

People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research



University of Tlemcen
Faculty of Letters and Languages
Department of English

**Language Development in Children with Autism
Spectrum Disorder: Case Study of Two Mental
Disabilities Centers in Tlemcen**

Dissertation Submitted to the Department of English as a Partial
Fulfilment of the Requirements for the Degree of Master in
Language Studies (LS)

Presented by :
Ms. Yasmine HEBBALI

Supervised by :
Dr. Nouredine MOUHADJER

BOARD OF EXAMINERS

Dr. Mohammed KHELADI **Chairperson**

Dr. Nouredine MOUHADJER **Supervisor**

Dr. Fatiha BELMERABET **Co-Supervisor**

Dr. Souad HAMIDI **Examiner**

Academic Year: 2018-2019

Dedications

To my parents

*For loving me unconditionally, supporting me throughout my
life, and giving me strength to reach my dreams*

Acknowledgments

I would like to express my deepest appreciation to my teacher and supervisor Dr. Nouredine MOUHADJER for his wide knowledge, advice, patience, and invaluable support.

I am extremely grateful to my teacher and co-supervisor Dr. Fatiha BELMERABET who generously accepted to correct this humble work.

My gratitude further extends to my teacher Dr. Mohammed KHELADI for his priceless help and advice.

Deepest gratitude for my teachers Dr. Mohammed KHELADI and Dr. Souad HAMIDI for accepting and devoting some of their time in reading and providing interesting comments on this work.

I owe my gratitude to my teacher Dr. Lakhdar BOURDIME for his valuable time, advice, suggestions and constant support.

A heartfelt gratitude to all my teachers in the English department for their considerable efforts and assistance during all these five years.

I would like to extend my sincere thanks to Boumedién MELKI, the head of DSAS service, for his approval, orientation, and patience.

It would be a great pleasure in acknowledging every individual who played a decisive role in this study. This research would not have been accomplished without their precious cooperation.

Abstract

Language is the only source of interaction between human beings. It can be either verbal or non-verbal, and also it is divided into two types: receptive and expressive. For the children with autism spectrum disorder, none of these types exists; that is, they are linguistically impaired. The present study is an attempt to cover how the autistic children are taught in order to develop their language as well as the difficulties that are encountered when teaching those children, and also what strategies followed to handle the situation. The investigation is a case study of those who are in charge of speech, communication, and language; that is, Speech-Language Pathologists (SLPs) of Tlemcen province. It relies on a sample of two SLPs. Moreover, data were collected qualitatively using two research instruments: a structured interview directed to the SLPs and a structured classroom observation. The main results revealed that both SLPs misunderstand the methods of teaching autistic children because they have inadequate knowledge about autism, and thus face serious difficulties when dealing with them. Consequently, this affects autistic children negatively.

Table of Contents

Dedications.....	I
Acknowledgments.....	II
Abstract.....	III
Table of Contents.....	IV
List of Acronyms and Abbreviations.....	VII
List of Phonetic Symbols.....	IV
List of Tables.....	X
List of Figures.....	XI
General Introduction.....	1
Chapter One: Literature Review	
1.1 Introduction.....	4
1.2 Language.....	4
1.3 Language Components.....	5
1.3.1 Language Contents.....	5
1.3.2 Language Form.....	5
1.3.3 Language Use.....	6
1.4 Language Development in Normal Children.....	6
1.4.1 Milestones of Language Development.....	7
1.4.2 Theories of Language Development.....	10
1.4.2.1 Behaviorism Theory.....	10
1.4.2.2 Innateness Theory.....	11
1.4.2.3 Cognitive Theory.....	11
1.4.2.4 Social Interaction Theory.....	11
1.5 Autism	12
1.5.1 History of Autism.....	12
1.5.2 Causes of Autism.....	14

1.5.3 Symptoms of Autism.....	14
1.5.3.1 Socialization	15
1.5.3.2 Sensory Functioning	15
1.5.3.3 Language	15
1.5.3.4 Cognitive Function.....	16
1.5.4 Diagnosis	16
1.5.5 Language Development in Autistic Children.....	17
1.5.5.1 Abnormal Speech Sounds Development.....	19
1.5.5.2 Abnormal Receptive and Expressive Language Development.....	19
1.5.5.3 Abnormal Social Communication Development.....	19
1.5.6 Methods of Developing Language in Children with Autism.....	20
1.5.6.1 ABA.....	20
1.5.6.1.1 Discrete Trial Training (DTT).....	21
1.5.6.1.2 Pivotal Response Training (PRT).....	21
1.5.6.1.3 Verbal Behavior (VB).....	22
1.5.6.1.4 Picture Exchange Communication System (PECS).....	22
1.5.6.2 TEACCH.....	23
1.6 Conclusion.....	24
 Chapter Two: Research Design, Data Analysis, and Implications	
2.1 Introduction	26
2.2 Research Methodology.....	26
2.3 The Setting of the Study.....	28
2.4 The Sample Population.....	30
2.5 Research Instruments.....	31
2.5.1 Interview.....	31
2.5.2 Observation.....	32
1.6 Data Analysis	34

2.6.1 Speech- Language Therapists’ Interview Analysis.....	34
2.6.2 Classroom Observation Analysis.....	38
2.7 Data Interpretation and Discussion of the Main Results.....	39
2.8 Suggestions and Recommendations.....	41
2.9 Conclusion.....	43
General Conclusion.....	45
Bibliography.....	48

Appendices

Appendix A.....	54
Appendix B.....	55
Appendix C.....	56
Appendix D.....	57
Appendix E.....	58
Appendix F.....	59
Appendix G.....	60
Appendix H.....	62
Appendix I.....	64
Appendix J.....	65

List of Acronyms and Abbreviation

- AAT:** Association of Autism Tlemcen
- ABA:** Applied Behavior Analysis
- ABC:** Antecedent – Behavior – Consequence
- ADI-R:** the Autism Diagnosis Interview- Revised
- ADOS:** Autism Diagnosis Observation Schedule
- APA:** American Psychiatric Association
- ASD:** Autism Spectrum Disorder
- ASQ:** Ages and Stages Questionnaires
- CDD:** Childhood Disintegrative Disorder
- CSBS:** Communication and Symbolic Behavior Scale
- DSAS:** Director of Social Activity and Solidarity
- DSMMD:** Diagnostic and Statistical Manual of Mental Disorder
- DTT:** Discreet Trial Training
- DVM:** Discrete Video Modeling
- LAD:** Language Acquisition Device
- M-Chat:** Modified Checklist for Autism in Toddlers
- PCCMD:** Psycho pedagogical Center for Children with Mental Disabilities
- PDD-NOS:** Pervasive Developmental Disorder – Not Otherwise Specified
- PECS:** Picture Exchange Communication System
- PEDS:** Parent’s Evaluation of Development Status
- PRT:** Pivotal Response Training
- SLCN:** Speech, Language, and Communication Need

SLP: Speech-Language Pathologist

STAT: Screening Tools for Autism Rating Scale

TEACCH: Treatment and Education for Autistic and related Communication
handicapped Children

VB: Verbal Behavior

List of Phonetic Symbols

English Transcription	Arabic Letters
[ʔ]	أ
[b]	ب
[ts]	ت
[θ]	ث
[ʒ]	ج
[ħ]	ح
[ʁ]	خ
[d]	د
[ð]	ذ
[r]	ر
[z]	ز
[s]	س
[ʃ]	ش
[ʂ]	ص
[d̪]	ض
[ʈ]	ط
[ðˤ]	ظ
[ʕ]	ع
[ɣ]	غ
[f]	ف
[q]	ق
[k]	ك
[l]	ل
[m]	م
[n]	ن
[h]	ه
[w]	و
[j]	ي

List of Tables

Table1.1. Speech and Language Development Milestones (National institutes of Health)	8
Table1.2. Positive Vs. Negative Reinforcement and Punishment.....	20
Table2.1. Pedagogical Employers.....	29
Table2. 2. Collecting Data Schedule	33

List of Figures

Figure1.1. The Intersection of Language Components.....	6
Figure1.2. The ABC Principle.....	23
Figure.2.1. Types of case study.....	28

General Introduction

General Introduction

General Introduction

Nowadays, caring for people with special needs is considered a real challenge for the entire world because providing a lot of services is required in order to help them integrate into a normal life with others. Autism is one of the special categories that deemed to be inscrutable for several psychologists, educators, and even philosophers. In this respect, many studies have been concerned with the autistic child, because of the continuously growing number of children diagnosed with autism, in order to know the treatment methods and the possibility of devising educational therapeutic programs to help parents and supervisors to modify their children's behavior. The problem faced by those children is the inability to communicate with others that results from language defect. In other words, the fundamental deficiency of autism is language development disorder.

The three first years of the child's life are regarded as the most important years of his/her life affecting language development. These years are known as the period of the growth and maturity of the brain in which the child acquires all the skills of the mother tongue. However, it is not the case for the autistic children. Therefore, the specialists resort to artificial methods and techniques with the purpose of developing their language, thereby causing a lot of difficulties faced by those specialists.

Indeed, this research is an attempt to explore and describe the extent to which specialists meet the needs of children with autism. In other words, this work could contribute to the current special pedagogical reform by settling three goals. First, it aims to investigate the techniques followed in educating children on the autism spectrum disorder. In addition, it seeks to outline the difficulties that encounter speech-language pathologists in educating those special children. Moreover, it tries to identify the solutions recognized to reduce or overcome those challenges.

Consequently, the researcher strives to answer the following questions:

1. Are there specific methods to develop autistic children's language?
2. What are the challenges faced by speech-language pathologists when dealing with autistic children?

General Introduction

3. How to overcome these difficulties?

The aforementioned questions led to formulate the following hypotheses:

1. ABA and TEACCH are the methods of developing language in children with autism.
2. There are many difficulties experienced by speech-language pathologists when dealing with autistic children such as: anger, rejecting, and/or insisting on not following the instructions.
3. Reinforcement and punishment are two basic solutions to overcome these challenges.

Therefore, for the sake of checking the truthfulness of the hypotheses mentioned above, the researcher designed an exploratory-descriptive case study research dealing with two speech-language pathologists in two centers of Tlemcen province. This case study will collect qualitative data relying on two research instruments: a structured interview with speech-language pathologists, and a structured classroom observation.

The bulk of this research is divided into two chapters. The first chapter reviews a relevant literature on normal and abnormal language development in children with autism, providing theories and definitions, in addition to techniques and strategies to develop autistic children's language.

The second chapter is concerned with the practical part of the conducted research. It is devoted to the description of the methodology utilized in the process of data collection, the setting, the sample, and the research instruments, in addition to the analysis and the discussion of the collected data. Furthermore, it seeks to answer the research questions either by confirming or infirming the research hypotheses. Finally, some suggestions and recommendations to promote language to children with autism are provided.

Chapter One: Literature Review

1.1 Introduction

Educating children with autism is such a very challenging process that requires a great effort and patience. In addition, the therapists should have an in-depth knowledge about the condition and all the ways of managing it, so that they can help those children progressing their language and communication.

