological composition of the human body.

## Methodology:

*In order to conduct our research and under the current circumstances, only one method of investigation was used. And it was a questionnaire administrated to students of English from across the country to highlight their opinions about language acquisition and biological linguistics.*

### Process:

*This research includes a general introduction and three chapters:*

***The General introduction:*** *to discuss the subject of the study briefly.*

***Chapter one:*** *is devoted to the explanations and definitions of language along with it functions, levels; and it also explains how language plays a major role in understanding the human behavior.*

***Chapter two:*** *is the theoretical review. It is devoted to present the human theories of language acquisition and its relation with human biology along with the causes and stages of language disorders of children, and few examples of these delays; and also, to elaborate the nervous system in the domain of psycholinguistics.*

***Chapter three:*** *is meant to analyze the data collected from the investigation that is directed to some students from across Algeria through electronic forms of a questionnaire.*

*Finally, a General conclusion on the findings and the results held by the research.*

# CHAPTER

# ONE

# Chapter I: Language Functions and Language Levels

Introduction

1.1. Definition of Language

1.2. Function of Language

    1.2.1. Jakobson's Functions of Language

       1.2.1.1. The Emotional or Expressive Function

       1.2.1.2. The Conative Function

       1.2.1.3. The Referential Function

       1.2.1.4. The phatic Function

       1.2.1.5. The Metalingual Function

       1.2.1.6. The Poetic Function

    1.2.2. Halliday's Functions of Language

       1.2.2.1. Instrumental

       1.2.2.2. Regulatory

       1.2.2.3. Interactional

       1.2.2.4. Personal

       1.2.2.5. Heuristic

       1.2.2.6. Imaginative

       1.2.2.7. Representational

1.3. Levels of Language

    1.3.1. Phonetics

    1.3.2. Phonology

    1.3.3. Morphology

    1.3.4. Syntax

    1.3.6. Semantics

    1.3.7. Pragmatics

Conclusion

## Introduction:

Language is a vital tool for communication and an extraordinary gift of god. It is part of what makes man fully human. Aristotle says man is rational animal but what sets him apart and raises him above the animals, is that he has the ability to reason, and it is very clear that he cannot reason without language, so language is necessary for man to be rational creature.

Every aspect of life involves language. It is what made the growth of civilizations possible and it also plays an important role in the development of a person personality, because communication is the one which drives lives and makes them better.

The first chapter aims to give a theoretical review of language from the perspective of many linguists, along with the functions that it performs and the levels that are necessary to acquire language and to communicate with each other.

## 1.1. Definition of Language:

**Chomsky defined language: "It is a set of finite or infinite of sentence, each finite in length and constructed out of a finite set of elements" (Chomsky, 1957)**

Sometimes it is necessary to define a language before discussing it, not only linguists, but also philosophers, psychologists and sociolinguistic have to pay more attention to language. So what is language? and how does the process of communication occur?

The tool of language gave us the ability to transfer information and knowledge to ourselves and to others, many linguistic defined it as:

**According to Sapir (1921):"** language is a purely human and non-instinaction method of communication ideas, emotions and desires by means of voluntarily produced symbol.

**Wibowo (2001:3):** pointed out that language is a system of symbols that is meaningful and articulate sounds that are arbitrary and conventional, which is used as a means of communication.

**Wittgentein**: Language is a form of thinking that can be understood, in touch with reality, and has the form and structure of logical.

**Robins (1959:14) says**: "Language is a symbol system based on pure or arbitrary convention…. infinitely, extendable and modifiable according to the changing needs and conditions of the speakers".

**H.A Gleoson says:"** Language has so many inter-relations with various aspects of human life that is can be studied from numerous points of views, all are valid and useful as well as interesting ".

Basically, Language must be systematic, it is highly organized system in which each unit plays an important part that relates to other parts (Boey,1975:1) In other words, each language is a system consisting of two subsystems of meaningful unites, the others is subsystems of sounds, which have no meaning in themselves but form the meaningful units.

Secondly, Language is socially acquired, learned and then used. for instance, there are two persons sitting in a waiting room, they begin to introduce and talk to each other's, at the time of introducing, talking and knowing each other's, they establish social relationship and they will probably maintain their social relationship in future time which must involve the use of language.

Thirdly, language is always spoken; this means that all people over the world always have a way of communicating ideas by using sounds that are produced by their speech organs. In this relation, it can be said that spoken forms of a language is primary that is to say that the written form of language is only a representation of what is actually spoken.

Another characteristic of human language is that it is productive or creative. This refers to the ability of native speakers to understand and produce any numbers of sentences (which they never learned before) in their native language.

To sum up, based on some definitions of language, we can say that Language is a basic instrument of human articulation and communication. Language is a fundamental apparatus that enables individuals to interface and charge, to caution and welcome, and to stay digest thought in solid words in our quest for higher learning.

## 1.2. Function of Language:

Logically, the identification of language functions is kind of a result of asking the following question 'Why do we use language?' The question is so basic that it seems hardly

to require an answer so, the linguistics books revealed many definitions, because there are many languages in our world that are different, and each language has its rules. The function is a part of the language.

## 1.2.1. Jakobson's Functions of Language

Roman Jakobson's (1960) defined six fundamental factors of language (or communication functions) that are necessary for communication to occur.

### 1.2.1.1. The Emotional or Expressive Function:

The Emotive Function focused on the "ADDRESSER" it tends to produce an impression of a certain emotion. In other way, "the emotive function, laid bare in the interjections, flavors to some extent all our utterances, on their phonic, grammatical, and lexical level". For example: "unfortunately, the rain came"," Oh" **(R Jakobson ,1987; 67)**

Therefore, "It can be said that the expressive function is present in almost all messages because in the simplest manner, is also a sign of a certain of the messages." **(Narcis, 2017; 58)**

### 1.2.1.2. The Conative Function:

The Conative Function is marked on the "ADDRESSEE", "this function is performed by direct forms of addressing the listener with verbal forms in the imperative".  So, you can orient someone to do something (e.g. "Drink "or "Go away " are examples about conative function that refers to an orientation toward "addressee". It helps making people do something and it includes orders. In fact, "the conative function, finds its purest grammatical expression in the vocative and imperative, which syntactically, morphologically, and often phonemically deviate from other nominal and verbal categories" **(Tribus, 2017; 12)**

### 1.2.1.3. The Referential Function:

Really, this function concentrates on the context and describes a situation, object or mental state. It is always dealing with something contextual. It is also associated with an element whose true value is under questioning especially when the truth value is identical in both the real and assumptive universe: **(Tristan's, 1987; 19)** for example: (The dog is an animal). Referential function refers to any message that is constructed to convey information.

The Referential function "dominates ordinary discourses because we designate objects and bestow them with meaning," **(Holenstein, 1974; 156)**

In the same way, the referential function is "leading task of numerous messages, the accessory participation of the other functions in such messages must be taken into account by the observant linguistic" **(Jakobson, 1987; 66)**

### 1.2.1.4. The phatic Function:

The Phatic Function deals with the connection between speaker, The use of this function also increases the listeners perception of the speakers proficiency, this function use of language to keep people in contact with each other, and keep the channels of communication open so, it means that someone helps to establish contact and refers to the channel or checking that it is working. It is primary purpose to confirm or attract this connection. For example, "REALLY", "WAW!",

In the same way, Jakobson (1960), pointed out that prolonged phatic conversation sometimes occurs when the communication process in threatened. Furthermore, the phatic function is "the first verbal function acquired by infant's; they are pronto communication before being able to send or receive informative communication". (Jakobson,1960;69).

### 1.2.1.5. The Metalingual Function:

Metalingual Function deals with the ADDRESSER, and the ADDRESSEE using same codes, or when two figures speak different languages. For instance, aphasia may be described as a loss of capability from metalingual actions. Therefore, "this function is currently present in ordinary conversation as a means of control on the same linguistic code by the interlocutors".

"In the process of language learning, child acquisition of the mother tongue makes wide use of such metalingual operations; and aphasia may often be defined as a loss of ability for metalingual operations" **(Jakobson ,1987;69)**

### 1.2.1.6. The Poetic Function:

The Poetic Function Known as the aesthetic function, it focuses of the language itself. However, "the poetic function is the determining function of the verbal art. This function, by promoting the palpability of signs, deepens the fundamental dichotomy of signs and objects

that is why, when dealing with poetic function, linguistics cannot limit itself to the field of poetry.

Furthermore, the linguistic study of the poetic function must overstep the limits of poetry. And, on the other hand, the linguistic scrutiny of poetry cannot limit itself to the poetic function. **(Narcis, 2017; 60)**

### 1.2.2. Halliday's Functions of Language

Logically, the people practice language in different aspects of their lives without having to concern themselves with determining the functions that language does for them. It has been the practice that the language function of children and adults is to impart individual thoughts to others.  The adult communicates to others different colors of his thoughts through language when people speak or write, they produce text. The term 'text' refers to any instance of language, in any medium, that makes sense to someone who knows the language (**Halliday and Matthiessen ,2004;14)**

So, when we use language to report, verbal statements prove objective facts or news, so they remain closely related to knowledge, and at other times, language reveals commands or desires, and is used for criticism or awareness, that is, it stimulates emotions and provokes action. But, is it certain that the function of language always conveys ideas even to an adult?.

First, you can mention that, the traditional paradigm of language as illustrated by **BUHLER** (1934) in particular is limited to only four basic functions with an open list of sub-functions each.

- Referential function: (objective) reference to the objects and phenomena of the world. (Informative, metalinguistic, metatextual, directive, didactic etc...)
- Expressive function: expression of the sender's (subjective) attitude or feelings towards (evaluative, emotive, ironical etc.)
- Appellative function: appeal directed at the receiver's sensitivity, previous experience or disposition to act (illustrative, persuasive, imperative, pedagogical, advertising etc…)
- Phatic function: establishing / maintaining / ending (social) contact between sender and receiver (small talk, taking leave, introductory "peg" for text opening etc. **(Buhler, 1990;113)**

For **Hallida**y, he considers that the human language is the basis for every meaning so that a child who cannot control a certain age in his movements can use some simple vocabulary that expresses his needs in his mother tongue, and it is evidence that he employs a language Meaningful, so that he can communicate with members of his linguistic community.

### 1.2.2.1. Instrumental:

The language allows its users from early childhood to satisfy their needs and express their desires, and what they want to get from the surrounding environment. This job is called the "I want" function. So, the child uses language to express their needs (e.g. Want rest)

### 1.2.2.2. Regulatory:

Through language, an individual can control the behavior of others (I do such ... and I do not do), it as a kind of request or command to implement the demands or forbid the performance of certain actions. The language has the function of "to do" or. Abstractly, this is where language is used to tell others what to do (e.g. stop talking)

### 1.2.2.3. Interactional:

Language is used to interact with others in the social world. We use and exchange language on various social occasions and use it to show respect and politeness with others. Language is used to make contact with others and form relationships (e.g. „Hate you, liar)

### 1.2.2.4. Personal:

Through language, the child and adult can express his views, feelings, and attitudes towards many subjects, and he can establish his personal identity and provide ideas to others. This is the use of language to express feelings, opinions, and individual identity (e.g. „My sister is a clement girl").

The next three functions are heuristic, imaginative, and representational, they helping the child to come to terms with his or her environment.

### 1.2.2.5. Heuristic:

The individual begins to distinguish himself from the surrounding environment and uses language to explore and understand this environment. It is what we can call the interrogative function. In the sense that he is asking about aspects that he does not know in an

environment so that the lack of his information about this environment forms. Generally, this is when language is used to gain knowledge about the environment (e.g. what about the mother tongue? ¨)

### 1.2.2.6. Imaginative:

The human uses the language according to this function, in order to reflect his emotions, experiences, and feelings, as the person uses them to promote, or uses them so that, he can overcome the difficulty of work and impart the spirit of the group as is the case in collective songs. Here language is used to tell stories and jokes, and to create an imaginary environment.

### 1.2.2.7. Representational:   The use of language to convey facts and information.

According to Halliday, as the child moves into the mother tongue, these functions give way to the three metafunctions of a fully tri-stratal language (one in which there is an additional level of content inserted between the two parts of the Saussurean sign **(Halliday,2002;153)**

As it mentioned before; the language functions are several according to the context like these sub-functions:

The Ideational component is that part of the linguistic system which is concerned with the expression of 'content', with the function that language has of being about something. It has two parts to it. The experiential and the logica1, the former being more directly concerned with the representation of experience, of the 'context of culture • in Malinowski' s terms, while the latter expresses the abstract logical relations which derive only indirectly from experience. The interpersonal component is concerned with the social expressive and conative functions of language. with expressing.