This chapter is devoted to reviewing a relevant literature which aims at providing information on the aforementioned research questions. It tries to clarify the concept of language then goes through language development in normal children in order to understand language development in children with autism. After that, reviewing the history of autism, its causes and symptoms. Later, it deals with the language development in autistic children and the techniques to enhance the process.

1.2 Language

Language is a humanistic feature that makes the human being different from others beings. People use language to express their thoughts, feelings, desires, or demands using words, gestures, or signs. Several definitions of language have been proposed over time. Although they vary in the wording, they are generally similar in their meaning. According to Henry sweet (1900:1) language is:

The expression of ideas by means of speech sounds. In other words, every sentence or word by which we express our ideas has certain definite form of its own by virtue of the sounds of which it is made up, and has a more or less definite meaning.

Furthermore, Bloch. B and Trager. G (1942) consider language as “a system of arbitrary symbols by means of which a social group cooperates”. Besides, Cambridge International Dictionary of English (1995) offers the following definition: “language is a system of communication consisting of a set of small parts and a set of rules which decide the ways in which these parts can be combined to produce messages that have meaning”

Language is generally divided into two categories: receptive and expressive. Receptive language is the ability to understand language. While expressive language, refers to the ability to produce language.

1.3 Language Components

Bloom and Lahey (1978) divided language into three major components: form, content, and use, which are further broken down into: phonology, morphology, syntax, semantics, and pragmatics. In other words, language consists of some aspects of content or meaning that is coded or represented by linguistic form for some purposes or use.

1.3.1 Language Content

According to Bloom (1980:117) “language content is the meaning or semantics of messages”. Speakers express ideas about objects and actions, as well as ideas about relationships such as possession or cause and effect. Sometimes, these meanings can be expressed by a single word. Other times, these meanings are expressed by group of words. The content of language has to do with what people know about objects, relation between objects, and events. (Bloom,1980)

1.3.2 Language Form

The form of language is known by language structure. “It involves three linguistic systems: phonology, morphology, and syntax” (Bloom, 1980:117). Phonology is the study of the sounds we use to make words. Morphology has to do with the internal organization of words. Morpheme is the smallest linguistic unit within a word that can carry a meaning. It is divided into two types: free morphemes and bound morphemes. Free morphemes are those words which can stand alone with a specific meaning, while bound morphemes cannot stand alone with a meaning. Syntax is the last language structure which refers to the linguistic convention for organizing word order. Basically, syntax is the formal term of grammar. For example, in English we say ‘red wall’; in Arabic we reverse the

proper order and we say ‘ha:ʔitun ʔahmar’. The meaning is the same, but the rules governing the word order are different for the two languages.

1.3.3 Language Use

According to Bloom and Lahey (1978) the use of language is the area of pragmatics. That is, the understanding and the use of language in social context. It helps people to decide what to say to whom, how to say it, and when to say it.

To sum up, effective language requires an interaction of content (semantics), form (phonology, morphology, syntax), and use (pragmatics). Speakers think of something to say with the best words to say it (content), and put those words into sentences (form) that address their goal (use) given the nature of speaking situation (use).

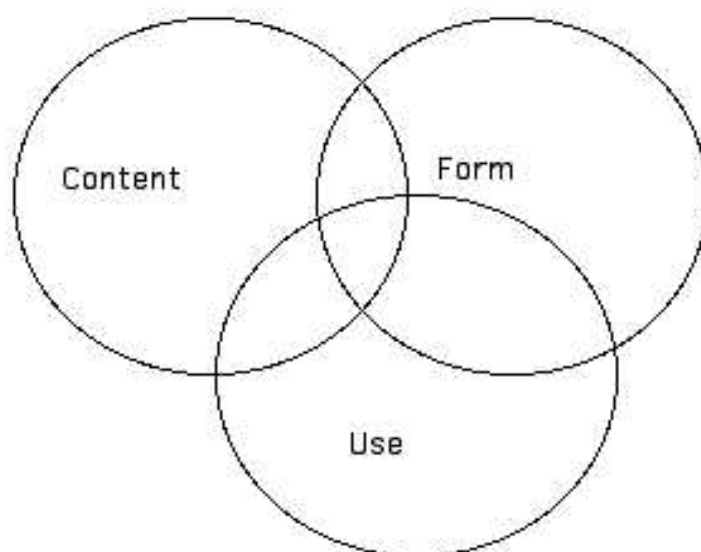


Figure1.1. The Intersection of Language Components.

1.4 Language development in Normal Children

The term ‘language development’ is commonly used among psychologists and educators when referring to the phenomenon of child language acquisition; that is the process by which the child acquires the ability to perceive language than express him/herself using words and sentences to communicate. The developmental process

of language is the gradual and progressive integration of content, form, and use. Children develop their receptive and expressive language chronologically at a very rapid pace, and it is known that girls' language development is faster than that of boys. Thus, the process of language development has been called 'mysterious' (Gleitman & Wanner, 1982) and 'magic' (Bloom, 1983)

1.4.1 Milestones of Language Development

Lightbown & Spada (2006) use the term 'developmental stage', or 'developmental sequence' for the order in which certain features of a language are acquired. The stages of language development are universal among humans. However, the age and the pace at which a child reaches each milestone of language development vary greatly among children. Thus, language development in an individual child must be compared with norms rather than with other individual children.

Table1.1. Speech and Language Development Milestones (National institutes of Health)

Milestones related to speech and language	
Birth to 5months	<ul style="list-style-type: none"> Reacts to loud sounds Turns head toward a sound source Watches your face when you speak Vocalizes pleasure and displeasure sounds (laughs, giggles, cries, or fusses) Makes noise when talked to
6-11 months	<ul style="list-style-type: none"> Babbles (says "ba-ba-ba" or "ma-ma-ma") Tries to communicate by actions or gestures Tries to repeat your sounds
12-17 months	<ul style="list-style-type: none"> Follows simple directions accompanied by gestures Answers simple questions nonverbally Points to objects, pictures, and family members Says two to three words to label a person or object (pronunciation may not be clear) Tries to imitate simple words
18-23 months	<ul style="list-style-type: none"> Follows simple commands without gestures Points to simple body parts such as "nose" Understands simple verbs such as "eat," "sleep" Correctly pronounces most vowels Says 8 to 10 words (pronunciation may still be unclear) Asks for common foods by name Makes animal sounds such as "moo" Starting to combine words such as "more milk"
2-3 years	<ul style="list-style-type: none"> Knows about 50 words at 24 months Knows some spatial concepts such as "in," "on" Knows pronouns

	<p>Knows descriptive words such as "big," "happy"</p> <p>Speech is becoming more accurate but may still leave off ending sounds</p> <p>Strangers may not be able to understand much of what is said</p> <p>Answers simple questions</p> <p>Speaks in two to three word phrases</p> <p>Uses question inflection to ask for something (e.g., "My ball?")</p> <p>Begins to use plurals such as "shoes" or "socks"</p>
3-4 years	<p>Identifies colors</p> <p>Uses most speech sounds but may distort some of the more difficult sounds.</p> <p>Strangers are able to understand much of what is said</p> <p>Able to describe the use of objects such as "fork," "car," etc.</p> <p>Expresses ideas and feelings rather than just talking about the world around him or her</p> <p>Answers simple questions</p> <p>Repeats sentences</p>
4-5 years	<p>Understands spatial concepts such as "behind," "next to"</p> <p>Understands complex questions</p> <p>Says about 200 - 300 different words</p> <p>Describes how to do things such as painting a picture</p> <p>Defines words</p> <p>Lists items that belong in a category such as animals, vehicles, etc.</p> <p>Answers "why" questions</p>
5 years	<p>Understands more than 2,000 words</p>

	<p>Understands time sequences (what happened first, second, third, etc.)</p> <p>Engages in conversation</p> <p>Sentences can be 8 or more words in length</p> <p>Describes objects</p> <p>Uses imagination to create stories</p>
--	--

1.4.2 Theories of Language Development

Several theories and approaches have emerged over the years to study and analyze the process of language acquisition. The main schools of thought, which provide theoretical paradigms in guiding the course of language development, are behaviorism theory, innateness theory, cognitive theory, and interaction/input theory.

1.4.2.1 Behaviorism Theory

The behaviourist psychologists developed their theories while carrying out a series of experiments on animals. They observed that rats or birds, for example, could be taught to perform various tasks by encouraging habit-forming. Researchers rewarded desirable behavior (positive reinforcement). Undesirable behavior was simply not rewarded (negative reinforcement).

The behaviourist B. F. Skinner then proposed this theory as an explanation for language acquisition in humans. In *Verbal Behaviour* (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.

(Cited in Lowe and Graham, 1998:68)

Skinner suggested that a child imitates the language of its parents. Successful attempts are rewarded because an adult who recognizes a word spoken by a child

will praise the child and/or give it what it is asking for. Successful utterances are therefore reinforced while unsuccessful ones are forgotten.

1.4.2.2 Innateness Theory

Noam Chomsky published a criticism of the behaviourist theory in 1957. Chomsky claims that children are born with a Language Acquisition Device (LAD) in their brains. That is, they are born with natural ability to organize the laws of language. According to this theory, when the young child is exposed to a language, their LAD makes it possible for them to set parameters and deduce the grammatical principles, because the principles are innate (Bigge and Shermis, 1998).

1.4.2.3 Cognitive Theory

This theory is proposed by Jean Piaget in 1936. He theorized that language is one of many human mental or cognitive activities. Piaget's view of how children's minds work and develop has been enormously influential, particularly in educational theory. His particular insight was the role of maturation in children's increasing capacity to understand their world, they cannot undertake certain tasks until they are psychologically mature enough to do so (Wood, 1998).

1.4.2.4 Social Interaction Theory

In contrast to the work of Chomsky, more recent theorists have stressed the importance of language input children receive from their surroundings. Lev Vygotsky (1978) is one of social interaction theorists. Vygotsky's theory stresses the fundamental role of social interaction in the development of cognition as he believed strongly that society plays a central role in the process of 'making meaning'. He argued: "learning is a necessary and universal aspect of the process of developing culturally organized, specifically human psychological function" (1978: 90).

1.5 Autism

Autism has been defined by many researchers and psychologists throughout the past years, many definitions can be cited. According to Gillberg (1992) autism is a behavioral crisis resulted from multiple causes and often accompanied by low intelligence and abnormality in social interaction and communication. (Cited in Suha Ahmed, 2002). Osterling (1994) is another one who defines autism as that disorder which includes shortness of emotional communication, delayed in the verbal communication development associated with the form and content of speech, echolalia¹, in addition to stereotyped movement and sounds and insistence on rituals without interruption with the existence of violent responses to any change. (Cited in Suha Ahmed, 2002). Catherine & Sarah (2006: 1) stated that: “autism is a syndrome that emerges in the first three years of life and is defined by a pattern of qualitative abnormalities in reciprocal social interaction, communication, and repetitive interests and behaviors”

From the aforementioned definitions we can say that autism is a developmental disorder that appears in the first three years of the child’s life in which it affects all of linguistic, cognitive, and social aspects with repetitive behaviors, and thus it affect his or her communication with others and also his or her ability of learning.