The speaker's 'angle': his attitudes and judgments, his encoding of the role relationships in the situation. And his motive in saying anything at all. We can summarize these by saying that the ideational component represents the speaker in his role as observer, while the interpersonal component represents the speaker in his role as intruder. **(Halliday, 1976; 26-27)**

Also, the text is best regarded as a semantic unit: a unit not of form but of meaning. Thus, it is related to a clause or sentence not by size but by realization, the coding of one

symbolic system in another. A text does not consist of sentences; it is realized by, or encoded in. sentences. If we understand it in this way. we shall not expect to find the same kind of structural integration among the parts of a text as we find among the parts of a sentence or clause. The unity of a text is a unity of a different kind. **(Halliday, 1976.2)**

Language is a set of conventional communicative used by humans. However, language is a system which is always changing; it is a fundamental basic of human behavior.

This section discussed the functions of language. According to Jakobson's functions of language are: emotive, conative, referential, phatic, metalingual, and poetic functions. Halliday classifies seven function of language into Instrumental, regulatory, interactional, personal, heuristic, imaginative, and representational.

## 1.3. Levels of Language:

Every language has its own rules of grammar that operate at various levels: phonetics, phonology, morphology, syntax, semantics and pragmatics.

### 1.3.1. Phonetics:

Phonetics is a branch of linguistics which studies the sounds and characteristics of human speech sounds. Since in English and some other languages there is a difference between spelling and sound, phonetic alphabets have been created in which one letter corresponds to one sound.

The best-known and most widely used one is **the International Phonetic Alphabet (IPA)**. The phonetic transcription is given in square brackets, for example **control [kan'traul]** or **madly [maedli]**. Phonetics is divided into **Articulatory phonetics** (**Acoustic phonetics**), which studies how speech sounds are produced, **Auditory phonetics**, which studies how human perceive speech sounds by the ear; it investigates the perception of pitch and loudness of sounds, and the physical characteristics of speech sounds.

All the speech sounds are classified into consonants and vowels. Vowels are pronounced without or with very little obstruction in the vocal tract and they make the nucleus of a syllable. Consonants are produced with some constriction in the airflow through the vocal tract. According to their place of articulation, the English consonants are classified into bilabial, labiodental, dental, alveolar, palatal, velar, and glottal. According to the manner of

articulation, they are grouped into stops, fricatives, and affricates. In addition, consonants are called oral, if the air escapes through the mouth; the majority of consonants are oral. However, if the velum is lowered and the air escapes through the nose, a nasal consonant is produced **(e.g. the first sound in house or few)**. Vowels in English are classified into **Monophthongs** and **Diphthongs**. **Diphthongs** shows a change in quality during the pronunciation **(e.g. the vowels in play and count)**. The distinction between lax and tense vowels shows that the first are produced with relatively less tension and are shorter than their tense counterparts, which shows a greater vocal tract constriction. The vowel in **bit** is lax and the vowel in **beat** is tense.  Two speech sounds **[w]** and **[j]** are articulated with the tongue like a vowel, but they function like voiced consonants and are called glides. Length, pitch, and stress are **prosodic features**, which means that they exist over the segmental values of the speech sounds in a syllable. In English, the stressed syllables are louder, longer and higher in pitch. Pitch change in spoken language that is related to differences in word meaning (i.e. change in pitch can show differences in word meaning) is called tone. English is not a tone language it is intonation language, where the change in pitch functions is on the level of sentence and its movement here shows an **emotional meaning** (anger, joy, irony, etc.) or **grammatical meaning** (e.g. statements vs. questions).

## 1.3.2. Phonology:

Phonology is the branch of linguistics concerned with the systematic organization of sounds in spoken language and signs in sign language. It is related to phonetics but has a different focus. Phonetics concentrates on the physical articulatory and auditory aspects of speech sounds while Phonology investigates sound types that subsume all the variations of speech sounds which we produce while speaking (linguistic analysis). For example, it gives explanations why the consonant cluster **[ps]** is not pronounced word-initially in English but is possible in Lithuanian or Russian, or why **[p]** is aspirated in the words like **put, pity, and rump**, but is non-aspirated in **spite, splash, and spirit**. Also, phonology entails the knowing what sounds and words are possible and what sounds are not possible in the language. For example, a native speaker of English knows that a form like **flib** could be a possible English word, though actually such a word does not exist; and he knows that the first vowel sound in the name **Goethe [oe]** is not a sound in English. On the other hand, he can say that a form like **ngick** is simply not possible and "does not sound English".

The aim of a phonologist is giving linguistic explanations for this phonological knowledge. The central term in phonology is **Phoneme**, which is defined as the smallest meaningful unit that distinguishes one word from another. In other words, phonemes can distinguish words with different meanings. For example, **/p/** and **/b/** are two separate phonemes because they can distinguish words (pit and bit; pull and bull, etc.). However, aspirated and non-aspirated [p] never distinguish words with different meanings and are just predictable variants of the same phoneme. They occur in different environments - the non-aspirated **[p]** is used after **[s]** and aspirated one in all other positions, so they are considered predictable.

Speech sounds that differ but do not create a meaningful change in the word are called **Allophones**. Allophones never occur in the same phonetic environment and they are said to be in complementary distribution. Phonemic distinctions are checked using the minimal pair test. If a substitution of one phoneme for another result in a word with a different meaning, we have two different phonemes. Comparing the same phonemes **/p/** and **/b/**, are very similar in their articulation, only **/b/** is voiced and /p/ is voiceless. Such distinguishing characteristics of phonemes are called **Distinctive Features**. If the feature is present in a phoneme, it is marked with a plus sign and if it is absent, it is marked with a minus sign. Thus **/b/** is presented as **[+VOICE]** and **/p/** as **[-VOICE]**.

## 1.3.3. Morphology:

Morphology is the branch of linguistics which studies the structure of words, types of their formation, and their relationship to other words in the same language. It is generally divided into **Inflectional Morphology** (which studies inflections of a language) and **Derivational Morphology** (which studies the types of word formation). Morpheme is the basic unit in morphology. It is defined as a meaningful linguistic unit. Thus, the word unlocked in the sentence **"He unlocked the door"** has three morphemes (un- is used to show an opposite; lock – means to fasten with a key, and –ed indicates past tense). There are morphemes that can be used as single words (e.g. book, run, nice, one). They are called **Free Morphemes**. Others cannot stand alone and have to be attached to another morpheme (e. g. un-, -ment, -ed, -s). They are **Bound Morphemes**. Words which consist only of one morpheme are called simple words.

Words consisting of two or more morphemes are called complex. Complex 0words have a root and one or more affixes (prefixes or suffixes). Derivation is one of the major types of word formation. Another type is compounding – the process of joining two or more words to form a new word; **e.g. raincoat, sky-blue, team-mate, or talking head**. from these examples, the spelling of compounds varies. They can be written as one word, hyphenated or written as two separate words. In the latter case they are treated as a word and not a phrase because they represent a single unit of meaning.

Conversion is a type of word formation when the function of a word changes (such as a noun to a verb or vice versa), **e.g.** butter (N) – butter (V); walk (V) – walk (N) or open (Adj) – open (V).   Other types of word formation in English include clipping, blending, backformation, initialisms (abbreviations and acronyms), and onomatopoeia. In addition, words are borrowed from other languages or totally new words can be invented. The first are called borrowings, **e.g**. the noun **chef** has been borrowed from French; the noun **series** comes from Latin, and the noun **avocado** is borrowed from Mexican Spanish. The newly made words- often trade names- are called **coinages**. They often become general words, **e.g. teflon** or **aspirin**.

## 1.3.4. Syntax:

Syntax is the branch of linguistics that studies the set of rules, principles, and processes that govern the structure of sentences in a given language. In his theory of generative grammar, Noam Chomsky has pointed out to the fact that the speaker of any language can produce and understand an infinite number of sentences of that language. The inventory of phonemes of a language is finite, the number of words may reach hundreds of thousands, and it would be very difficult to try to count all the existing words of a language. However, to say how many sentences there are in a language is impossible. A speaker can create new sentences by adding prepositional phrases, adjectives, clauses, etc.  The traditional grammar has its roots in the description of the classical languages – Greek and Latin – provided the distinction and description of the parts of speech: **nouns(N)** like (door, idea, Katherine, juice), **verbs(V)** like (run, buy, believe, eat , be), **adjectives(Adj)** as (beautiful, new, small, open), **adverbs(Adv)**  as (very, quickly, really), **prepositions** (in, of, without, despite) **pronouns** (they, you, somebody), **articles** (a, the) **conjunctions** (and, while, though), and **interjections** (oh, phew).

Modern linguists, point out to some incompleteness of the definitions of parts of speech. For example, **nouns** may be defined as words referring to people, entities, qualities or abstract notions; adjectives are words that modify nouns, expressing quality, property or attribute of a person or entity, etc. In these definitions parts of speech are presented including their essential meaning properties but not all their functional properties are revealed.

English has fixed **Subject-Verb-Object (SVO)** word order. Therefore, the sentence "The children took all the apples" is correct (grammatical) but the sentence "Took all the apples the children" is ungrammatical.

Sentences may be analyzed into phrases. For example, the following sentence contains three phrases, indicated by bracketing **[The diligent students] [have completed] [the last tas**k]. A phrase may consist of one word or a group of words. The substitution test may be used to show the identity of a phrase, i.e. a single word can often replace it. **For example**, the phrase the diligent students can be replaced by the pronoun they. Another way to test the reality of phrases is the movement test – a whole phrase can be moved as a unit. Compare the two sentences:

a)  *He put the cake on the kitchen table.*

b)  *On the kitchen table, he put the cake.*

The main types of phrases are: the noun phrase, the verb phrase, the adjective phrase, the adverb phrase, and the prepositional phrase.

According to Noam Chomsky's generative grammar, is a finite set of formal rules project a finite set of sentences upon the potentially infinite number of sentences of a language, which means there are certain formal rule that indicates the structure of sentences in a language. One of the main rules is that a sentence must contain a noun phrase and a verb phrase.

Sentences are classified into different types. The majority of linguists make a distinction between functional and formal classifications. From the point of view of their **function**, sentences are divided into statements (She closed the door.), questions (Did she close the door?), commands (Close the door!), and exclamations (What a big door!). **The formal** classification makes a distinction between declarative, interrogative, and imperative sentences. Another categorization of sentences is: simple, complex and compound. **Simple** sentences have one Subject – Verb unit, **e.g.** The kid jumped on the bed. **A compound**

sentence consists of two or more main clauses, **e.g.** He is a busy man, but he promised to find time to help me solve the problem. We have a **complex** sentence when one clause is used as a main clause and another is added to express subordinate meaning, **e.g.** When I first saw the car, I was amazed by the sound of the engine.

## 1.3.6. Semantics:

Semantics is the branch of linguistics that refers to the study of meaning in language. It is generally about the fact that words, phrases, and sentences have meaning. **Lexical semantics (lexicosemantics)** studies the meanings of words and sense relations (such as synonymy, antonymy and hyponymy). **Sentence semantics (sentential semantics)** it deals with the meaning of syntactic unites larger than words**, i.e.** sentences phrases and clauses and the semantic relationship between them. The meaning of the majority of words is conventional, **i.e.** all speakers of a language agrees on their meanings. If they did not, it was going to be impossible for people to communicate with each other.

It is possible to analyze meanings of words decomposing them into more basic semantic features. For example; the noun **man** can be described as having the features **[+ HUMAN], [+MALE]**, and **[+ADULT].** Componential analysis helps clarifying how words relate to each other's. Comparing man and boy, it can be noted that the two words are differentiated only by one semantic feature: boy is characterized as **[- ADULT]**.

Linguists acknowledge that it is difficult to define and to analyze the meaning of a word. One of the reasons is that word meaning is not homogeneous. Denotation is reflected in the dictionary definitions of words. So, the denotation of the word **wolf** is *"a wild animal that looks like a large dog and lives and hunts in groups" (Longman Dictionary of Contemporary English 2007: 1897).* However, for a lot of people the word may be a sign of danger and fear, and this is treated as the word's connotation. The word **home** has the meaning of a place (house or apartment) where you live, yet it has associations of safeness and warmth. Denotations of words are more stable and established, while connotations are less determinate.

Within the vocabulary, words are semantically related to one another in different ways. One of the most widespread sense relations is **synonymy**, or sameness of meaning. However, there are no strict or perfect synonyms, **i.e.** two words usually do not have exactly the same meaning. For example; **beautiful** and **pretty** Both means someone or something

attractive to look at. Beautiful describes someone who is good-looking in a very exceptional way, while pretty refers to someone or something that is pleasant to look at but not impressive. **Antonyms** are words that are opposite with respect to some element of their meaning; for example, **big** and **small** both describe size, but opposite in regards of the size. If two sentences have the same meaning, they are called **paraphrases** of each other. For example, the sentence **The car hit the kid** is a paraphrase of the sentence **The kid was hit by the car**.

**Entailment** is a semantic relation between two sentences when the truth of one sentence implies the truth of another but not vice versa. For example, the sentence **Adriane saw a lion**. entails **Adriane saw an animal**. But saying that Adriane saw an animal does not mean that he saw a lion, he might have seen a wolf, a giraffe, etc.

## 1.3.7. Pragmatics:

Pragmatics is a branch of linguistics that studies how people comprehend and produce a speech act and the way context contributes to meaning.

There are two concepts to show the scope of pragmatics: **Micropragmatics** and **Macropragmatics**. In general, **micropragmatics** can be defined as the study of illocutionary force at the utterance level. While**, macropragmatics** is not on the utterance, but on a series of utterances which form discourses/text.

Pragmatics is the study of literal meaning independent of context. For Example; If I'm having a hard day, I may tell you that "my day has been a nightmare" but of course I don't intend you to take that literally. In this case the semantic meaning of "nightmare" a bad dream, differs from its pragmatic meaning.

Pragmatic knowledge is to know how to use language appropriately.  pragmatic competence is generally implicit known at some level, but not usually available for explicit examination. For example, it would be difficult for most people to explain how they know that My day was a nightmare means that my day (like a nightmare) was very unpleasant, and not, for example, that I slept through it.

These levels work together in harmony to create meaningful communication among individuals either in writing or speaking.

## Conclusion:

This chapter has discussed a number of important aspects of language that good speakers should always consider. It is important for speakers to remember the power of language and to harness that power effectively, yet ethically. We've discussed the relationship between the language and it functions, also the main levels of using language that is clear, vivid, stylized, and ethical that reflects well on the speaker.

# Chapter

# Two

# Chapter II: The Biology Dimension of Language Acquisition

Introduction

2.1. Language disorder

2.2. The brain anatomy

2.3. Human Theories of Language Acquisition

    2.3.1. Behaviorist Theory

    2.3.2. Innateness Theory

    2.3.3. The Cognitive Theory

    2.3.4. The Input or Interactionist Theory

2.4. Stages of Language Acquisition in the Child

    2.4.2. The pre-linguistic stage

        2.4.2.1. Stage 1: (0 to 2 Months): Crying

        2.4.2.2. Stage 2: (2 to 4 Months): Cooing

        2.4.2.3. Stage 3: (5 to 8 Months): Babbling

    2.4.3. The Linguistic Stage

        2.4.3.1 First word (Holophrastic) stage

        2.4.3.2. Two words stage

        2.4.3.3. Sentence stage

    2.5.2. Aphasia

        2.5.2.1. Definitions

        2.5.2.2. Broca's aphasia

        2.5.2.3. Wernicke's aphasia

2.6. Stuttering

    2.6.1. Definition

    2.3.7. Hearing Disability

    2.3.8. Causes of language disorders

        2.3.8.1. Organic and Neurological causes

        2.3.8.2. Psychological causes

        2.3.8.3. Social and environmental causes

Conclusion

## Introduction:

Language acquisition is the process by which humans acquire the capacity to perceive and comprehend language; in other words, gain the ability to be aware of language and to understand it, as well as to produce and use words and sentences to communicate, with the use of certain tools including, phonology, morphology, syntax, semantics, and pragmatics.

The second chapter aims to give a theoretical review of the biology dimension of language acquisition. It is generally devoted to explain the relationship between language acquisition and the human biology, and it will be focused on children and the problems they face while learning a certain language.

This chapter will contain the theories and stages of language acquisition, in addition to some casual language disorders that happens to some children during the process of language acquisition along with their causes.

## 2.1. Language Disorder:

Human beings are genetically pre-programmed, not only to acquire language, but also, -and as part of the same process- to produce and recognize speech sounds. It has often been pointed out that what the linguists commonly refer to as the speech organs (vocal organs)- the lungs, the vocal cords, the teeth, the tongue, etc. – all serve some biologically simple more basic function the producing vocal signals. In the normal course of events, children acquire a command of the spoken language naturally (by their biological endowment and without special training), whereas reading and writing are special skills in which children are given special instructions based on their prior knowledge of a spoken language.

The human being cannot express his purposes without the need for language and this is what has made him a subject of great interest and works to develop it to keep pace with the tremendous development that is occurring in societies and for reasons that may cause the language to a variety of disorders, including language disorders, what is meant by language disorder

**Definitions :** Language disorder, or linguistic expression disorder is the condition that calls the weak ability of the person to communicate with others properly, so he is not able to

communicate his idea to others clearly, and the disorder is in the form of errors in the pronunciation of some exits of letters, and the state of language disorder can also be described As a condition or method of speech that does not match the age of the person speaking, let us assume that the person who suffers from language disorder has an age of about 10 years, and you find that the method of his speech is consistent with a person who has age of only 5 years, or less, i.e. The person with language disorder is below his normal age level. Children with language disorder will typically be delayed in learning or speaking their first words and phrases. When they do speak, their sentences are shorter and less complex than would be expected for their age. However, Language disorder is a communication disorder in which a person has persistent difficulties in learning and using various forms of language (i.e., spoken, written, sign language).

## 2.2. The Brain Anatomy:

The Brain (see FIGURE 2) is not a symbolic processor, but a regulator of sensori-motor activity. As we shall see later, sensori-motor activity can be seen as proto-metafunctional in its organization. Social semiosis emerges through the entrainment of embodied sensori-motor activity to the higher-scalar meaning-making practices of the eco social system **(Paul J. Thibault; 2004, P18)**

"Man is, of all the animals, the one whose brain in the normal state is the most asymmetrical. He is also the one who possesses most acquired faculties. Among these faculties-which experience and education developed in his ancestors and of which heredity hands him the instrument but which he does not succeed in exercising until after a long and difficult education-the faculty of articulate language holds pride of place. It is this that distinguishes us the most clearly from the animal". **(Harrington A. 1987; P65/66)**

We learn that most people's left cerebral hemisphere is concerned with language, their right with spatial orientation. More broadly still, the left caters to sequential analysis and the generating of action sequences, the right to setting such activities into a spatial framework. Most general of all, the left hemisphere controls motivated approach sequences (handling, eating, and soon), progressively focusing and acting upon the target; the right hemisphere is more involved with the person's movement through the intervening space and the spatial background of the target. The left hemisphere's activities can be context free, whereas the

activities of the right are context bound. The hemispheres are complementary in their functioning **(Kinsbourne, Marcel 2001.P236)**

These observations by Kinsbourne show the diverse, yet complementary, roles that the two hemispheres play in the regulation of sensori-motor activity. The left hemisphere is 'analytical' and 'focal'; the right hemisphere is 'general' and 'global'.

The only thing which is 'transmitted' is the physical speech sounds produced in vocal-tract gestural activity and propagated through the air as sound waves. Only the neural impulses corresponding to the expression stratum are transmitted via the loop to the vocal apparatus for speech production. The impulses corresponding to the meaning – the content - remain, as **PENG (2000)** shows, in the speaker's brain. Meanings do not travel through the air to the hearer. Instead, the hearer must re-construct in his or her own brain the relationship between the two strata by (1) recognizing the speech sounds which are picked up by the auditory system; and (2) combining Of binding in his or her brain the neural impulses deriving from the brain regions concerned with proto-meaning (content) and expression.
**( Peng, Fred C. C. 1994; P195)**

Neurological maturation and motor control of the speech organs most probably have an influence on the onset and duration of the developmental stages of speech.

The brain of a new born infant and the neurological paths for the innervation6 of the speech organs undergo intensive development in the first years of life. Not many studies have been performed on the relationship between infants' speech development and neurological maturation of the speech organs in the first year. It has been suggested that the pre-babbled vocalizations are related to an early maturing part of the subcortex involved in the vocalization subsystem common to most mammals. Unfortunately, he did not mention at what age exactly these pre-babbled vocalizations are affected to the maturation of the subcortex.
**(Published by The Netherlands- Prof. Dr. A.E. Baker P.58)**

**Brain Anatomy**

Cerebrum

Choroid plexus

Ventricles
(fluid-filled spaces)

Pineal gland

Hypothalamus

Optic nerve

**Supratentorium**

**Infratentorium**

Pituitary
gland

Pons

Brain stem

Medulla

Cerebellum

Spinal cord

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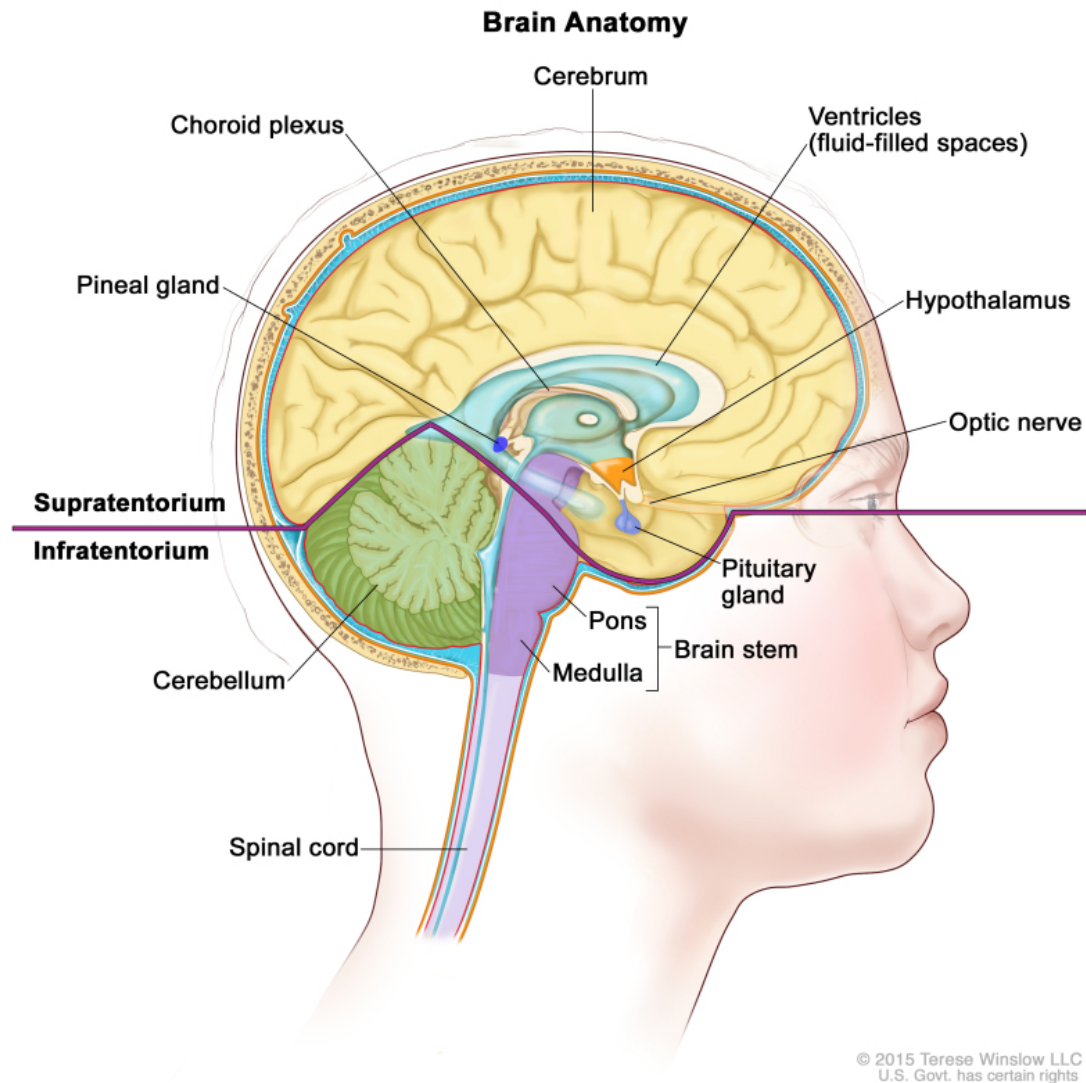
*Figure 1: The brain anatomy*

## 2.3. Human Theories of Language Acquisition:

Over the years, several theories and approaches have emerged to study and analyze the process by which children learn to speak and understand a certain language. The main theories guiding the course of language acquisition are, Innateness Theory, Cognitive Theory, Behaviorist Theory and Interaction Theory.