1.5.1 History of Autism

The term ‘autism’ appeared recently; however its beginning goes back to 1943 in which it called the attention of a large number of specialists and researchers. Studies have shown that there were people who suffered from autism long time ago before that date, with many stories in the ancient literature about individuals who appeared to be autistic.

The psychiatrist, Joan Mark Gaspard Itard, who is specialized in ear diseases and the education of children with special needs, wrote about the first child infected

¹ Echolalia is the repetition of other people’s words or sounds

with this disorder, named Viktor, who was nicknamed 'the wild child of Aveyron'. The cause of the disease was that his family abandoned him as a young child in French forests where he lived alone for several years without being cared by anyone. It was clear in his behavior that he was not able to interact socially with those around him due to his suffering in language delay.

.In 1943, the American child psychiatrist Leo Kanner published a paper describing eleven children who were highly intelligent but displayed a strong 'desire of aloneness' and an 'anxiously obsessive desire for the maintenance of sameness'. As a result, Kanner viewed autism as profound emotional disturbance that does not affect cognition. He named the condition as 'early infantile autism'.

In keeping with Kanner perspective, the second edition of the DSM (1952) defined autism as a psychiatric condition.

In 1967, the psychologist Bruno Bettelheim popularized the theory that 'refrigerator mothers' as he named them caused autism by not loving their children. The concept of 'refrigerator mothers' was disapproved as research showed that autism had biological underpinning and is rooted in the brain development.

The 3rd edition of DSM, published in 1980, described autism as 'pervasive developmental disorder' distinct from schizophrenia as it has its own separate diagnosis. The DSM-III defined three essential criteria for autism: a lack of interest of people, severe impairments in communication, and bizarre responses to the environment, which developed in the first 30 months of life.

In 1987, the DSM-III was revised; significantly altering the autism criteria, it expanded the concept of autism to 'pervasive developmental disorder- not otherwise specified' (PDD-NOS), and dropping the requirement for the onset before 30 months.

The 4th edition of DSM released in 1994 and revised in 2000 categorized autism as a 'spectrum'. This version listed five conditions with distinct features: autism, PDD-NOS, Asperger's disorder, childhood disintegrative disorder (CDD), and Rett syndrome.

Throughout the 1990s, researchers hoped to identify genes that contribute to autism. After the Human Genome Project was completed in 2003, many studies

tried to zero in on a list of ‘autism genes.’ They found hundreds, but could not link any exclusively to autism. It became clear that finding genetic underpinnings and corresponding treatments for the five conditions specified in the DSM-IV would not be possible. Experts decided it would be best to characterize autism as an all-inclusive diagnosis, ranging from mild to severe.

In 2013, the 5th edition of DSM introduced the concept “Autism Spectrum Disorder” or (ASD) that includes autistic disorder, Asperger’s syndrome, and PDD-NOS. It is characterized by two groups of features that appear in early childhood: ‘persistent impairment in reciprocal social communication and social interaction’ and “restricted, repetitive patterns of behavior”. Childhood disintegrative disorder and Rett syndrome were removed from the autism category.

1.5.2 Causes of Autism

Autism is considered one of the most complex disorders as it affects children’s behavior and their ability to communicate and learn. Therefore, many scientists have differed about what causes autism. Some researchers clarified that it is not yet possible to determine the factors of autism, and there is still controversy so far and they could not detect a reason or a theory that emphasizes the existence of this disorder.

1.5.3 Symptoms of Autism

Signs and symptoms of autism spectrum disorder are often noticeable as early as infancy (Scheuermann & Webber, 2002). According to American Psychiatric Association ‘APA (2000), the first indicators fall into four broad areas:

- Socialization
- Sensory functioning
- Language
- Cognitive functioning

1.5.3.1 Socialization

Differences in social interaction are often seen at very early age in children with autism. Thus, children with ASD often exhibit different facial expressions or lack interest in object from infancy (Baranek, 1999). For instance, a child with autism may not smile when cooed to, or may smile or laugh when there is no environmental cue to do so.

1.5.3.2 Sensory Functioning

Young children with ASD frequently have sensory differences. Atypical sensory responses may occur with any of the senses: visually, auditory, tactile, olfactory, and/or taste. (Goin & Myers, 2006). For example, some children with autism are bothered by bright light; others would seem to be deaf when their names are called. Many children with autism show a preference to specific thing such as: one type of food. Atypical sensory preference may also be tied to self stimulation. Self stimulatory behaviors in children with autism are usually repetitive. From a very early age children with autism act stereotypically, they may rock, twirl object, and flap their hands. (APA, 2000). Each child with autism has his or her own stereotypic behavior.

1.5.3.3 Language

Frequently young children with ASD use their unique behavioral responses to communicate. Approximately 50% of autistic children never develop their expressive language (Gleason, 2005). They do not use language to socialize and facilitate having their needs met. Although these children's expressive language is impaired, receptive language is often thought to be better developed. Children may demonstrate the ability to use sounds and words but they might make it in an odd fashion (Scheuermann & Webber, 2002). Some other children demonstrate echolalia; that is, they repeat what others say. For example:

A (normal person): how are you?

B (autistic child with echolalia): how are you?

Here, the autistic child repeat what has been asked instead of providing an answer, and thus, this is echolalia.

1.5.3.4 Cognitive function

In early infancy, cognitive functioning is associated with language, social, and motor development. Hence, if a child is impaired in at least one of the mentioned areas, there is strong reason that cognitive development is impaired as well.

1.5.4 Diagnosis

The symptoms of ASD usually manifest in early childhood. Research has found that autism can sometimes be detected at 18 months. Speech and language delays are the first concerns of most parents of children that lead them to visit the specialist. To make ASD diagnosis, professionals need to assess the child's social interaction, communication, play, and other behaviors through interviewing parents as well as observing and talking to the child. By 24months, a diagnosis by an experienced professional can be considered very reliable.

Assessment for an autistic child is multidisciplinary process and may include many professionals; speech-language pathologist or (SLP) is one of them. An SLP gathers information about communication development. It includes speech (using sounds to form words), receptive, and expressive language. If the autistic child is not verbal, the SLP tries to find out some other ways for him or her to communicate. Whereas for verbal children with ASD, the SLP assesses the information about pragmatic language; that is, the ability to use socially appropriate language and non-verbal cues for different situations.

There are several different developmental screening tools that may be administered by professionals. These include:

- Ages and Stages Questionnaires (ASQ)
- Communication and Symbolic Behavior Scales (CSBS)
- Parent's Evaluation of Development Status (PEDS)
- Modified Checklist for Autism in Toddlers (M-CHAT)
- Screening Tools for Autism in Toddlers and Young Children (STAT)

- The Childhood Autism Rating Scale (CARS)
- The Autism Diagnostic Interview- Revised (ADI-R)
- Autism Diagnostic Observation schedule (ADOS)

1.5.5 Language Development in Autistic Children

A failure to develop language is one of the earliest signs of autism. Children with autism generally show impairments in both the comprehensive and the production of language. Although the causes of problems with language development in autistic children are unknown, many researchers believe that the difficulties result from a variety of conditions which occur before, during, or after birth affecting brain development. Language development in those children varies depending upon the intellectual and social development of the individual. Extant evidence has identified three common deficits in the language development in those children: early language delays (Howlin, 2003; Weismer, Lord, Esler, 2010; Hudry, Leadbitter, Temple, Slonims, McConachie et al, 2010), atypical language production (Eigsti, Bennetto, Dadlani, 2007; Roberts, 2014), and pragmatic difficulties (McCann, Peppé, Gibbon, O'Hare, Rutherford, 2007; Shriberg, McSweeny, Klin, Cohen, Volkmar, 2001).

The language development of children with ASD is also characterized by several atypical language features such as: echolalia, use of jargon, and varying intonation. (Eigsti, de Marchena, Schuh, Kelley, 2011; Eigsti, Bennetto, Dadlani, 2007).

The echolalia refers to the imitation and repetition from others' speech, and it can be classified into three types according to Roberts (2014):

- Exact echolalia: here the autistic child repeats exactly and right after what he hears.
 - Delayed echolalia: it can be defined as echoing of a phrase after some delay or lapse of time (Simon, 1975); that is, those children who repeat for example their favorite movie or song scripts.
 - Mitigated or modified echolalia: it refers to any change in echoed emission for communicative purposes; it can be exact or delayed echolalia. For

example, pronouns changing in the repetition: what are you doing? And the child repeats: what am I doing?

Research has shown that echolalia can serve a communicative strategy for autistic children as a language acquisition technique to help them initiate or maintain conversations.

Jargon is another characteristic of language development of children with autism, in which they produce nonsense words. It serves a specific role in language acquisition and development of children on the spectrum (Eigsti, Bennetto L, Dadlani, 2007). Many autistic children use jargon as a means of maintaining conversations or expressing their needs (ibid) that is considered difficult to decipher into a meaningful conversation.

In addition to the unusual language patterns described above, atypical production of supra-segmental features such as: accent, rhythm, stress, and intonation, have also been reported in individuals with autism (McCann, Peppé, Gibbon, O'Hare, Rutherford 2007; Diehl, Bennetto, Watson, Gunlogson, McDonough, 2008). Typically, those who are diagnosed with autism embody some atypical supra-segmental features, such as: inappropriate speech volume, flat or sing song intonation (Shriberg, Paul, McSweeny, Klin, Cohen, Volkmar, 2001).

However, each individual with autism is unique; that is, they do not share the same features. Each individual has his/her own way of echolalia, his/her own way using jargon, and/or his/her own way of supra-segmental features.

Children with autism may show early deficits in speech, language, and communication. Thus, they are classified of those children who have speech, language, and communication needs (SLCN). According to APA (2000) speech, language, and communication needs are split into three main areas:

- Difficulties in developing speech sounds.
- Difficulties in developing receptive and expressive language.
- Difficulties in developing social communication skills.

1.5.5.1 Abnormal Speech Sounds Development

Children with autism face a problem in the articulation of speech sounds. The latter can be totally absent in those children. Therefore, they cannot build up words and speaking fluently without hesitating.

1.5.5.2 Abnormal Receptive and Expressive Language Development

By language, we mean both understanding (receptive language) and talking (expressive language). Unfortunately, autistic children cannot enjoy these abilities. Most individuals with autism have both receptive and expressive language problems (Hudry, Leadbitter, Temple *et al*, 2010).

Autistic children have receptive language disorder; that is, they have difficulties in understanding what have been said to them. The symptoms appear when the child does not seem to listen when people are spoken to, he/ she demonstrates a lack of interest in things, or when he/she fails in following verbal instructions. These symptoms begin from the age of three and vary from one autistic child to another. Generally, receptive language goes along with expressive language. Children with a receptive language disorder also have an expressive language disorder, which means they have trouble using spoken language. We may find autistic children express their needs using their own way which is represented in stereotyped behaviors, and each autistic child has his/her own way to express him/herself.