### 2.3.1. Behaviorist Theory:

The behaviorist psychologists developed their theories while carrying out a series of experiments on animals. So, they argue that the process of language acquisition, for an infant, is similar to the process of learning any other behaviors.

The behaviorist B. F. Skinner then proposed this theory as an explanation for language acquisition for humans.  In Verbal Behavior (1957), he stated:

"The basic processes and relations which give verbal behavior its special characteristics are now fairly well understood.  Much of the experimental work responsible for this advance has been carried out on other species, but the results have proved to be surprisingly free of species restrictions.  Recent work has shown that the methods can be extended to human behavior without serious modifications." **(Lowe and Graham, 1998, p68)**

**Skinner** suggested that a child imitates the language of adults. His correct utterances are reinforced when he gets what he wants or when he is praised. But while there is some truth in Skinner's explanation. There are many objections to it.

As a limitation of behaviorism, language is based on a set of rules, and when children make mistakes, they reveal that they are not simply imitating but they are applying rules.

### 2.3.2. Innateness Theory:

In 1957; Noam Chomsky criticized the behaviorist theory by bringing this new theory that claims that every child is born with a Language Acquisition Device (LAD). That means that a child's brain contains special language-learning mechanisms at birth.

The Innateness Theory remains at the center of the debate about language acquisition. However, it has been modified, both by Chomsky himself and by others.  Chomsky's original position was that the LAD contained specific knowledge about language.  Dan Isaac Slobin has proposed that it may be more like a mechanism for working out the rules of language:

"It seems to me that the child is born not with a set of linguistic categories but with some sort of process mechanism - a set of procedures and inference rules, if you will - that he uses to process linguistic data.  These mechanisms are such that, applying them to the input data, the child ends up with something which is a member of the class of human languages.  The

linguistic universals, then, are the result of an innate cognitive competence rather than the content of such a competence." **(cited in Russell, 2001)**

As a limitation of The Innateness Theory is that Chomsky's work on language was theoretical. He was interested in grammar and much of his work consists of complex explanations of grammatical rules.  He did not study real children.  The theory relies on children being exposed to language but takes no account of the interaction between children and their careers.  Nor does it recognize the reasons why a child might want to speak, the functions of language.

### 2.3.3. The Cognitive Theory:

This theory was held by the Swiss psychologist Jean Piaget. He placed the process of language acquisition within the context of a child's mental or cognitive development.  He argued that a child has to understand a concept before acquiring the particular language form which expresses that concept.

The limitation of the Cognitive Theory says that while the child continues to develop, it becomes harder to find clear links between language and intellect.  Some studies have focused on children who have learned to speak fluently and it was found that Syntax does not rely on general intellectual growth.

### 2.3.4. The Input or Interactionist Theory:

This theory by Bruner favors Chomsky's Innateness theory. It relies on the idea that children require a lot of interaction with people, mainly their primary caregivers, to learn language. Bruner came up with the idea of Language Acquisition Support System (LASS), which assures that children have an innate ability to learn and acquire language, but also need the interaction with other users of the same language to succeed in the learning process.

As a limitation of the Input theory that serve as a useful corrective to Chomsky's. It has already been noted that children in all cultures pass through the same stages in acquiring language. Also, there are cultures in which adults do not adopt special ways of talking to children, so child-directed speech may be useful but seems not to be essential.

As stated earlier, the various theories should not be seen simply as alternatives. Rather, each of them offers a partial explanation of the process.

## 2.4. Stages of Language Acquisition in the Child:

The acquisition of a child's language is one of the most exciting topics, in a sign that the child has taken his place in society, and is also clear evidence that his mental structure is developing. So, we can say the acquisition of speech is an unproblematic developmental process for the large majority of children, although many of this category have not chance, they born with speech acquisition considerably delayed.

The child goes through the process of acquiring the language with a set of stages, each stage has special characteristics, and these stages divided into two main categories: **The pre-linguistic stage** and **linguistic stage.**

### 2.4.1. The pre-linguistic stage:

It consists of three stages: crying, cooing, and Babbling.

### 2.4.2.1. Stage 1: (0 to 2 Months): Crying

The first stage is characterized by productions, crying was used to covey the basic physiological needs such as: hunger. In addition, the first sounds of a child are described at this stage by emotional involuntarily voices, they are innate sounds that are issued involuntarily by the child. «Psychologists have managed to distinguish types of crying:

  1) Angry cry: The angry cry follows the same sequence as the basic crying

  2) Pained cry: "The cry of pain is sudden from the start and consists of a long cry followed by a long silence" **(Sreeja TD,2018 :563)**. However, **Kess (1993:134)** states that:" the child's development lies as the child interacts with things and people on this environment"

In fact, "crying sounds were also produce when the child in pain, after a couple of months. the crying started diminishing and developed cooing "**(Jamal Azmi ,2014/173).**

### 2.4.2.2. Stage 2: (2 to 4 Months): Cooing

At this stage, the child has an innate tendency to play with sounds, and he/she spends long period of his/her time producing various sounds. However, cooing is the oral expression that explores the production of all possible sounds that human can produce .the period of cooing continued up to the seventh month; long vowel: such as : a; u ; I  and the short vowel such as: am .In addition to , In this stage, child often produce comfort sounds when having

face to face interactions with caregiver , Bolinger (2002) believes that this stage, "infants are reflexive to human sounds by making vowel-like sounds " .

### 2.4.2.3. Stage 3: (5 to 8 Months): Babbling

This stage is characterized by the imitation of sounds and words of adults. However, it included a wider variety in both consonant and vowel. during the babbling period, the child acquired the front consonants "t" and "d" such as: "taa", "daa", "baa", and "mamaaa".

Made within this stage, babbling can be recognized as for forerunner in language development. Therefore, as a linguistic ability, babbling is related to the sort of received language by the infants. However, an important milestone in linguistic is babbling at around 8months of language.

So, we find that babbling stage is an important for building the foundations of language learning for the child.

## 2.4.2. The Linguistic Stage:

**Development of Anatomy and Physiology of The Speech organs:**

Anatomy and physiology most probably have an influence on onset and duration of several developmental stages of speech. The anatomy and physiology of the newborn's speech apparatus is quite different from that of an adult or even of a child of two years of age. The vocal tract is short, with a relatively short pharyngeal cavity. During the reflexive/phonation/ uninterrupted phonation stage the larynx is relatively high and the epiglottis and velum close to each other. The tongue is relatively big and fills the oral space almost completely (see Figure 3.) and the velum (soft palate) hangs down passively, almost touching the tongue and epiglottis. The extrinsic (outer) velum muscles cannot actively lift up the velum yet, since the velum is still located in more upward position than these muscles.

This results in actively lowering the velum instead of raising it, as we find in older infants and adults. In the first months many sounds are produced with the lips closed. For those reasons the air stream goes mainly via the nose and not via the mouth in new borns. This explains the nasality in this stage. They call the infant an obligate nasal breather and an obligate nasal vocalizer.

Two or three months onwards the air stream moves more via the oral cavity, and not only via the nasal cavity. This is probably not due to a more active use of the velum muscles, but to the anatomical growth. Because the tongue and the velum are close together, with the jaw and the tongue in rest position, the air stream between the velum and the tongue makes both articulators vibrate, producing back trill-like or fricative-like sounds. This results in a higher amount of velar fricatives and trills during the cooing/going/one articulatory movements stage **(Prof. Dr. A.E. Baker P36)**

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At the age of four to six months the anatomy of the oral and pharyngeal areas changes again, the mandible grows more downward, giving the tongue more space to move and giving the air the possibility to go through the oral cavity, without causing the tongue or velum to vibrate. In the same period the human (and chimpanzee) larynx descends gradually during infancy, possibly associated with developmental changes of the swallowing mechanism. The descending of the larynx contributes physically to an increased independence between the processes of phonation and articulation for vocalization, mentions also increased neuromotor control of the intercostals muscles at that age and a relatively smaller tongue compared to the oral cavity as aspects contributing to more control of several articulators resulting in different types of vocalizations **(Prof. Dr. A.E. Baker P37)**

For instance, the higher air pressure combined with closed or almost closed lips results often in a bilabial raspberry. Moreover, the tongue can also be protruded between the lips (although infants are able to move the tongue to a fronted position at an earlier age while swallowing), resulting in an interlabial raspberry.
Thus, clear anatomical changes take place in this period and we therefore assume that they are related to the onset of the vocal play/expension/variegated phonation stage.

Around seven months it becomes anatomically and physiologically possible to move the jaw freely up and down. In this period infants starts to chew. If the up down movement is repeated, the result might be babbling; a rhythmic up-and down movement of the jaw,

normally during voicing and the reduplicated babbling/ canonical babbling/babbling stage starts. **(Prof. Dr. A.E. Baker P37)**
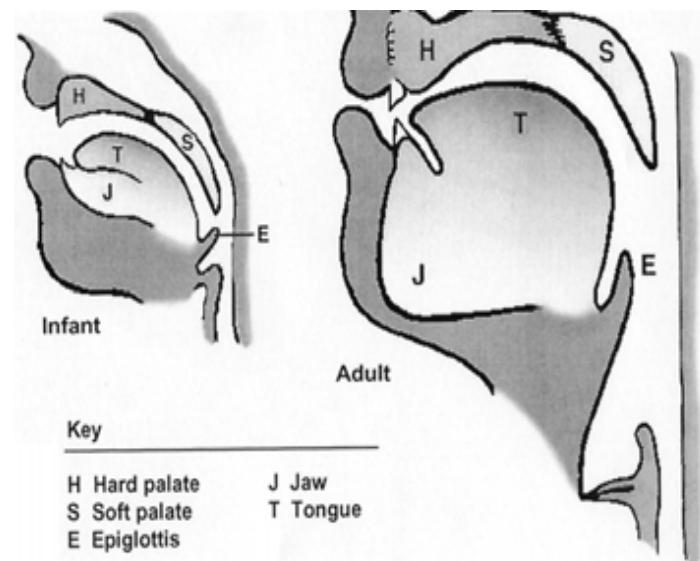


*Figure 2: The cross-section of the vocal tract of a newborn infant and the vocal tract of an adult.*

The phonatory activity of the larynx is the basis of all voice production. Voice is produced when subglottal air pressure forces the vocal folds (cords) apart. As pulmonary air passes through the glottis, the resulting decrease in subglottal air pressure causes the vocal folds to close. The folds remain closed until the build-up of subglottal air pressure once again forces them apart. This entire glottal cycle is repeated several hundred times per second. When it is disrupted by the presence, for example, of nodules on the speaker's vocal folds, the resulting perceptually deviant voice is described as a voice disorder of phonation.

The voice that is produced by the vibratory action of the vocal folds in the larynx is itself altered as it passes through the oral, nasal and pharyngeal resonatory chambers. Defects of or obstructions in any part of this supraglottic resonator (e.g. nasal polyps) can adversely affect the voice that is produced and that is perceived by the listener. (Louise Cummings.2008 P407)

So, The Linguistic stage consists of three stages first words, two words, sentence stage.

### 2.4.3.1 First Word (Holophrastic) Stage:

Typically, this stage extends from the tenth month to the eighteenth month, infants frequently produce the same sounds to refers to the same thing .However, children utterances just one word to convey complicated meaning .for example, child say "I want milk" .In fact, around ten month of age begin to produce recognizable words. These words appear in context that involves meaning. In other words, children are able to comprehend more complicated language than they produce. for example "na:ni" (sleep), "kuli" (eat)," ru:hi"(go out ) .

### 2.4.3.2. Two Words Stage:

In this stage, child stars combining words to produce two words utterances and then began to understand words.so, this stage is a brief between one word and two words which the child produce strings of single words for example: "mama hali:b" , she or he requests his or her mother to get his or her milk.

### 2.4.3.3. Sentence Stage:

At this stage, the child begins producing phrases that contain more than two sentences; the first thing a child learns is the name of things. Children at the age of two generally handle two or three words units. «Being able to hold only few things in the mind at any one time probably leads to the telegraphic sentence that children emit **"(Jonson and Medinnus ,1969: 156)**

Language acquisition in a requirement for a child's developments, as it qualifies him to become an active member in society.

## 2.5.2. Aphasia:

### 2.5.2.1. Definitions:

Aphasia is an acquired disorders that results from damage of the brain to the left cerebral hemisphere that are responsible for language for most people .means therefore that someone can no longer say what he or she wants, these areas are on the left side of the brain, "most of them who have aphasia usually do have a few cognitive problems (such as problems with arithmetic) that are detectable on clinical testing, but most of their brain is still working normally"( lise, and nina dronkers ; 2017, 215) . In other word, aphasia is usually described as

a symbolic processing disorder that involves difficulty formulating and interpreting linguistic code. In addition, aphasia has different types such as broca's aphasia, wernicke's aphasia:

### 2.5.2.2. Broca's Aphasia:

Broca's aphasia takes its name from the French **PAUL BROCA** (1824-1880), Aphasia is a linguistic disorder characterized by loss of speech and language in young and old. It occurs when the brain region responsible for the language known as the broca aphasia ,which is located in the frontal lobe on the left side of the brain .it is one part of the brain for producing speech (tongue, lips, ...etc.) .At the most basic, the patients with Broca's aphasia can speak but very hardly and slowly, shortened speech, since they cannot take the words out, and if they can, they cannot pronounce one or two words like yes or no .Thus, "Broca's aphasia affects speech production rather than speech perception and comprehension .so this aphasia is primarily a production disorder with little effect on comprehension." **(Roellien Bastiatiaanse. 1995 ;18)**
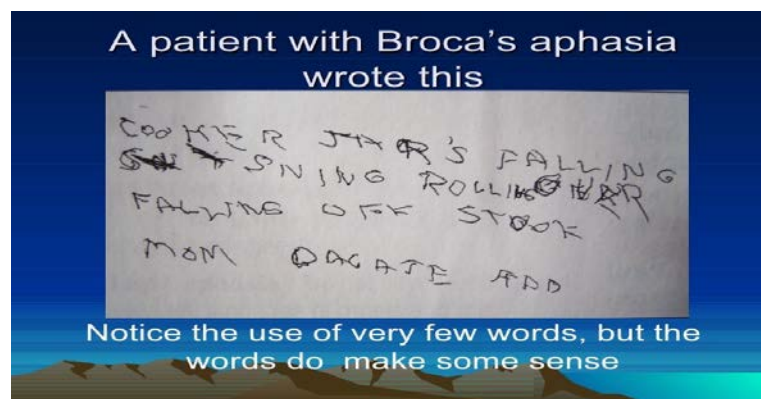


*Figure 3: An Example of hand writing of patient with Broca's aphasia*

The comtemporain medicine research has confirmed that Broca's area is responsible for the main part of language production in human children and adults, probably from the period of the first word productions onwards. The location of Broca's area is in the inferior frontal gyrus of the frontal lobe on the left side of the brain. However, it seems that Broca's area is not involved in vocalizations, as shown by lesion studies in monkeys and humans.

Lesion studies in monkeys have shown that the lateral frontal cortex and primary motor cortex of the precentral gyrus, which is comparable with the Broca's area in humans,

has almost no effect on monkeys' vocalizations. Aphasia patients with severe Broca aphasia (due to lesion of the Broca area) have an almost normal language perception, but the language production is disordered.

These patients can often still produce speech production "ingredients" such as prosody, syllables and phonemes, without a relationship with meaningful words in paraphasias **(Prof. Dr. A.E. Baker- P125)**

**(Paraphasia is the production of unintended syllables, words, or phrases during the effort to speak)**

### 2.5.2.3. Wernicke's Aphasia:

Wernicke's aphasia takes its name from the neuroligistic **carl Wernicke (1848-1905)**, this type of aphasia is characterized as fluent and effortless speech. However, the speech of wernicke's patient can read the text, but cannot understand the meaning of the message. However, "wernicke's aphasia speakers have speech rates similar to neurologically intact speakers, but their speech variety is rather poor, they do not show any articulation or deficits". **(Trofimova maria; 2009, 10)**. So, they fail to convey ideas they have in mind. "In wernicke's aphasia, the lexical repertoire (vocabulary) tends to decrease language –understanding difficulties are evident". (Alfredo ardila;2014,62)



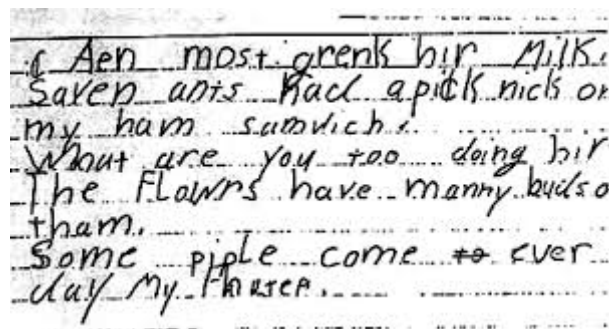*Figure 4: An Example of hand writing of patient with wernicke's aphasia*

Aphasia is a group of linguistic communication disorders related to a neurological injury in centers responsible for language, lead to total or partial loss of language, whether on expressive level, understanding, or both.

## 2.6. Stuttering:

## 2.6.1. Definition:

Is defined as involuntary dysfluency, it is a speech disorder in which sounds, syllables, or words are repeated as speech blocks or prolonged pauses between sounds and words. People who stutters exactly knows what he or she would like to say, but has trouble producing it because of involuntary repetitions, and the flow of their speech by any of these disrupted (e.g. where's my mmmmmmother?). In fact, stuttering begins during the three and ten years while the child acquired speech.

An International classification of diseases (1977) stuttering is defined as a disorder that effects the frequency of speech. However, "stuttering is the break down happening in the flow of communication, stopping by the repetition of sounds, arrhythmia in speaking which is affected by psychological, neurological and physiological factors in a meaningful speaking ". **(Hakan SARI ;2017, 31.32)**. In other word, suffers sometimes avoid particular words, most children who stutter eventually outgrow it. In general, stuttering is often classed as a disorder of childhood, it occurs more in males than females.

According to Weis (2013):

"**Stuttering reflects an underlying problem with speech production. Children, who stutter, know what they want to say, but they have problem saying it. "**

"**Stuttering is disruption in the fluency of verbal expression. which is characterized by audible or silent repetitions, in the utterance of short speech elements, sounds, syllables, and words**". **Wingate (1964.P29)**

Concerning the definitions above, stuttering is one of the faults of speech, children who stutter face difficulties in rhythm, sounds, syllable, and phrases repetition, she/he have a trouble to find the suitable word to communicate and to convey messages in order to express their ideas.

Stuttering can be classified into three subgroups: neurogenic, psychogenic, and development.

The first is derived from brain damage, brain injury, stroke or traumatic origin, and the second it "involves rapid repetition of sounds. It occurs with a history of psychiatric problems following a psychogenic emotional "( **Mahr G , Leith W ;1992, 35)** , and the third one is

noted in children between three and eight years of age ,it occurs at the beginning of words in addition to the secondary behaviors which are more obvious.

Finally, knowing this disorder and educating parents and relatives, whether from family or friends is an important factor in trapping stuttering and helping the child to integrate and live in a society free from harassment and ridicule, the faster intervention, the more treatment is effective.

You must make clear that the language disorders we mentioned earlier have no relation with many studies which called'' **Speaker's errors''** which is a kind of Deviations (conscious or unconscious) from the intended form of the utterance. They are types of errors which may lead to the addition, deletion, or substitution of sounds and morphemes known as "slips of the tongue" or "slips of the brain", and are made in the false starts, pauses and non-fluencies of speech. They can occur at the syntactic, morphological, lexical and phonological levels as a result of the learners (…), speakers very often make speech errors when they are nervous, tired or anxious **(HEMAIDIA Mohamed. 2016, P48)**

## 2.7. Hearing Disability:

The process of communication is a mutual effect between the two parties of the message (the sender and the addressee) in a specific social context, directly or indirectly, and this depends on the auditory apparatus ( receipt sound waves), but this vital process is exposed to many Of the disturbances, especially at the level of hearing, because it is - in our opinion - the axis of communication between members of the same linguistic group, and without hearing, nobody will be able to acquire linguistic sounds.**(HAMIDANI   AISSA ;P195)**

Depending on scientific and anatomical research, the function of the ear is to receive acoustic vibrations (sounds) –as it is aforementioned-and to convert them into signals transmissible by the auditory nerve to specific areas of the brain where they will be analyzed, and the sense of balance (equilibrium) maintained. So, we cannot deny that our perceptual world of sound.

**The anatomy and physiology of the ear (see figure 5):**

Anatomically The human ear, can divided into three parts:

**Outer Ear:**

includes the pinna (visible part) and the external ear canal (auditory canal). It plays a relatively minor role in the hearing process. The auditory canal is a 25 mm long transverse canal; open and closed at its internal end by the eardrum. Sound waves arriving at the external ear are transmitted through the ear canal, and put the tympanic membrane (eardrum) in vibration. This canal serves as an acoustic resonator, or a sound amplifier. generally, the pinna helps the brain identify the sounds originated **(IBID, P 197).**

**Middle Ear:**

Contains three lever-teletype bones called; the ossicles (the hammer (malleus), anvil (incus), and stirrup (stapes).; which are the mechanical link between the eardrum and the inner ear. These ossicles, suspended in a cavity of the skull, transmit the vibrations of the eardrum to a membrane.

The main function of the middle ear is to amplify the vibrating energy which will be transmitted to the inner ear. It is estimated that the presence of the eardrum and the ossicles multiplies by 35 the force of the vibrations which enter the oval window (IBID, P 198)

**Inner Ear:**

It is in the inner ear that the vibrations produced by the sound waves are finally converted into nerve impulses by help the cochlea. This main structure is a membrane filled with liquid. When the bones hit the oval window; the liquid is repelled and starts to vibrate. The cochlear duct contains the organ of CORTI. This last is comprised of inner hair cells that turn the vibrations into electric neural signals, these cells are located near the endings of the auditory nerve. When they are tilted, they stimulate the fibers of the auditory nerve which transmit this information to the brain **(IBID, P 198)**
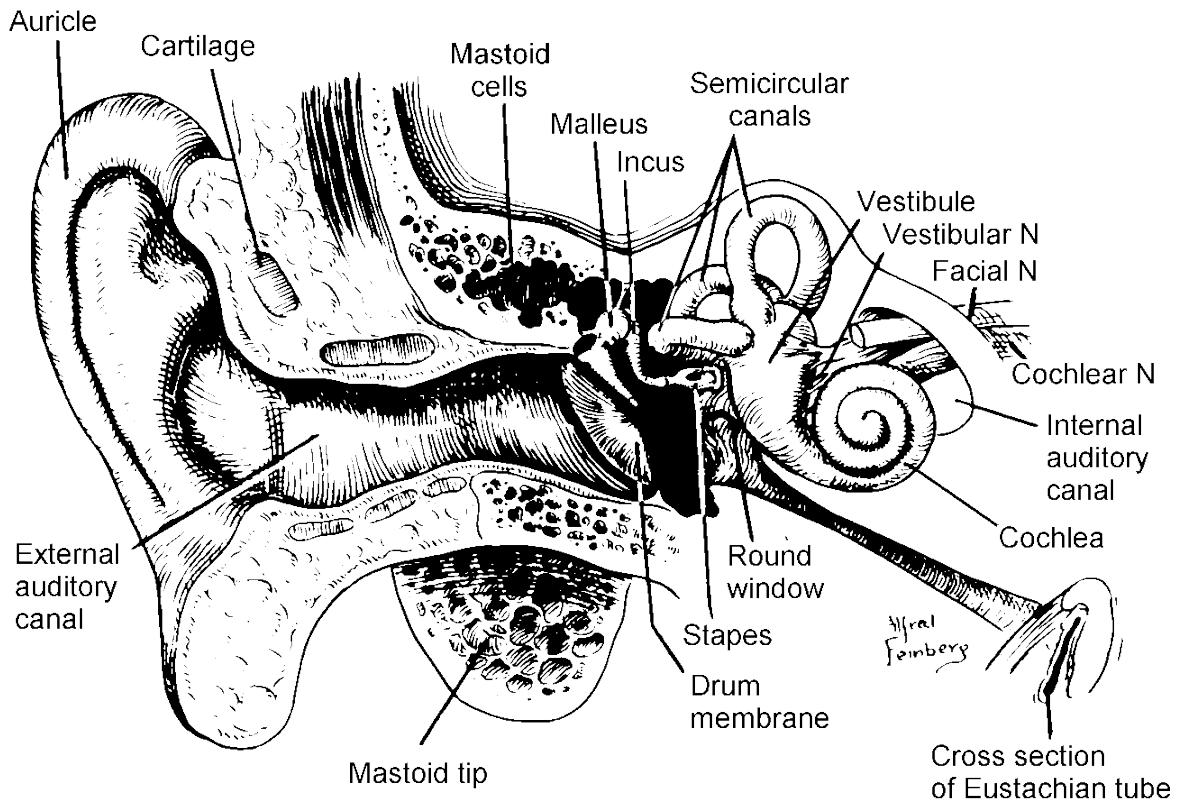
*Figure 5: The anatomy and physiology of the ear*