1.5.5.3 Abnormal social communication development

We mean by communication the way in which language is used to interact with others. Children with autism may not have the chance to experience this ability. Abnormal social communication development in autistic children is used to define pragmatic development deficit. “Pragmatics concerns the practical knowledge that is necessary to use and interpret language appropriately for social and real-world contexts in which utterances are made” (Walenski, Tager-Flusberg, & Ullman, 2006:176). “Pragmatics encompasses both verbal and non-verbal aspects

of communication” (ibid). However, children who are diagnosed with autism can communicate neither verbally nor non-verbally. This later means that autistic individual cannot use gestures, and facial expressions.

1.5.6 Methods of developing language in children with autism

There are many different ways to educate children on the autism spectrum disorder. ABA and TEACCH are two famous effective methods that develop language of autistic children.

1.5.6.1 ABA

ABA is a short term for ‘Applied behavior Analysis’. It is a technique that is used in school, home, or clinics. The field of behavior analysis has a long history with the study of language development. B.F. Skinner, one of the pioneers of modern behaviorism, wrote an entire book around the topic ‘verbal behavior’ which sparked significant debates in the field of psychology and continues to provide fertile ground for treatment of language related behavioral issues.

Therefore, ABA is considered a teaching method for autistic children because it tends to increase the desired behavior or decrease the undesired one through reinforcement or punishment respectively. Reinforcement is the opposite of punishment, and there are two types for each one: positive and negative. The table below clarifies each concept.

Table1.2. Positive Vs. Negative Reinforcement and Punishment

	Reinforcement	punishment
Positive	Something is <i>added</i> to <i>increase</i> the likelihood of a behavior.	Something is <i>added</i> to <i>decrease</i> the likelihood of a behavior.
Negative	Something is <i>removed</i> to <i>increase</i> the likelihood of a behavior.	Something is <i>removed</i> to <i>decrease</i> the likelihood of a behavior

ABA is almost always implemented one-on-one; that is one autistic child and one therapist. Therefore, different skills can be taught to the autistic child such as: imitation, receptive language, expressive language, and grammar. (Smith, 2002). Imitation can occur when the therapist for example claps his/her hands and tells the child to do like him/her, the child will then have to follow. Another skill that ABA works on is receptive language; for example, the therapist picks up a ball and says 'ball'. Along with receptive language there is expressive language that ABA tries to enhance; for example, when the therapist holds up an object, the child would respond with the correct object's name. Since most children with autism do not have the ability to talk, expressive language is an important lesson to try with autistic children (Smith, 2002). For grammar, it could occur, for example, when the therapist corrects the personal pronouns for the autistic child.

There are many different techniques under the ABA umbrella that professionals use on a daily basis:

1.5.6.1.1 Discrete Trial Training (DTT)

DTT is one-on-one teaching strategy that uses a series of trials to teach each desired behavior. Lessons are broken into their simplest parts and positive reinforcement is used to reward the correct answers and behaviors. When the child gives an incorrect answer, it is most likely ignored (Zaman, 2011). DTT is typically conducted with a therapist and an autistic child seated adjacent to one another at a table.

1.5.6.1.2 Pivotal Response Training (PRT)

PRT is another popular one-on-one floor teaching technique in ABA. It is a variety of naturalistic behavioral interventions. Thus it is based on natural reinforcement. For example: if the therapist is teaching the word 'car' to the autistic child, then the therapist may play with a set of cars and give the child a car to play with as a reward. This can motivate the autistic child to speak.

1.5.6.1.3 Verbal behavior (VB)

The VB therapy teaches communication and language. It does not focus on words only (car, ball...) rather it teaches why we use words and how they are useful in communicating ideas.

1.5.6.1.4 Picture Exchange Communication System (PECS)

ABA has developed a communication system for non-verbal autistic children. It allows them to communicate using pictures. However, this technique hurts the development of the autistic child's spoken language.

ABA interventions for autistic children are called operant model. Learning is the result of consequences that follow a behavior, and these consequences determine the likelihood of a behavior to happen again (Donaldson, 2014). The operant models involve three main parts: an antecedent which is an event of experience that happens before a behavior occurs. Then, there is a behavior from the individual. Finally, there is the consequence which means what will happen after the behavior occurs. This is known as ABC of ABA (Donaldson, 2014). Thus, all the ABA techniques are based on ABC principle.

In order to clarify more, an antecedent may be an instruction that the therapist gives to the child, for example 'show me the apple'. The behavior is when the child shows the therapist the apple, right after the therapist reinforces the child positively, and this is the consequence. There are many types of reinforcers; it could be food, praise, kiss, hug, high five...etc. A prompt may occur between the antecedent and the behavior in order to help the child providing a correct answer, and then the positive reinforcement occurs. So that it motivates the autistic child to provide a correct answer again.

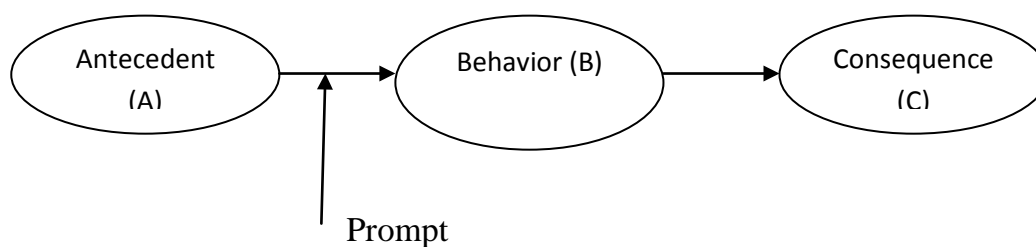


Figure 1.2. The ABC Principle

It is preferable to start a therapy session with ‘pairing’. Also referenced as ‘precession pairing’, is well documented in clinical resources. In fact, several therapeutic resources suggest that developing therapist–child rapport through pairing may be helpful in reducing problematic behavior by developing a positive therapeutic environment prior to introducing non preferred or aversive therapeutic components (Smith, 2001; Sundberg & Partington, 1998; Sundberg, 2008). The pairing procedure is generally described as imitating the child’s actions, engaging in activities the client prefers, and delivering preferred items and activities to the client (Smith, 2001; Sundberg & Partington, 1998).

1.5.6.2 TEACCH

TEACCH is short term for Treatment and Education for Autistic and related Communication handicapped Children. It is established by Eric Shopler in the early 1970s. It developed the intervention approach called ‘structured teaching’ which is based on understanding the learning characteristics of autistic individuals and the use of visual supports to promote independence.

TEACCH generally recommends four kinds of structure. The first is physical structure where using elements such as furniture arrangement or visual cues that show the autistic child which activity occurs in a particular area and where to stand or to sit and reducing all environmental sources of distraction. The second type of structure involves organizing visual schedules where activities are clearly shown in their sequential order through words or pictures. The third kind of structure is the organization of individual’s tasks using visual means in order to show the individual what he/she is supposed to do, how long the activity will last, and how many

repetitions he/she do, how he/she can see that he/she is making progress, how he/she can see that the activity is finished, and what he/she will do next. The fourth type of structure is linking individual tasks into a sequence of activities; it is called the work/ activity system in order to increase the amount of time that the individual is meaningfully engaged in productive activities.

1.6 Conclusion

In this theoretical chapter, the researcher presented some definitions about language and its components; besides, normal language development and its theories. She included some definitions about autism, its causes, symptoms, and diagnosis. Moving further in this chapter, language development in children with autism was presented with some strategies of developing language in such children. This review of relevant literature will be followed in the next chapter by a situation analysis and detailed description of data collection methods, then an interpretation and discussion of the results. Finally some suggestions and recommendations will conclude this second chapter.

Chapter Two:
Research Design, Data
Analysis, and Implications

2.1 Introduction

The main intent of this chapter is the field investigation. It aims at collecting data about the way children with autism are taught, difficulties encountered speech-language pathologists when teaching those children, and the techniques used in overcoming those difficulties. This chapter provides a description of: the research methodology and the instruments, the setting of the study, and the sample population. In addition, it includes the analysis and interpretation of the data collected. Finally, the researcher tries to put forward some suggestions and recommendations.

2.2 Research Methodology

Before tackling a description of the method followed in this dissertation, let us first consider some definitions given to the term ‘research’ by different scholars. According to Grinnell (1994:4) the word research is

Composed of two syllables, *re* and *search*. The dictionary defines the former as a prefix meaning again, anew or over again and the latter as a verb meaning to examine closely and carefully, to test and try, or to probe. Together they form a noun describing a careful, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts or principles.

Burns another scholar who defines research as “a systematic investigation to find answers to a problem” (1997:2). In their definitions, both Grinnell and Burns share the word ‘systematic’; that is to say, a research should not be taken in a haphazard way but according to a particular and an organized method. One of the paramount methods is the case study method.

Case study refers to the investigation of topical real-life issues through the collection of detailed information about a particular participant or small group. Yin (1984:23) defines the case study research method as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context”. The case study is divided into three categories according to: the purpose of research, the number of cases, and the unit of analysis.

Researchers can use the case study method for many purposes: to explore new areas and issues and bring ideas about the way of improving the existing situation (exploratory case study); to describe a process or the effects of an event or an intervention, especially when such events effect many different parties (descriptive case study); and to explain the reasons behind a certain phenomenon (explanatory case study).

In terms of the number of cases, this category includes two types of case study: single and multiple. The first focuses on only one case, and it comprises two sub-categories: intrinsic and instrumental. The former aims at understanding the studied cases without giving importance to the generalization of the results, while the latter attempts to study a specific case to understand more than what is obvious with the purpose of generalization of research results. The second type also known as ‘collective case study’ that studies more than one case in a single research work.

Two major types used for the unit of analysis: holistic and embedded. The holistic case study has one unit of analysis, and provides a global view about the studied object. Whereas, the embedded case study provides a separate analysis for each sub-unit for the sake of generalizing the results for all the case.

The mentioned categories are summarized in the diagram below.