(The pinna and external auditory canal form the outer ear, which is separated from the middle ear by the tympanic membrane. The middle ear houses three ossicles, the malleus, incus and stapes and is connected to the back of the nose by the Eustachian tube. Together they form the sound conducting mechanism. The inner ear consists of the cochlea which transduces vibration to a nervous impulse and the vestibular labyrinth which houses the organ of balance**). (Hallowell, Davis and S. Richard Silverman (Ed.), (1970). P113)**

The term 'Deaf 'refers to a child who cannot use the sense of hearing functionally and is unable to acquire the natural language. In fact, deaf children are the ones who have lose their hearing either due to genetic or other causes, including lack of oxygen during childbirth, or a sudden and dramatic increase in the temperature of the child. Hearing loss for the deaf is like living with a glass wall around him, a child who is a deaf can see people talking but she /he cannot understand what they are saying. However, "deafness is a kind of physical disability which may be with the infant at birth or may occur at a later time or if it happens before the child has the opportunity to acquire language, it is called prelingual deafness" **(Mohammad ali salmani ,2008; 16)**. "Most children are born into a world with language

input for these children, language acquisition begins at birth and even before. Children who are deaf or hard of hearing enter a world where access to language is much less certain." **(matthen L.Hall , wgatte c .hall , and noami K, caselli, 2019; 02)**

At the most basic, "not all deaf communicators are "deaf". In fact, only 1 in 1,000 people with hearing loss is profoundly deaf, most have some level of hearing, but it is sufficiently poor in quality that they have to learn deaf strategies for communicating with others. Hearing loss is measured for all individuals as differences from a normal ability to defect sounds relative to standards established by American National Standards Institute (1989). for example, if a phone is ringing a person with mild hearing less is likely to notice is after some time. A person with severe hearing loss can hear it only with the help of assistive listing devices, and a person with a profound hearing loss may not hear the phone even with assistive listing devices". **(Braine Goss, 2003; 02).**

As a matter of fact, "Hearing impairment, Hearing loss , is a partial or total inability to hear ,it is one of the most common medical conditions presenting to physicians .However, Hearing impairment people are not  able to communication well due to some disabilities and the communication is the main problem among them ,because they have their own independent  vocabularies and their own grammatical structure."( **R.A.D.K. Rupasingle ,D.C.R. ailapperrun ;2014, 45)** .On the whole, "the hearing impairment imposed the isolation of the child at the start of speech processing ,so that at that time he does not communicate with his community ,he cannot understand the world around them , it is difficult for him to express his feelings, his emotions, and emotional . Cognitive, development and biological needs because hearing impairment affects the child language in all aspects of language development. A hearing-impaired child will become dumb if he does not have effective training opportunities".( **Hamidani Aissa; 2019.20)**

Finally, education is important in the child's life, especially if the child has a hearing impairment, so the organization should rely a program to teach this kind of children, and must provide means for the success of his/her academic and social path.

## 2.8. Causes of Language Disorders:

There are multiple causes, directly or indirectly, to one or more forms of language disturbances, where disturbances can be linked to psychological and other causes, physical or sensory.

Psychological and educational studies indicate that the causes of language disorders differ according to age and most of these reasons are generally due to either organic causes such as injury to one part of speech and breathing and the nervous system and these in turn are due to birth factors or to reasons of an educational psychological nature due to the family and factors of social upbringing and as for psychological factors such as emotions and psychological trauma, we can classify the reasons into three categories: organic factors, psychological factors, and socializing factors.

### 2.8.1. Organic and Neurological Causes:

When we talk about organic factors in determining their responsibility for linguistic disorders, we mean two main parts: the physiological organ system that includes the respiratory system, the speech and speech apparatus, and the biological organic system of the nervous system. In fact, the integrity of the organic devices responsible for issuing and pronouncing voices is an essential condition of the individual's safety from linguistic disturbances and these devices include both the respiratory system, the speech and speech device represented in the throat and other speech devices such as the tongue, lips, teeth, and the auditory device represented in the ear. Studies have confirmed that an imbalance in these organs it may lead to speech and speech disorders, such as the following organic defects:

- Hearing deficiency that makes the child unable to capture the correct sounds of speech

- Injury to the respiratory system that causes a sudden stop in breathing and therefore the individual cannot speak as the phrases are very short due to frequent changes in breathing.

- Wounding the organs of the speech system, such as the throat, nose, lips, and tongue.

As for the second organic part, it is the biological system represented in the nervous system. This device is considered the basis of cognitive processes. These processes are accomplished through the fully organized function of the neurons that are formed in what is called the brain. Nervous causes mean those causes related to the nervous system and the damage or injury to that organ, before or after birth. The nervous system is responsible for many behaviors, including language. Therefore, any defect that affects the second half of this device must lead to problems in Linguistic Understanding, below are examples of some neurological causes:

- Any damage or bleeding that affects the nervous system

- What affects the verbal centers of the young from damage or injury before, during or after birth, and the effects of this appear in children with cerebral palsy, where they suffer from difficulty in moving the jaws, lips and tongue.

### 2.8.2. Psychological Causes:

It means the causes related to psychological conflicts or family circumstances and the methods of family upbringing, especially those that are based on corporal punishment and among the most important reasons:

Psychological conflicts and neurological diseases due to the presence of internal conflicts in personal relationships and the emergence of various symptoms, including anxiety, fear, psychological tension, loss of self-confidence, academic delay, and factors of fear and anxiety play an important role in perpetuating these disorders .In fact, A child, when he notices that his method of expression and speech differs from the others, will feel difficult to adapt to his environment, especially if it occurs early. However, The child's sense of deficiency and emotional deprivation, neglect and insatiable psychological and emotional needs, lack of knowledge of the right from wrong, and learning of unacceptable behavior leads to the child being affected significantly.

-Family conditions, the most important of which are:

**Erroneous education**: violence and corporal punishment, severe parents 'fear for the child, parents' anxiety, urgency, and pressure on children to speak without regard to maturity according to their individual differences.

The family broke up due to the incompatibility between the two parents and the permanent quarrels between them .Among the most important manifestations of psychological causes: stuttering, and excessive speed of speech .At the most basic, The weak self-confidence and the inability to assert oneself and family disintegration, and the child's loss of care, which causes him to lose the ability to depend on himself and always depend on others and this is what drives him to lose confidence in himself. The family plays the important role in this area, and the mother plays the special role because it is the first addressee for the child. "All of these psychological factors that the child is exposed to can be an obstacle to his speech. The presence of any mental disorder in the child will affect his development and

language, which leads to psychological symptoms such as his speech disorders and sometimes leads to his unwillingness to communicate with others".

### 2.8.3. Social and Environmental Causes:

The environment in which a child is raised is one of the important things in his life, so the better this environment is, it will be the catalyst for the development of the child's language, and the family represents the first emotional bond for the child, and it is by far the most important factor in the process of socialization, and speech diseases may occur when you do not help him This environment is to develop his language. The child is by his nature a quick acquisition of knowledge, memorization of words, and the ability to imitate his surroundings. Once he hears conversations about him, he makes him learn little by little. This is a sensitive stage for the Child.

Children who grow up in family circles do not find it difficult to speak, as family deprivation in turn and living in places where appropriate social upbringing are not available may be reflected in poor language yields or delayed speech emergence or language disturbances. Also, the isolation that the child is exposed to, especially at the beginning of his career the linguist may adversely affect his linguistic score.

## Conclusion:

This chapter has critically discussed the various theories of language acquisition and their positive and negative aspects, and also the pre-linguistic and the linguistic stage of language acquisition for children. This chapter combined language acquisition and the biology of human with language pathology and the difficulties that children faces in their acquisition of language almost impossible.

Language disorders may occur in children with other developmental problems like hearing loss, and learning disabilities. A language disorder may also be caused by damage to the central nervous system, which is called Aphasia. Also, children face some difficulties in rhythm, sound, phrase repetition, and faults of speech like Stuttering

For most infants and children, language develops naturally beginning at birth, so for a correct acquisition of language, a child must be healthy, have the physical ability to form speech and must be able to see; understand, and remember.

# CHAPTER

# THREE

# Chapter III   : Research Methodology (the Results of the study)

Introduction

3.1. The Research designs

3.2. Research instruments

3.3. The sample

4.3. Data collection

4.1. Discussion of the questionnaire results

*"Research is an ongoing activity which is never totally completed*

*because each piece of research raises additional questions for more research."*

*Seliger H.W. & Shohamy E. (2000: 2)*

## Introduction

No research will be accomplished without a field investigation. The present chapter describes the methods used in the investigation of children's speech delay and disorder, the aim of this study as a whole is to provide a clear and complete representation of the steps and the methods that the research has followed .The present chapter highlights the methodology applied in this research paper. It presents the research design, research instruments, the sample, the questionnaire, and its analysis. It also presents the findings together with discussions of the final results of the study.

## 3.1. The Research Design

It is said that if you fail to plan, you are planning to fail, any research needs to be well planned in order to reach the desired results. This can be accessed through the wise selection of the research design. The function of a research design is to assure that the evidence obtained enables us to efficiently address the research problem logically and as unambiguously as possible. Our goal is to highlight the way in which a child acquires a language. Furthermore, descriptive research designs help provide answers related to a particular research problem. The research aims to know the main role of society in acquiring the child's first language. It also explores the way in which they influence the development of language in a positive or negative way. A descriptive study cannot decisively ascertain answers, but it is used to obtain information concerning the current status of phenomena and to describe "what exists" concerning variables or circumstances in a situation. Hence, this research design is the most appropriate in this case of study.

## 3.2. Research Instruments

In this research paper, a questionnaire has been used a research instruments for collecting data, This questionnaire contains in total Fourteen questions about the topic besides questions concerning the sample.in order to collect data ,to obtain accurate outcomes and sufficient information from the participants we have used a qualitative method by designing a questionnaire , the former was presented to the participants electronically via Google forms .the choice of such electronic means can be justified by the distributions ease of the questionnaire .in addition, this form assures that the participants will not miss any question in case the answer is required .the Google form helps the research in grouping the final data which will be transformed automatically to an Excel file.

## 3.3. The Sample

This questionnaire was presented to participants electronically via Google Forms. The form of the questionnaire was distributed via social media, mainly Facebook and Emails. Participants from around Algeria took part in filling the form, yet it took approximately one months to collect only 107 completed forms, because we still lack the initiative and the motivation to participate in studies as such, though it takes no more than a couple of minutes. The majority of the participants were females with a percentage of 80.4% while males participated with a percentage of 19.6%. However, the questionnaire includes 14 questions, in which there are yes/no questions and the students are asked to justify their answers. The others questions are open-ended questions, the students, here, are free to answer according to their experience. The results are illustrated as follows:

**Question 1: what is your Gender?**

| Participants | Number | Percentage |
|---|---|---|
| Females | 88 | 80,4% |
| Males | 19 | 19.6% |
| Total | 107 | 100 |

*Table 1: The gender of the respondents*
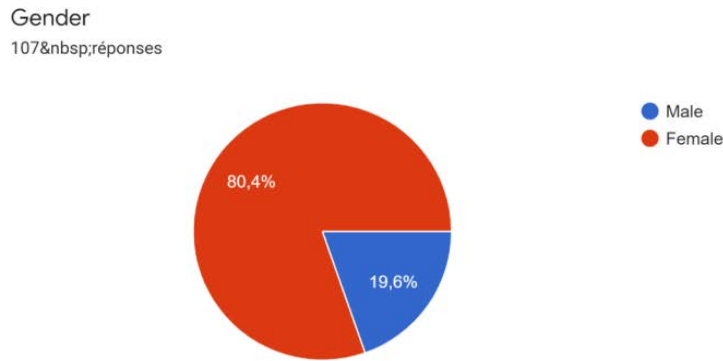
**Figure 6: The gender of the respondents**

In the table 01 and the figure above, we can notice that the majority of the participants are female constituting the total of (80, 4%). Therefore, males constitute a small minority with a number of 19 students which represents (19, 6%) of the whole sample.