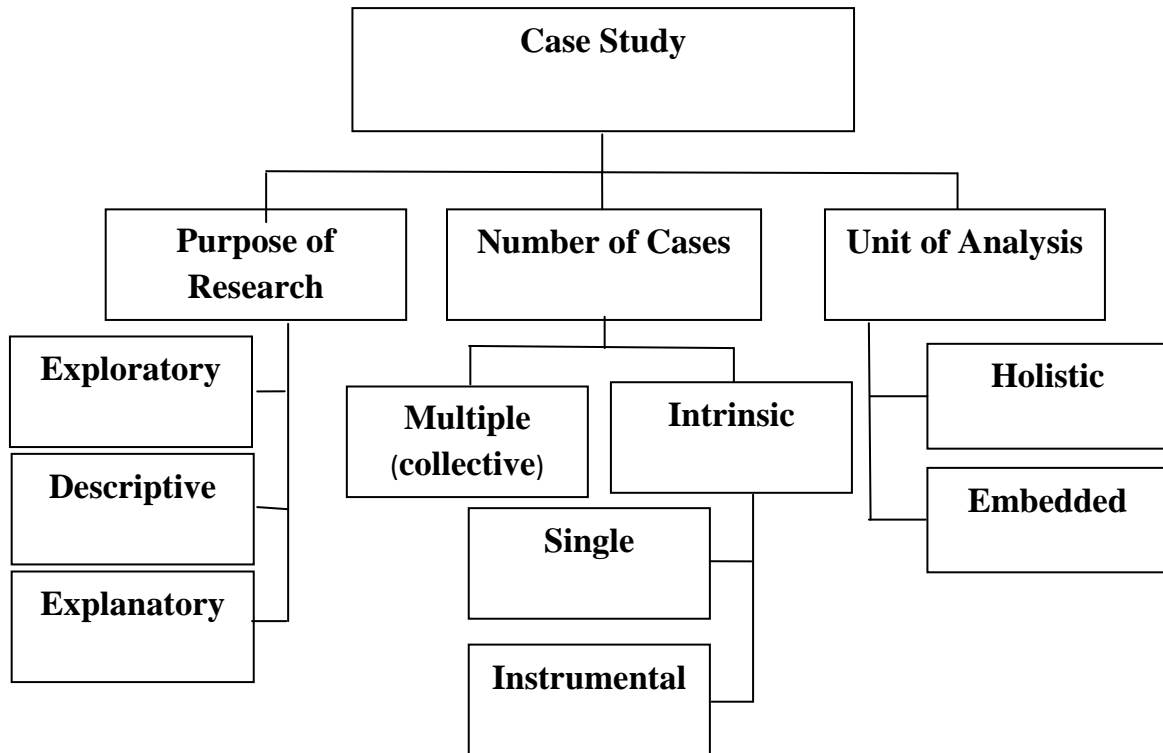


Figure.2.1. Types of Case Study

Case studies involve both quantitative and qualitative data. Quantitative data focuses on numbers and mathematical calculations. On the contrary, qualitative data is the one that is concerned with descriptions which are not numerical.

This research was conducted using a single exploratory descriptive case study in which the researcher addressed two SLPs in order to explore and describe how children with autism can be taught to develop their language, in addition to challenges that encounter them with those children, and also the ways followed to control such situations.

2.3 The Setting of the Study

The researcher wanted to conduct the present study in several settings at the level of Tlemcen Province (Nour association in Maghnia, two centers in Remchi, El Amel association in Hennaya, and other two centers in Tlemcen) in order to know how the autistic children are taught to develop their language.

Chapter Two Research Design, Data Analysis , and Implications

First, the investigator visited the association of Remchi with an authorization signed by the head of English department “Dr. Abd Rahmen BASSOU” (Appendix A). The administration said that it needed a demand written, signed, and stamped from the head of the English department to the Director of Social Activity and Solidarity (DSAS).

The head of the English department wrote a demand in Arabic in which he explained the mission of the researcher (Appendix B). Then it was lifted to the DSAS who permitted the researcher to conduct a field study in a center (The Psycho pedagogical Center for Children with Mental Disabilities, Birouana-Tlemcen-) (Appendix C) and two associations (El Amel Association for Autistic Children- Hennaya-, and the Association of Autism Tlemcen (AAT)-Tlemcen-) (Appendix D). The researcher tried to find out where these three mentioned places are situated and she discovered that the association of Hennaya has not worked yet because the location needs some repairs.

Finally, the study was carried out in only two settings in Tlemcen: The Psychological Center for Children with Mental Disabilities is situated in Birouana Street Djanoub –Tlemcen -. In fact, the center was established on September 9th,2007 and opened on October13th,2008. It basically comprises 8 employee and 120 children, with both genders, different ages, and different disabilities, who are receiving internal, half internal, care; among them 5 half internal children with autism. The center also receives external children with autism to make sessions of speech therapy.

Table2.1. Pedagogical Employers

Enumerate pedagogical employees according to the domain					
Psychology Domain			Educators	Social Assistant	Total
Clinical Psychologist	Educational Psychologist	Speech Therapist			
01	01	01	04	01	08

On the other hand, Autism Tlemcen Center is another center that was visited. It was created in October, 2011 by the Autism Association Tlemcen (AAT) which consists of parents of autistic children, psychologists, educators, psychiatrists, and doctors. In 2012, Hadj Mustapha BENKALFAT has offered a space in Mansoura to care for children with autism. After a layout made by the help of a group of people, the official opening was in 2013. The center encompasses 30 psychologists, 2 educators, 1 speech-language pathologist, and 110 autistic children. This later is divided into groups: two groups in the morning (9am - 12pm) and three groups in the afternoon (1:30pm – 4:30pm). Those groups are divided into subgroups of 15 children for each with 5 domains (cognition, communication and language, fine motor skills, gross motor skills, and preschool). Each specialist takes 3 children for 30minutes, and thus 10minutes for each child in each domain, the remaining 30minutes are allotted for snack.

Both centers' workers were kind, helpful, and welcoming.

2.4 The Sample Population

The key factor of any scientific research is the selection of the sample. Leedy and Ormrod (2005:199) refer to a sample as “a subset of a population” that should be representative, by which the researchers will be able to draw a conclusion about the entire population.

In this research, two speech therapists were chosen at random to be the subject of the present study. Both of them were women. One at PSCMD who hold a classic License degree majoring in speech therapy with an experience of 10years. The other at AAt is a young woman of 4 years experience. Child psychopathology is her domain but she takes in charge the section of communication and language. Taking into consideration their experiences in teaching children with autism. Thus, the aim was to draw a comparison between them to see whether they use the same techniques and procedures in the process of expressive language development in

autistic children. Also, to see if they utilize the same techniques to overcome difficulties when dealing with such children.

2.5 Research Instruments

For this study, the data were collected through the use of an interview that was designed for SLPs and also a classroom observation.

2.5.1 Interview

Interviews can be defined as a qualitative research method which involves “conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation.” (Boyce.C. & Neale.P., 2006). In the same line of thoughts, it is a conversation between the researcher and the informants with the purpose of collecting data about their opinions and attitudes.

There are three formats of interviews: structured, unstructured, and semi-structured. The first type consists of a list of pre-defined questions that all interviewees answer in the same order. The second kind of interviews is a sort of discussion between the interviewer and the interviewee in which no question is prepared before. Whereas the third format is such a combination between the first and the second forms of interviews that the researcher prepares a series of questions to be answered by all the participants and some other not prepared questions may be added to clarify and explain certain issues.

In this research, the structured interview (Appendix E) was relied on. Therefore, both participants answered the prepared questions in the same order after the researcher presented herself and her objectives from this work.

The speech therapist’s interview included 10 questions divided into five rubrics: one for the opening, each of the three others is appropriate for one of the

research questions, and the last rubric was for closing. The questions were asked in Arabic (Appendix F) in order to facilitate the investigation.

The interview questions can be described as follows:

Questions 1, 2, 3, and 4 were asked for the opening of the interview and also to show if the participants are aware of the theoretical framework of ASD.

Questions 5, 6, and 7 sought to know the system followed to help children with ASD developing their language.

Questions 8 aimed at revealing the challenges that speech therapists face when dealing with an autistic child.

Question 9 was set to know the techniques used by speech therapist to control the behavior of autistic children.

Question10 was for closing the interview.

2.5.2 Observation

Observation is a way of collecting data through watching an ongoing events or behaviors. Marshall and Rossman (1989, 79) define observation as “the systematic description of events, behaviors, and artifacts in the social setting chosen for study”. Therefore, observation is useful to researchers in a variety of ways. It provides researchers with ways to check for nonverbal expression of feelings, determine who interacts with whom, grasp how participants communicate with each other, and check for how much time is spent on various activities (Schmuck, 1997).

The observation process can be done through different ways. It can be participant or non-participant, structured or unstructured, overt or covert. The participant observation involves being a part in the activities of the group being observed, whereas non-participant observation requires observing without integrating in the activities under the study in the setting. The structured observation is based on a template on which the researcher relies, while the researcher does not

Chapter Two Research Design, Data Analysis , and Implications

hold a plan in the unstructured observation. The overt observation occurs when the researchers reveal the fact that they are doing research; however if the observation is covert, the researchers conceal the fact that they are conducting a research.

In this research, the observation was used to support and verify what was learned from participants in the interview. The investigator relied on a checklist items that was tied to the research questions in order to be organized.

The researcher used an overt, structured, non participant observation (Appendix G) to investigate language development in children with autism at both centers.

At PSCMD, the interview lasted three days and AAT; it lasted two days because the SLPs were busy and could not answer all the questions in a day.

Concerning the observation: At PSCMD, the SLP works not only with autistic children but all the kinds of speech and language disabilities, and thus the researcher waited for the day of an autistic child session. At AAT, the researcher underwent 2 sessions of observation with the SLP.

Table2. 2. Collecting Data Schedule

	Interview	Observation
PSCMD	April 09 th , 2019 April 10 th , 2019 April 11 th , 2019	April 17 th , 2019
AAT	May 01 st , 2019 May 02 nd , 2019	May 6 th , 2019 May 07 th , 2019

1.6 Data Analysis

The process of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision making is called data analysis. Therefore, the data, after collection, has to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan.

The collected data can be analyzed quantitatively as well as qualitatively. Quantitative analysis is often associated with numerical analysis in which it explains the use of appropriate statistical analyses in relation to the number of variables being examined. Qualitative analysis, on the other hand, examines qualitative data to derive an explanation to a particular phenomenon. Wallace, cited in Khelifi, discussed the distinction between quantitative and qualitative researches by stating that:

Quantitative is broadly used to describe what can be counted or measured and can therefore be considered objective. Qualitative is used to describe data which are not amenable to being counted or measured in an objective way, and are therefore subjective. (Wallace, 1998:38)

In the research under discussion, the primary collected data, through the use of interview and observation, has been analyzed qualitatively and thus to provide a rich, contextualized understanding of the SLPs' experience with autistic children.

2.6.1 Speech- Language Therapists' Interview Analysis

As mentioned before, the interview contained 10 questions and addressed to two speech-language pathologists who provided detailed answers to all the asked questions.

Question1: How long have you been dealing with autistic children?

The SLP who works in The Psychological Center for Children with Mental Disabilities, Birouana-Tlemcen- answered ten years and the other who works in Autism Association Tlemcen answered almost four years.

Question2: What is autism? And why is referred to as a spectrum?

One participant stated that autism is a developmental disorder that is characterized by the total absence of language and communication with unfamiliar

sounds and movements. She added that children with autism have their own world which they do not allow us neither to enter nor to bring them to ours. The other participant stated that autism is a developmental disorder that affects the functions of the nervous system which include cognition, sensory-motor, language, social communication, and emotion. Regarding the second part of the question, the first participant stated that spectrum is like a robe that makes all the child's capacities rigid. The other said that the word spectrum was launched in DSM5. (Both participants answered this question with hesitation).

Question3: Does the child develop autism or is born with?

Both participants answered that the child is born with autism.

Question4: What is the relation between autism and language?

Both participants shared the fact that the relation between language and autism is such a strong relation that parents give too much importance, and language is totally absent in autistic children. Therefore, it is the salient mark and the source of concern that makes them bring their children to specialists.