*Question 2:* **Participants' age**

| Age | Number | percentage |
|---|---|---|
| 20-26 | 87 | 82,2% |
| 26-30 | 10 | 9,3% |
| 30-35 | 09 | 8.4% |

*Table 2: Participants' age of the respondents*
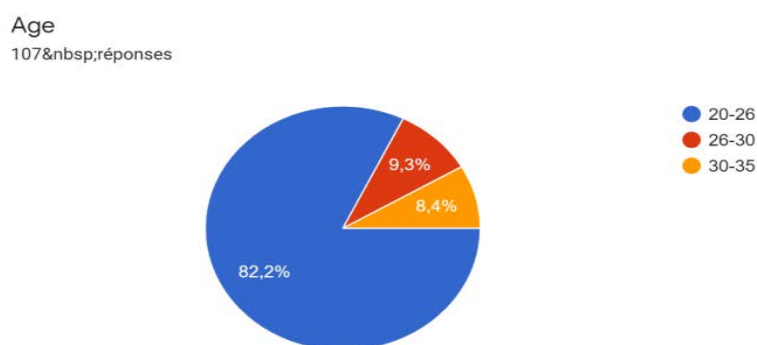


*Figure 7: Participants' age of the respondents*

The table 2 and the figure show that the students' age ranges between 20 to 35 years old. Nearly, all of them are between 20 and 26 years old making up (82, 2%) of the total. Then, equal to (9, 3%) are aged between 26 and 30 years old. After that, in the last position, only (8, 4%) are between 30 and 35 years old.

**Question *3:* What is the level of each student?**

The participant who had the kindness to answer our questionnaire most of them were Master students (93, 5%), while PHD students (6.5%). the figure 03 gives more details about the participants.

| Levels | Number | Percentages |
|--------|--------|-------------|
| Master | 97 | 93,5% |
| PHD | 10 | 6.5% |
| Total | 107 | 100 |

*Table 3: Students levels of study*

Educational Level
107 réponses

93,5%

● Master
● PHD
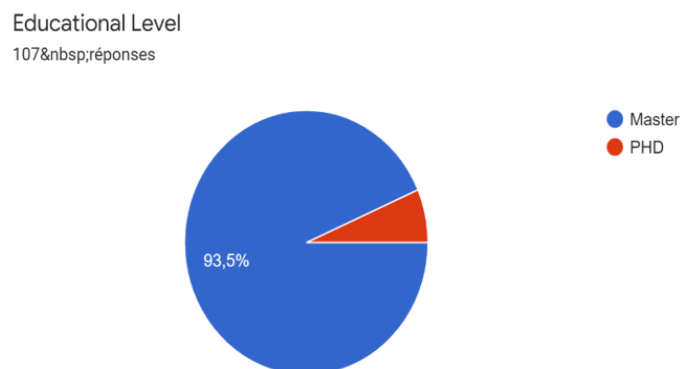
*Figure 8: Students levels of study*

**Question 4: Do you think that learning language is easier for children than for adults?**

| Options | Number | Percentage |
|---------|--------|------------|
| Yes | 93 | 86% |
| No | 14 | 14% |
| Total | 107 | 100% |

*Table 4: difficulties in learning language for children*

As it is shown in the table above the majority of the participant (86%) answered that it is easy for children to learn language than for adults. In contrary, 14% of the students said that learning language for children it is too difficult.

-Do you think that learning language is easier for children than for adults?
107 réponses

● Yes
● No

14%

86%
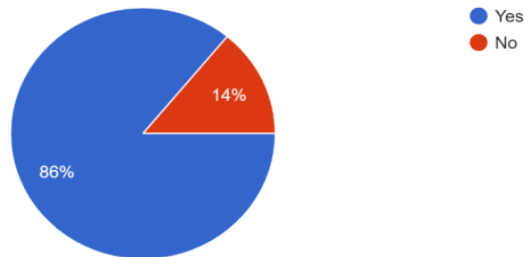
*Figure 9: difficulties in learning language for children*

**Question 5: in your opinion, is there any relationship between the human mind and language acquisition?**

| Options | Number | percentage |
|---------|--------|------------|
| **Yes** | *98* | *91,5%* |
| **No** | *08* | *8.5%* |
| **Total** | *107* | *100%* |

*Table 5: The human mind and language acquisition*

In your opinion, is there any relationship between the human mind and language acquisition?
106 réponses

● Yes
● No

8,5%

91,5%
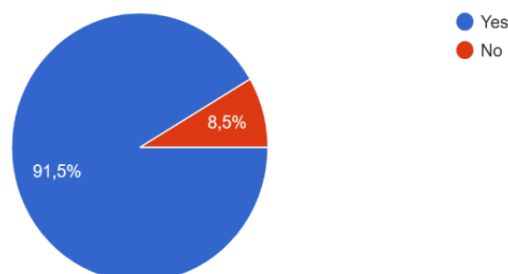
*Figure 10: The human mind and language acquisition*

The answers are evident since (91, 5%) of the students agree that there are strong relationships between human mind and language acquisition. However, (8, 5%) do not agree.

**Question 6: Language usually develops along with the development of the mind:**

| Options | Number | Percentage |
|---|---|---|
| Agree | 60 | 55,7% |
| Strongly agree | 39 | 38,7% |
| Disagree | 05 | 5,3% |
| Strongly disagree | 02 | 1,8% |
| Total | 106 | 100 |

*Table 6: development children with language problems*
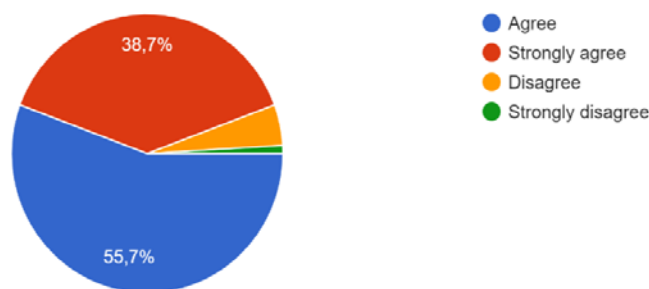


*Figure 11: development children with language problems*

As we see most of students (55.7%) agree that the language develops, whereas (38%) of them also says that language usually develops of the mind, however just few students (05.3%) and (1, 8) answer negatively to this question.

**Question 7: Do you think that children:**

| Options | *Numbers* | *percentage* |
|---|---|---|
| **Are born with the ability to acquire language** | *61* | *57,9%* |
| **Learn language by imitation** | *41* | *37,4%* |
| **No idea** | *05* | *4,7%* |
| **Total** | *107* | *100* |

*Table 7: language between imitation and innate phenomenon*

Do you think that children:

107 réponses



- ● Are born with the ability to acquire language
- ● Learn language by imitation
- ● No idea
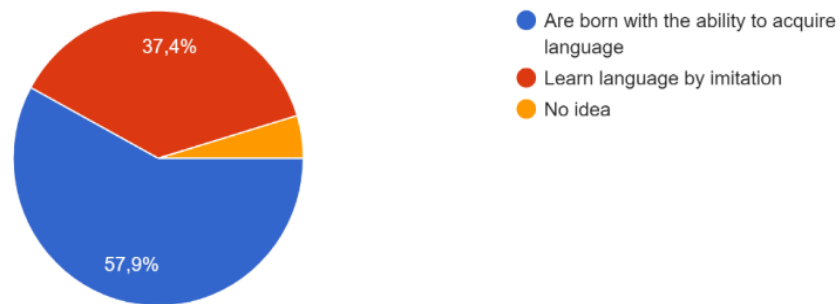
*Figure 12: language between imitation and innate phenomenon*

The table07 and the figure above presented that (57, 9%) of the respondents who totally agree that children are born with the ability to acquire language, (37, 4%) say that children learn language by imitation, while few (4, 7%) said that have not any idea.

### Question 8: is Speech disorders due to

This question also receives 104 responses out of 107. The aim of this question is to know what the main reason behind speech disorders.

| Options | Number | Percentage |
|---|---|---|
| **Psychological processes** | 60 | 56,7% |
| **Emotional processes** | 20 | 18,3% |
| **Hereditary processes** | 14 | 8,7% |
| **Organic processes** | 10 | 16,3% |
| **Total** | 104 | 100 |

*Table 8: The causes behind speech disorders in the child*

Is Speech disorders due to:

104 réponses



- Psychological processes
- Emotional processes
- Hereditary processes
- Organic processes

8,7%

18,3%

16,3%

56,7%
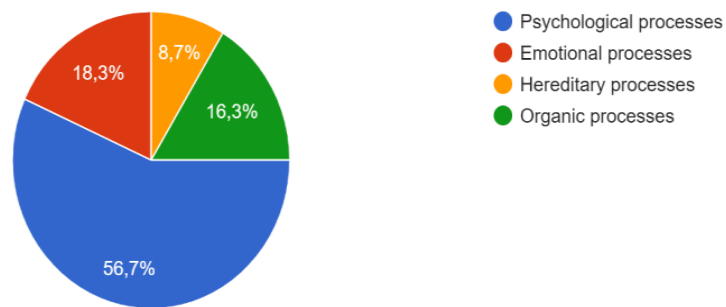
*Figure 13: The causes behind speech disorders in the child*

Most of students (56.7%) said that speech disorders due to psychological processes, whereas (18,3%)of them said that speech disorders due to emotional processes, while , (16,3%) say that language disorder due to hereditary processes .however, just few students (08.7%) said that the main reason behind it is organic processes.

### Question 9: Do you know what is aphasia?

The aim behind this question is to see if students have knowledge about aphasia or not.

| Options | Number | percentage |
|---------|--------|------------|
| **Yes** | **72** | **67%** |
| **No** | **34** | **33%** |
| **Total** | **106** | **100** |

*Table 9: The answers about the term aphasia*

This table showed that 67% of students said that they know the term aphasia. In contrary, 33% of them said no.

Do you know what is aphasia?
106 réponses
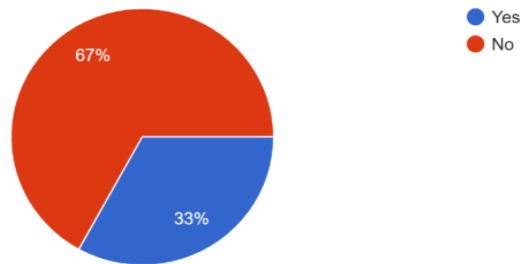


*Figure 14: The answers about the term aphasia*

**If yes, what is mean?**

The majority of student (67%) said no, while the others (33. %) said that aphasia:

-Is one of the pathologies it is a language disorder that results in brain damage.

-It is inability of understanding or producing a speech because of brain damage.

-lose of the ability to understand or express speech or an idea and this is due to a damage in the brain, i think.

-It is the inability to communicate, speak, read or comprehend a language. It has two types: Broca's (inability of the production of the language) and Wrenick's (inability to comprehend a language).

-Aphasia is a communication disorder that occurs due to brain damage in one or more areas that control language

-It is a speech disorder caused by disorders in the brain where a person loses the ability to speak in whole or in part.

**Question 10: Do you know someone who suffers from stuttering?**

The purpose of this question is to know the appropriate answers which given by the students.

| The answers | Number | Percentage |
|:-----------:|:------:|:----------:|
| Yes | 54 | 50% |
| No | 52 | 50% |
| Total | 106 | 100 |

*Table 10: Known someone who has stuttering*

Do you know someone who suffers from stuttering?
106 réponses
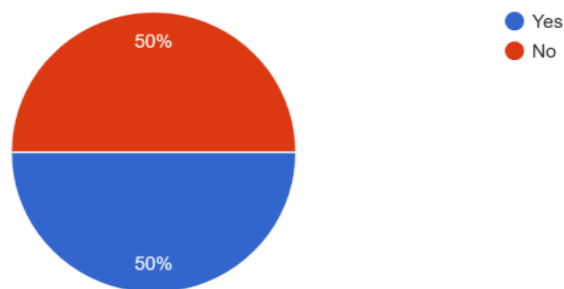


*Figure 15: Known someone who has stuttering*

In the figure number 10, half of the whole numbers of students, represented in the percentage of (50%) do not know someone who suffers with stuttering. The other number of them (50%) knew this kind of patients.

**Question 11: If you face someone who has aphasia what do you do to him?**

The purpose of this question is to know what the students do if they face someone who has aphasia and he/she need a help.

| The answers | Number | Percentage |
|:-----------:|:------:|:----------:|
| Leave him/her | 03 | 2,9% |
| Help him/her | 63 | 63,1% |
| No idea | 37 | 34% |
| Total | 103 | 100 |

*Table 11: Behaviors of students toward aphasic person*

If you face someone who has aphasia what do you do to him?
103 réponses



- Leave him/her
- Help him/her
- No ideas
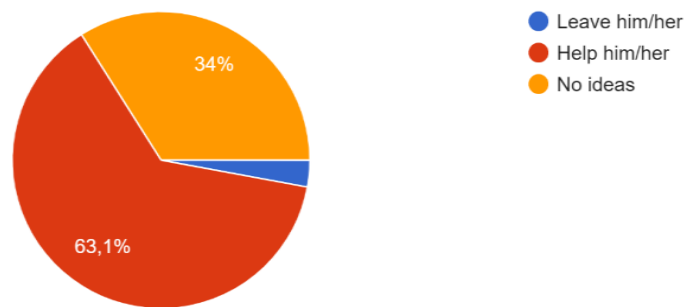
*Figure 16: Behaviors of students toward aphasic person*

The majority of students said that they help aphasic person if they face him/her. Whereas the others said that have not any idea. Few of them said that they live him/her.

**Question 12: Do you read about stuttering in books, internet, and magazine ……...etc.?**

This question aims to know how many students read about the term stuttering and to see if they are aware about it or not.

| The answers | Number | Percentage |
|---|---|---|
| Once | 28 | 27,1% |
| Twice | 11 | 12,1% |
| Never | 68 | 60,7% |
| Total | 107 | 100 |

*Table 12: Reading about stuttering*

Do you read about stuttering in books, internet, magazine .........etc.?
107 réponses

- Once
- Twice
- Never

60,7%

12,1%    27,1%
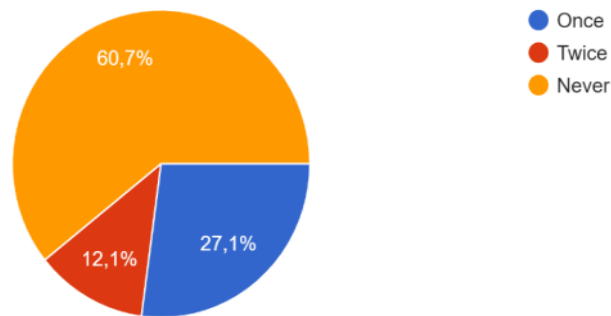
*Figure 17: Reading about stuttering*

Majority of learners (60, 7%) said that they have not read about it yet. Students who read about it once represent (27.1%) of the number of students. The others (12.1%) said that they read about stuttering just twice.

**Question 13: Do you think that children with language disorders can be cured?**

In this question we wanted to see if these kids can be cured in our country or no.

| Options | Number | Percentage |
|---|---|---|
| **Yes** | **93** | **87,7%** |
| **No** | **13** | **12,3%** |
| **Total** | **106** | **100** |

*Table 13: treatment of children who have language disorders*

- Do you think that children with language disorders can be cured?
106 réponses

- Yes
- No

12,3%

87,7%
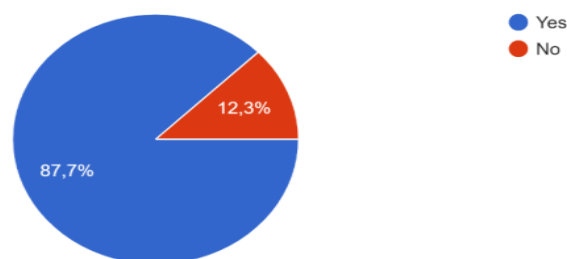
*Figure 18: treatment of children who have language disorders*

As we see about 87, 7% of students find that children need to be cured in our society. In the opposite, 12, 3% of students they find that there was no need to treat this category of children.

**Question 14: Do you think that a medical center in your state provides adequate health and psychological care for these kinds of children?**

The aim behind this question is to see if students interact with future of these kinds of children or not.

| Options | Number | percentage |
|---------|--------|------------|
| **Yes** | **48** | **44,2%** |
| **No** | **56** | **55,8%** |
| **Total** | **104** | **100** |

*Table 14: The role of medical centers in helping children to overcome language disorders*

Do you think that medical centers in your state provides adequate health and psychological care for these kinds of children?

104 réponses
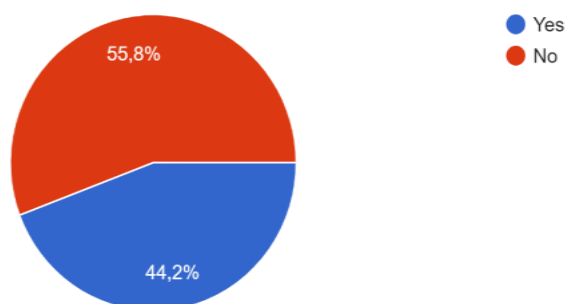


*Figure 19: The role of medical centers in helping children to overcome language disorders*

This question intended to know if students are interested or not, most of them (55, 8%) are not satisfied with these medical centers for these kinds of children. The others (44, 2%) are agree.

*If No, what are your suggestions for helping these children?*

The aim behind the last question is to suggested some solutions for making the life of these children good and even their future. The majority of students agreed in changing the program and conditioning it also creating other branches in the school. Moreover, they suggested listening to them, encouraging them to participate in public speaking, theater or anything like

that and never blame them or ignore them .However, The Ministry of Education should pay attention to allocating teaching programs and special support for these children - Educating the community about good handling of this group -Psychiatrists must be allocated for their care in health centers. In addition, they suggested providing private institutions to care for these children. And provide specialists to take care of them and provide them with the correct treatment. Finally, they want more care from government and the help of their families.

## 4.3. Data Collection:

For the data analyses, we assembled data collected from different sources. Examination of data collected took an amount of time, and then we started categorizing answers which in turn were interpreted to make sense of the meaning of the data.

## 4.1. Discussion of The Questionnaire Results:

The questionnaire involves 107 participants, all of them are students, there are 88 girls, and 19 boys whose participated in this investigation .the girls represent the majority (80, 4%) in contrast the boys (19, 6%), but this inequalities rate of sexes do not represent any problem to the research .whereas, the participants were divided into three main levels of study .the research focus on investigate the master's students more than the others, in fact that the masters have more knowledge about language then the others in order to their levels of study. However, the differences of participants whether in gender or levels of study do not represents any obstruction to the investigation, the important is to test how much the students aware about children with language development problems. The questions of the investigation are putting in order to prepare the informant to the main questions .the first one is concerning with the difficulties in learning language for children, asking the participants' if he/she has difficult in learning language for children or not, there answers divided into yes/no questions, the majority said that the children have difficulties in learning language, (14) of them said no.

Whereas, in asking them if there is any relationship between the human mind and language acquisition, most of the participants' said yes (98), as well as very few of them (08) said that there is no relationship between the human mind and language acquisition .In the form, participants' are requested to give their opinions about development children with language problems .Most of the answers agreed, while the others not agreed.

Subjects of the survey are asked to see if children are born with the ability to acquire language or they learn language by imitation. A huge percentage of the participants' (57,9%) concerned that they born to acquire language, others go with the idea that children acquire language by imitation (37,4%), while the rest of the participants' (4,7%) said that they have no ideas. According to the responses received on a question about the causes behind speech disorders in the child, the results show that the majority (56, 7%) of the participants said that speech disorders due to psychological processes, whereas (18, 3%) of them said it is due to emotional processes, while (16, 3%) says that language disorders due to hereditary, just few of them (8, 7%) said that the main reasons behind it is organic processes.

The questionnaire is building by the question of what is aphasia?  .this question aims to see the knowledge of the participants' about aphasia ,the findings showed that the majority (67%) of the participants' are know the term aphasia , in contrast to the others whose ignoring this term .The findings revealed that the half are known someone who has stuttering ,while the rest said no. Far from this question, the researcher wants to test the reaction and behavior of participants' towards the aphasia person ,by asking them what they will do if they face someone with aphasia ,the participants' have the interest to meet this kind of children, and they ready to help them according to their answers. Another question which asked to the participants' is if they read about this kind of illness un different ways(books, internet, magazines) , so regarding this questions, the students who do not do about it at all represent the rate of (60,7%) and (27,1%) of them read about this term.

According to the analysis, the participants predict that the children with language disorders can be cured, the majority of them agreed (87, 7%), while few of them not agreed (12,3%)

The last question in the questionnaire was the role of medical centers in helping these kinds of children by suggesting possible solutions they see to fit for this kind of them, the results of this question show that students have different views, this question uncovers the reality of the participants' mentalities. However, every participant agrees on the importance of medical centers for helping these children.

**Conclusion***:*

This chapter is concerned with getting real data about students' opinions concerning language disorder in the child in addition to the information that was gathered through the analysis of

the tool used in this work that is students' questionnaire. Where the researchers selected different graphs by comments and suggestions which are related to the sample's point of view.

# General Conclusion

# General Conclusion

This research work is devoted to the investigation of language acquisition according to biological linguistics. It aims to explore and describe the relation between the brain and language acquisition disorders. This study has shown that children who are facing retardation and difficulties in speech production are affected by various psychological and socioemotional problems.

This research work is initiated with the theoretical review of language, language acquisition and its stages, and children's speech delay and disorders such as aphasia, stuttering, hearing loss, learning disabilities, and the causes behind them. This paperwork also included a practical part where a questionnaire was used as a tool of investigation.

The data of this study were gathered from different participants with different opinions about the process of acquiring language and language disorders. And it was discovered that many students have wide knowledge about the subject of investigation. Although, most of them never read about it in books, magazines or social media. This research also presented some solutions to help the process of the treatment for children with language disorders.

In order to help children with language disorders to recover, there must be some protocols and specialized programs for their learning process. And they must have the necessary help by talking to them, listening to them, and encouraging them to speak in public.

Since this present study was confined to analyze the relationship between language acquisition and human brain, it is recommended for conducting further research to highlight some micro-reasons of delays and disorders in children's speech. Furthermore, dealing with other issues concerning psycholinguistics is also interesting. Researchers have to tackle more angles and through various perspectives the learning disabilities in school.

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# APPENDICES

## Students' Questionnaire

**Dear student**

    **You are kindly requested to participate as a volunteer in a research study conducted by a second year English Master Students. This questionnaire is designed to gather information about the Phenomenon of Language Acquisition, according to the Biological Linguistic, especially for the Child. We are interested in giving us your opinion about the topic.**

    **Thank you for your cooperation**.

**Gender**:   female  ☐                   Male  ☐

**Age:**

20-26  ☐

26-30  ☐

30-35  ☐

**Educational Level:**

PHD  ☐

Master  ☐

**1-Do you think that learning language is easier for children than for adults?**

    Yes  ☐          No  ☐

**2- . In your opinion, is there any relationship between the human mind and language acquisition?**

Yes  ☐                    No  ☐

**3-Language usually develops along with the development of the mind:**

- Agree  ☐

- Strongly agree  ☐

- Disagree  ☐

- Strongly disagree  ☐

**4- Children:**

a- Are born with the ability to acquire language  ☐

b- Learn language by imitation  ☐

c- No idea  ☐

**5- Is Speech disorders due to:**

Psychological processes  ☐

Emotional    processes  ☐

Hereditary   processes  ☐

Organic        processes  ☐

**6- Do you know what is aphasia?**

Yes  ☐                    No  ☐

**If yes, what is it? (In few words)**

…………………………………………………………………………………………

…………………………………………………………………………………………

**7- Do you know someone who suffers from stuttering?**

Yes ☐                                    No ☐

**8- If you face someone who has aphasia what do you do to him?**

Leave him/her ☐           Help him/her ☐           No ideas
☐

**9- Do you read about stuttering in books, internet, magazine ……...etc.?**

Once ☐             Twice ☐             Never ☐

**10- Can children with language disorders be cured?**

Yes ☐      No ☐

**11- Do you think that medical centers in your state provide adequate health and psychological care for these kinds of children?**

Yes ☐                                    No ☐

**If No, what are your suggestions for helping these children?**

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