Question5: How many autistic children do you work with in a session? And how many sessions a week are there?

The first participant stated that she provided one session a week based on one- to- one therapy for 30minutes because she worked with 120 intern children and 60 extern children, including autistic children and others with other disorders, thus she had not enough time to provide daily sessions. When the autistic child begins to speak, he/ she is involved in a group therapy of 3 children where language is used a session per week for two hours. The other participant stated that she provided ten minutes a session for each child and there are 4 sessions a week.

Question6: What are the methods do you use with autistic children in order to develop their language?

Both participants stated that there are two famous methods which are ABA and TEACCH. One declared that she does not work with them because they based on pictures but she uses her own exclusive method (does not have a name yet) in which 12 months of behavior correction and 12 months of language are required. She added that when using ABA, the autistic child relies on pictures; for example, if

he/she wants water then he/she shows his/her mother the picture of water, and with this way they cannot reach an expressive language; even if they do, they take long time to speak. The other participant uses those methods and also PECS.

Question7: What is the program followed when teaching autistic children?

The first participant stated that she starts with a test of articulation (Appendix H) in which she determines what sounds the autistic child struggles with. After testing and determining what sounds the child needs to work on, she starts a therapy using massage that helps to restore the consciousness to the child with autism. She added that she follows an arrangement from easy to difficult sounds (Appendix I). She said also that she does not expect a correct clear articulation from the beginning but she accepts and considers it as an attempt. In this phase, she relies also on puzzles (Appendix J) by which she trains the autistic child eye contact, and some orders like: give me and show me, and when the child responds to her demand she rewards him/her. After the child grasps all sounds, she moves on to the formation of the word then simple sentences then complex sentences using her exclusive method. The other participant stated that the program is broken down into four levels in picture cards: the first level contains food and drink (bread, water,...), utensils (spoon, fork, plate,...), things (chair, table,...), school supplies (pen, school bag,...), colors, clothes, animals, and verbs (drink, eat, sleep,..). She said that in the first level we rely only on simple basic things that the child sees every day. The second level contains the same components of the first level but in a bit difficult way in which the autistic child tries to express a phrase; for example: orange juice. The third level is pretty difficult where the autistic child expresses a sentence of more than three words; for example: a picture card of a family in a restaurant, the autistic child has to describe everything. The fourth level involves picture cards more difficult (just the same components) plus emotions, and body parts. She added that they could not move to another level unless the autistic child grasps everything about the previous level. Then she moves to PECS; here the autistic child can combine picture cards together to form a sentence. In ABA and PECS, she focuses on orders such as: give me, show me, and vocalization without forgetting eye contact. Concerning TEACCH method; she stated that the autistic child learns how

to organize him/herself using a schedule that contains all the activities, to help them move on to the next activity.

Question8: How do the autistic children react when you tell them to do something?

Both participants answered that there is a difference before and after therapy. The autistic children, in their first sessions, react with isolation, crying, stereotypy, weird sounds, anger, biting, hitting, avoiding eye contact, and all these to defend themselves. After a hard work, they start to understand what we are trying to communicate and respond to our demands, and sometimes they understand but do not react. Thus, it depends on their moods. One participant stated that one child refuses to produce a phoneme and when he sees her wearing the gloves he does all what she orders him.

Question9: Do positive /negative reinforcement and punishment take place when dealing with autistic children? And how?

Both participants' answer was 'yes' but their answers varied when they went into details. The first participant stated "the autistic child behavior is difficult and challenging to manage; children with autism may refuse and ignore requests. Thus, I must impose myself on them to control and modify their behaviors by using both reinforcement and punishment. I usually reinforces autistic children positively when they obey my requests; for example, when they produce a correct sound, I reward them by cards where 'excellent' is written, high five, saying 'bravo', kissing, or hugging. I try to avoid material reinforcement as much as I can because the child gets used and refuses to work unless I show him/her that I have for example a chocolate and he/she can get it after accomplishing his/her task". Concerning negative reinforcement she said that it occurs by punishing the autistic child when refuses doing his/her task or when they are hyperactive by tying him/her in the chair for one hour or more. This latter method achieved great results in modifying autistic children's behavior. She added "I recommend parents not to give their autistic children what they want until they articulate the object that they need; for instance, if an autistic child wants water and starts looking at it, it is better not to pretend that you do not understand him/her till he/she express the need verbally".

The other participant stated that she uses material reinforcers and she told us a story about a child who loves sweets: “there is an autistic child who refuses to vocalize and I know that he loves sweets, so that I took the opportunity to make him speak by saying /ʃu:f ʃendi ʔalwa/ (look I have a sweet) (in a sing-songy way) then he vocalizes and got it”. Concerning negative reinforcement, she said that she reinforces autistic children negatively by expressing feelings of anger or punishing them; for example, when autistic children start making their weird sounds she yells ‘stop’, or she deprives them from their snacks when they do not respond to her demands.

Question10: Can an autistic child become a normal child?

Both participants go along with the idea that an autistic child can become as a normal one with the hard work, patience, and also the collaboration of parents.

2.6.2 Classroom Observation Analysis

As stated above, the observation was based on the interview that has been planned. It took place in two settings in Tlemcen province where two speech-language pathologists were observed. The major interest of the classroom observation was an exploration into and a description of difficulties facing those therapists when dealing with non-verbal autistic children, the way they treat them to decrease challenges, and methods of teaching to develop their language.

At the PCCMD, the speech-language pathologist provides each child with 30 minutes of therapy for “one session a week, or one session in couple of week, and I prefer working with the extern children than the intern because at the end of the session I can talk to parents about the weaknesses that they should work on with their children at home,” she stated during the observation. During that day of observation, there was the first session of an 8-year old non-verbal girl with hyperactivity, stereotyped hand movements, and unusual intonation. The SLP started working, at a table, with some puzzles where she focused on instructions with eye contact, and also she helped the girl when she found difficulties. Right away, she reinforced the correct trying verbally. Then, she moved using her own

method. At the end of the session, she told her father the points that he should work on with his daughter.

At the center of ATT, there was a medium size class with some shelves where to put educating materials. The class was divided into three small sections: the first section was for the responsible's office, the second section was for cognitive skills, and the third for communication and language skills. What was apparent in this observation is that there were only 6 to 8 years old non-verbal boys who were diagnosed with autism and provided with education and care for 3 years. Before they had communication and language session, each child went to his own schedule, that outlines the events of the day, which is hanging on the wall out of the classroom and put the stick in the column of the communication and language. Then, they went back to their places. The therapist has a list where the need of each individual is written. She provided each child with 10 minutes of therapy using flashcards and asking him to show, give, or vocalize something. The responses of children vary: there were a child who repeats the therapist's question, other shows no interest and cries. There were also some who responded correctly and sometimes incorrectly. The therapist sometimes helps the child to provide a correct answer, and right after she reward him verbally. In the vocalization time, the therapist provides children who have articulation deficits with some blowing activities such as: cotton ball and cardboards with tracks (straight, curved, and zigzag) and the child tries to blow the ball across the track. At the end of the session, she wrote remarks of every child in his copybook.

2.7 Data Interpretation and Discussion of the Main Results

The interview and the observation used with two SLPs of Tlemcen centers revealed many interesting results that allowed the researcher either to confirm or reject the research hypotheses.

Regarding the first hypothesis which denotes that ABA and TEACCH are methods of developing language in children diagnosed with autism, the results partially validate the researcher's first hypothesis. The analysis of the interview and the observation revealed that ABA method is used by both speech therapists.

The first SLP denied that she uses ABA as a teaching method because she does not know what it really is; she considers that the ABA method is based on picture communication rather than changing behavior through reinforcement and punishment. Picture communication is only one technique of ABA techniques which is called PECS that helps non-verbal autistic children to express their needs using pictures. The A-B-C steps are shown in the question (7) when she gives an instruction to the child, the latter answers; and sometimes prompting takes place, than she rewards the correct answer or immediately ignore the incorrect one, thus it is ABA method and more precisely the DTT technique. She does not use TEACCH method.

The second SLP uses both ABA and TEACCH methods. When she said that she uses ABA method she means DTT technique. She referred to PECS as another method without knowing that it is based on the principle of ABA; in other words, PECS is one other technique of ABA. TEACCH method was observable only in scheduling. Regarding the time that was allotted to each autistic child was not enough to develop their language.

Concerning the second hypothesis which stipulates that SLPs experience several difficulties when dealing with autistic children such as: anger, rejecting, avoiding, and/or insisting on not following the instruction, the results validate the researcher's second hypothesis.

The data collected revealed that children with autism allow no one to explore their own world, besides they cannot express themselves verbally. Thus, they defend themselves in a variety of ways that the speech therapists find challenging.

To answer the third question which was designed to find out how to overcome those challenges, the researcher proposed that reinforcement and punishment are two basic solutions to overcome those challenges. According to the analyzed data, it appeared that when reinforce or punish the autistic child, the difficulties were decreased and thus the third hypothesis was validated.

The data collected have shown that both SLPs consider negative reinforcement as a punishment. It seems they confuse negative reinforcement with

punishment in operant conditioning, but they are two different mechanisms. In question (8), one informant said that when the child saw the gloves he told her the required sound; in this case the gloves are negative reinforcers that increase the behavior of sound articulation. In contrast, the punishment decreases the behavior whether being positive or negative. In question (9), the participant said when the autistic child refuses to respond she deprives him from the snack; in here positive punishment is applied to decrease the behavior of refusing to answer.

2.8 Suggestions and Recommendations

In this last section of the current research, and for the sake of helping children with autism to develop their language whether it is receptive or expressive, some suggestions and recommendations have been made to therapists and parents.

Providing an education services to a child with autism is not an easy task; it requires a great effort, patience, creativity, and collaboration.

The most important issue is that therapists have heard the term ‘ABA’ but they are not sure what it means or what involves. So dealing with an autistic child is often difficult because they are uninformed about the system and untrained. In order to decrease the difficulties when dealing with children with autism, a relationship should be made between the autistic child and the therapist. As said James P. Comer²: “no significant learning occurs without a significant relationship”. Simply put, rapport building is the foundation of effective communication. Therefore, when an autistic child begins therapy, the therapist should establish that relationship or ‘pairing’ as it is known to ABA. All the techniques under the ABA umbrella collaborate in enhancing both receptive and expressive language to children with ASD. Therapist must increase their knowledge about everything related to autism.

² James P. Comer is currently Professor of Child Psychiatry Maurice Falk at the Yale Child Study Center since 1976. He is also Associate Dean at the Yale School of Medicine in New Haven, Connecticut.

Parents play an important role in their autistic children's lives. Most parents do not accept the idea that they have a different child, so they ignore and margin him or her because he/she embarrassed them when they behave in an awkward way. Others accept their children with autism but they are always busy. Others accept their autistic children and have time but do not know what autism is and how they should deal and manage their children's challenge at home. For the three categories, the researcher suggests to create awareness campaigns about ASD among parents aim at changing parents' mind about ignoring their autistic children and sensitizing them that these different children, whom parents feel ashamed when taking them outside, are always waiting for acceptance, attention, love, and affection. When they misbehave, they try to call their parents' attention and tell them that they exist. In addition, taking the autistic child to the therapist's office is not enough; parents must collaborate in the educating process at home if they want to achieve a great success. Moreover, providing information about what autism is. Causes of autism. How to diagnose autism. And how we can treat children with autism?

A need or a problem encourages creative efforts to meet the need or solve the problem, and that is what shapes the proverb "necessity is the mother of invention". Laura KASBAR is a mother of twins who were diagnosed with autism at 3 years old. They were non-verbal children, they were taking intensive therapy but they did not respond to. Her twins' needs which led her to create a web-based program in 2000 which she named it GemIIni. It focuses on one concept at a time, using an approach called 'Discrete Video Modeling' or (DVM) to teach speech and language skills, cognitive skills, academic skills, social and emotional skills, motor skills, activities of daily living, and more. DVM breaks down information into understandable and digestible bites to make it an ideal solution for young children or even adults with special needs. It contains a language pyramid that starts with preverbal skills and expands to simple and concrete language to more abstract and complex one. Laura's autistic twins are now thriving in college. GemIIni is currently available in English, French, Chinese (Mandarin), and Spanish, and the content is always expanded. For the other languages, there is an ability to

create and upload video clips according to one's mother tong. (Website: <http://www.gemiini.org>)

Music therapy affects language development skills of children diagnosed with autism. Currently, music is not only enjoyed in relaxation and entertainment, but it is also is used as a therapy for mental illnesses, physical traumas, and to increase language development and sensory integration skills for the children on autism spectrum (Reschke-Hernandez, 2011). Melody and lyrics have been reported to influence emotions (Borroff, 1977; Galli, 2002; Geist, 2012).

Influences of musical activities have been detected with the cerebral hemisphere, brain, stem, pons, and cerebellum (Hughes et al., 2012; Levitin, 2013). Music is reported not only to play a role in both physical and mental health, but also it specifically increases gray matter density and volume of brain tissue, as well as positively influences the pleasure center of the brain (Geretseggar et al., 2015; Gooding, 2011, Hargreaves & Aksentjevic, 2011). The wave of music is attractive to the brain. The combination of melodies, the tones, the rhythm, and the pitch of the music all provide influence to brain development, resulting in skill attainment (Bruscia, 2012; Peterson & Harmon-Jones, 2012; Stern, 2010)

2.9 Conclusion

The current chapter attempted to clear up the data collection methods and procedures that the investigator utilized throughout this research. It was devoted only to qualitative data analyses which were gathered by means of interview and observation. These two different instruments were arranged pointedly to explore and describe the methods followed in teaching children with autism, the consequent challenges, and then the solutions provided. This chapter supplied an interpretation and a discussion of the main findings and checked the hypotheses proposed to the aforementioned research questions being validated or rejected. Finally, the researcher came up with some useful, hopefully, suggestions and recommendations to both therapists and parents that can be adapted to cope with difficulties and obstacles they face when dealing with those children.

General Conclusion

General Conclusion

General Conclusion

Autism is a developmental disorder that is considered as one of the most severe and serious disorders as it affects all the child's aspects including language development. It is a challenge of indeterminate causes which researchers still look for. Therefore, the only thing that is recommended is the early intervention that reduces future risks. There are several interventions to develop autistic children's language and every child with autism has his/her unique challenges. So there is no one size fits all autistic children; each autism intervention should be tailored to meet the child's specific needs.

It is harder for children with autism to learn and use language. Thus, this study aimed at examining the way to teach language to those children. The researcher tried to know the techniques and strategies used in order to increase language to children diagnosed with autism. In addition, the investigation attempted at identifying the arisen difficulties when teaching autistic children with the followed solutions to control such difficulties. For this purpose, three research questions were put forward:

1. Are there specific methods to develop autistic children's language?
2. What are the challenges faced by speech-language pathologists when dealing with autistic children?
3. How to overcome these difficulties?

The above cited questions led to the formulation of the hypotheses as follows:

1. ABA and TEACCH are the methods of developing language in children with autism.
2. There are many difficulties experienced by speech-language pathologists when dealing with autistic children such as: anger, rejecting, and/or insisting on not following the instructions.
3. Reinforcement and punishment are two basic solutions to overcome these challenges.

This work encompassed two main chapters. In the first chapter, the researcher tried to explore the world of language impaired children through the typical

General Conclusion

language development. Such a general description has been theoretically supported by different definitions of key concepts. As for the second chapter, it was more practical. It included a description of the methodology, the sample population, and the instruments used in this research. Furthermore, a data analysis of the interview and observation followed by an interpretation and a discussion of the main results were provided. By the end of the research, a set of suggestions and recommendations were supplied to both therapists and parents in order to develop language to autistic children.

This study came up with interesting results. The results revealed that speech-language pathologists have not a strong theoretical framework about autism spectrum disorder and methods in order to teach those children, and thus it affects the practical framework that led to make great efforts in vain in which adversely affects the development of the autistic child.

Eventually, the conducted research suffered from a set of limitations. First, the researcher encountered a problem of time; the investigation started a little bit late because of some factors such as: the researcher's first term exam, the business of DSAS in order to orient a setting to the researcher, and the holidays of the centers. In addition, the interview consumed time because the speech language pathologists were really busy. Besides, the investigator was not allowed to take some pictures of the program or instruments of teaching in one center. Moreover, in the center of AAT there was no speech-language pathologist but a psychologist who takes in charge the communication and language domain, and thus the researcher considered her as a speech-language pathologist. Finally, the sample is too small and the study by being a qualitative case study is not generalizable.

To conclude, it is noteworthy that this humble research would pave the way for further investigations that could be tackled in different ways. For example, it would be interesting to work on a non-verbal autistic child longitudinally.

Bibliography

Bibliography

Bibliography

1. Addison S. C., Silliman E.R., Ehren J.B. & Apel K. (2004). *Handbook of Language and Literacy, Development and Disorders*. The Guilford Press : NY
2. American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (DSM-IV-TR)* (4th Ed., Text revision, pp. 75, 84). Washington, DC: Author.
3. Amsel E. & Byrnes J.P. (2002). *Language, Literacy, and Cognitive development, the Development and Consequences of Symbolic Communication*. Lawrence Erlbaum Associates, Inc. Mahwah. New Jersey.
4. Baranek, G.T. (1999). Autism during infancy: A retrospective video analysis of sensory-motor and social behaviors at 9-12 months of age. *Journal of Autism and Developmental Disorders*, 29, 213-224.
5. Baxter.P & Jack.S (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544-559.
6. Berk, L. E. (2006). *Development through the lifespan* (4th Ed.). Boston, MA: Allyn & Bacon.
7. Bigge, M. & Shermis, S. (1998). *Learning Theories for Teachers*. London: Longman
8. Bloch. B & Trager. G. (1942). *Outline of linguistic analysis*. New York: Inguistic Society of America.
9. Bloom, L. (1983). Of continuity, nature, and magic. In R. Golinkoff (Ed.), *the transition from preverbal to verbal communication*. Hillsdale, NJ: Lawrence Erlbaum Associates.
10. Boyce, C. & Neale, P. (2006). Conducting in-depth Interviews: A Guide for Designing and Conducting . *In-Depth Interviews*, Pathfinder International Tool Series.
11. Chomsky, N. (1957). *Syntactic Structures*. The Hague: Mouton.
12. Cynthia, N., Mark, B. & Walter, Z. (2018). *California Autism Prevalence Trends from 1931 to 2014 and Comparison to National ASD Data from IDEA and ADDM*.

Bibliography

- Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6223814/> [June 8th, 2019]
13. Diehl J.J., Bennetto L., Watson D., Gunlogson C., & McDonough J. (2008). Resolving ambiguity: A psycholinguistic approach to understanding prosody processing in high-functioning autism. *Brain Language*, 106: 144-152.
 14. Eigsti I.M., Bennetto L., Dadlani M.B. (2007). Beyond pragmatics: Morphosyntactic development in autism. *Autism Development Disorder*, 37:1007-1023.
 15. Essa, E. L. (2003). *Introduction to early childhood education* (4th Ed.). Clifton Park, NY: Delmar Learning.
 16. Essays, UK. (November 2018). *Non participant observation and self reports*. Available at: <https://www.ukessays.com/essays/psychology/non-participant-observation-and-self-reports-psychology-essay.php?vref=1> [June 10th, 2019]
 17. Frazier M.S. (2011). Receptive Language. In: Goldstein S., Naglieri J.A. (eds). *Encyclopedia of Child Behavior and Development*. Springer, Boston, MA
 18. Friederici A.D. & Guillaume T. (2008). *Early language development*. Amsterdam / Philadelphia.
 19. Gary B. M., Victoria S. (2009). *The TEACCH Program in the Era of Evidence-Based Practice*. doi: 10.1007/s10803-009-0901-6
 20. Gary B.M. (2009). The TEACCH Program in the Era of Evidence-Based Practice. *Journal of Autism Development Disorder*. Doi. 10.1007/s10803-009-0901-6
 21. Gleason, J. B. (Ed.). (2001). *The development of language*. Boston, MA: Allyn & Bacon.
 22. Gleason, J.B. (2005). *The development of language* (6th Ed.) Boston: Allyn & Bacon.
 23. Gleitman, L.R. & Wanner, E. (1982). Language acquisition: The State of the State of the Art. In E. Wanner & L. Gleitman (Eds), *language acquisition: the state of the art*. Cambridge: Cambridge University Press.
 24. Goin, R.P., & Myers, B.J. (2006). Characteristics of infantile autism. *Focus on Autism and Other Developmental Disabilities*, 19(1), 5-12.
 25. Henry, S. (1900). *The history of language*. Bedford Street London.

Bibliography

26. Howlin P (2003). Outcome in high-functioning adults with autism with and without early language delays: Implications for the differentiation between autism and Asperger syndrome. *Journal of Autism Development Disorder* 33: 3-13.
27. Hudry K, Leadbitter K, Temple K, Slonims V, McConachie H, et al. (2010). Preschoolers with autism show greater impairment in receptive compared with expressive language abilities. *International Journal Language and Communication Disorder*, 45: 681-690.
28. Hudry K., Leadbitter K., Temple K. *et al* (2010). Preschoolers with autism show greater impairment in receptive compared with expressive language abilities. *International Journal of Language and Communication Disorder*. 45(6), 681–690.
29. Khelifi , K. (2013). *Learner and Teacher Readiness for Constructivism in Algerian EFL Classroom: The Case of 3rd Year Literary Classrooms in Colonel Abd Elhadi Secondary School Sidi Bel- Abbes.*(Magister thesis). University of Tlemcen, Tlemcen, Algeria.
30. Kohn.L.T. (1997). *Methods in Case Study Analysis* (doctoral thesis). The Center for Studying Health System Change.
31. Kothari,C.R.(2004). *Research Methodology: Methods and Techniques* (2nd Ed.). Ansari Road, Daryaganj, New Delhi.
32. Kumar,R.(2011). *Research Methodology: A step- by- step guide for beginner* (3rd Ed.). Sage, New Delhi.
33. Leedy, P. D., & Ormrod, J. E. (2005). *Practical research: Planning and design*. Upper Saddle River, N.J: Prentice Hall.
34. Lightbown,P & Spada,N. (2006). *How languages are learned* (3rd Ed). Oxford: Oxford University Press
35. Marshall, Catherine & Rossman, Gretchen B. (1989). *Designing qualitative research*. Newbury Park, CA: Sage. Available at: <http://www.qualitative-research.net/index.php/fqs/article/view/466/996> [June 8th, 2019]
36. McCann J., Peppé S., Gibbon F.E., O'Hare A., & Rutherford M. (2007). Prosody and its relationship to language in school-aged children with high-functioning autism. *International Journal of Language and Communication Disorder*, 42: 682-702.

Bibliography

37. Moldin O.S. & Rubenstein L.R. (2006). *Understanding Autism from Basic Neuroscience to Treatment*. CRC Press.
38. Robert E. Owens, Jr. (2012). *Language Development: An Introduction* (8th Ed). Geneseo, State University of New York.
39. Roberts J.M. (2014). Echolalia and language development in children with ASD. *Communication Autism*, 11:55-74.
40. Ruble, L. A. & Dalrymple, N. J. (2002). COMPASS: A parent-teacher collaborative model for students with autism. *Focus on Autism & Other Developmental Disabilities*, 17(2), 76-83.
41. Scheuermann, B., & Webber, J. (2002). *Autism: Teaching does make a difference*. Belmont, CA: Wadsworth.
42. Schmuck, Richard (1997). *Practical action research for change*. Arlington Heights, IL: IRI/Skylight Training and Publishing. Available at: <http://www.qualitative-research.net/index.php/fqs/article/view/466/996> [June 08th, 2019].
43. Scott, M. (2007). Identification and Evaluation of Children with Autism Spectrum Disorders. *Pediatrics*. Available at: https://www.researchgate.net/publication/5878190_Identification_and_Evaluation_of_Children_With_Autism_Spectrum_Disorders [june10th, 2019]
44. Scovel, T. (1998). *Psycholinguistics*. Oxford: Oxford University Press.
45. Sigridur, L. J., Evald, S., Ingibjorg, S. A., & Solveig, S. (2011). Children Diagnosed with Autism Spectrum Disorder before or after the Age of 6 Years. *Research in Autism Spectrum Disorders*.
46. Simon, N. (1975). Echolalic speech in childhood autism. *Archives of General Psychiatry*, 32, 1439-1446.
47. Smith, T. (2001). Discrete Trial Training In The Treatment Of Autism. *Focus on Autism and Other Developmental Disabilities*, 86-92.
48. Sundberg M.L., Partington J.W. (1998). *Teaching language to children with autism and other developmental disabilities*. Pleasant Hill, CA: Behavior Analysts Inc.
49. Sundberg ML. (2008). *VB-MAPP Verbal Behavior Milestones Assessment and Placement Program: a language and social skills assessment program for children with autism or other developmental disabilities: guide*. Concord, CA: AVB Press.

Bibliography

50. The National Institute on Deafness and Other Communication Disorders. (2000). *Speech and Language Developmental Milestones*. NIH Publication No. 00-4781. Available at <https://www.readingrockets.org/article/speech-and-language-developmental-milestones> [June 11th, 2019]
51. Trawick-Smith, J. (2006). *Early child development: Multicultural perspective* (4th Ed.). Boston, MA: Allyn & Bacon.
52. Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
53. Weismer SE, Lord C, Esler A (2010). Early language patterns of toddlers on the autism spectrum compared to toddlers with developmental delay. *Journal of Autism Development Disorder* 40: 1259-1273.
54. Wood, D. (1998). *How Children Think and Learn* (2nd Ed). Oxford: Blackwell.
55. Zainal,Z (2007). *Case Study as a Research Method*. Faculty of Management and Human Resource Development: Universiti Teknologi ,Malaysia.
56. Zeldovich, L. (2018). The evolution of ‘autism’ as diagnosis, explained. *The DSM5’s take on autism: five years on*.

Appendices

Appendix A

الجمهورية الجزائرية الديمقراطية الشعبية

وزارة التعليم العالي والبحث العلمي

جامعة ابي بكر بلقايد تلمسان

كلية الاداب واللغات

قسم اللغة الانجليزية

الى مدير مركز التوحد

بسمة أمل - الرمشي-

تلمسان

الموضوع: طلب ترخيص المداومة لإجراء بحث علمي.

انا الممضي اسفله السيد: ياسو عبد الرحمان رئيس قسم اللغة الإنجليزية. أتقدم اليكم سيدي مدير المركز بطلبنا هذا والمتمثل في طلب ترخيص لمداومة بحث علمي وذلك بالسماح لطالبتنا "حيالي يسمين" المولودة في 1994/09/11 بمغنية لإجراء بحث علمي حول الطفل التوحدي، وكذلك الاتصال ببعض الاساتذة العاملين بالمركز.

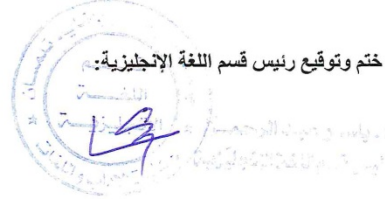
وفي الختام نرجو من حضرتكم قبول هذا الطلب وأخذه بعين الاعتبار.

تقبلوا سيدي فائق الاحترام والتقدير.

تلمسان في:

07 JAN 2019

ختم وتوقيع رئيس قسم اللغة الإنجليزية:



تسلم هذه الشهادة في حدود ما يسمح به القانون.

Appendix B



الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التعليم العالي والبحث العلمي
Ministry of Higher Education and Scientific Research



UNIVERSITY OF ABOU-BAKR BELKAID-TLEMEN
FACULTY OF LETTERS AND LANGUAGES
DEPARTMENT OF FOREIGN LANGUAGES
SECTION OF ENGLISH

جامعة ابي بكر بلقايد - تلمسان
كلية الآداب واللغات
قسم اللغة الانجليزية

طلب تسهيل مهمة

الى السيد: مدير النشاط الاجتماعي والتضامن لولاية تلمسان

السلام عليكم سيدي المدير...

يرجى منكم سيدي المدير تسهيل مهمة الطالبة:

يسمين هبالي السنة الثانية ماستر تخصص علم اللغة بجامعة ابي بكر بلقايد - تلمسان - وذلك لإجراء بحث علمي حول الطفل التوحدي وهذا في اطار تحضير أطروحة الماستر.

تقبلوا منا سيادة المدير فائق الاحترام والتقدير.

رئيس قسم اللغة الانجليزية



Appendix C

الجمهورية الجزائرية الديمقراطية الشعبية

ولاية تلمسان

مديرية النشاط الاجتماعي

رقم/.../.../...م.ن.إ.ت/ 2019

رخصة إجراء دراسة ميدانية

الطالب (ة) :

.....

.....

المستوى الدراسي :

الشعبة :

الهدف من التريص :

موضوع الدراسة :

المؤسسة المستقبلية :

تحديد العينة :

مدة التريص :

ابتداء من إلى غاية و.....

الملاحظات :

المدير
رئيس مصلحة
الأشخاص المعوقين وترفيتهم

الملاحظات
المدير
رئيس مصلحة
الأشخاص المعوقين وترفيتهم

Appendix D

الجمهورية الجزائرية الديمقراطية الشعبية

ولاية تلمسان

مديرية النشاط الاجتماعي

رقم/.../.../... م.ن.ا.ت / 2019

رخصة إجراء دراسة ميدانية

الطالب (5) : ديلمين، جمال محمد

.....

.....

المستوى الدراسي : السنة الثانية مساس

الشعبة : اللغة الإنجليزية الاختصاص : علم اللغة

الهدف من الترخيص : تحضير أطروحة الماجستير

موضوع الدراسة: تطور اللغة عند الطفل التوحد

المؤسسة المستقبلية: جمعية الأمل لأطفال التوحد بالولاية العنينة
جمعية التوحد تلمسان A.A.T

تحديد العينة:

مدة الترخيص: 12 يوم

ابتداء من 23/04/2019 إلى غاية 05/05/2019

الملاحظات:



السيد: مال
نائب مصلحة حماية
الطفولة والمؤسسات التربوية



Appendix E

Speech-language Pathologists' Interview

I am Master student of English and I am undertaking an investigation on Language Development in children with Autism spectrum Disorder. Your cooperation would be very helpful for the well running of my research and your efforts would be greatly appreciated.

1. How long have you been dealing with autistic children?
2. What is autism? And why is referred to as a spectrum?
3. Does the child develop autism or is born with?
4. What is the relation between autism and language?
5. How many autistic children do you work with in a session? And how many sessions a week are there?
6. What are the methods do you use with autistic children in order to develop their language?
7. What is the program followed when teaching autistic children?
8. How do the autistic children react when you tell them to do something?
9. Do positive /negative reinforcement and punishment take place when dealing with autistic children? And how?
10. Can an autistic child become a normal child?

Appendix F

1. منذ متى وأنت تتعامل مع الأطفال المصابين بالتوحد؟
2. ما هو مرض التوحد ولماذا يشار إليها باسم الطيف؟
3. هل يصاب الطفل بالتوحد أو يولد به؟
4. ما هي العلاقة بين التوحد واللغة؟
5. كم عدد الأطفال المصابين بالتوحد الذي تعمل معه في الجلسة؟ وكم عدد جلسات الأسبوع؟
6. ما هي الأساليب التي تستخدمها مع الأطفال المصابين بالتوحد من أجل تطوير لغتهم؟
7. ما هو البرنامج الذي يتبع عند تعليم الأطفال المصابين بالتوحد؟
8. كيف يتفاعل الأطفال المصابون بالتوحد عندما تطلب منهم القيام بشيء ما؟
9. هل يحدث التعزيز الإيجابي / السلبي والعقاب عند التعامل مع الأطفال المصابين بالتوحد؟ وكيف؟
10. هل يمكن أن يصبح الطفل المصاب بالتوحد طفلاً طبيعياً؟

Appendix G
Observation scheme

Element of Observation	Practical Observation at PCCMD	Practical Observation at AAT
<p>ABA</p> <p>Antecedent (instruction)</p> <p>Show me</p> <p>Give me</p> <p>Tell me</p> <p>Do this (imitate)</p> <p>Behavior (child's response)</p> <p>No response</p> <p>Imitating</p> <p>Echolalia</p> <p>Noise</p> <p>Avoiding eye contact</p> <p>Correct action</p> <p>Incorrect action</p> <p>Consequence (reinforcement/punishment)</p> <p>Positive reinforcement</p> <p>Negative reinforcement</p> <p>Positive punishment</p> <p>Negative punishment</p> <p>Teaching format</p> <p>One-to-one</p> <p>Group</p>		

Appendices

<i>TEACCH</i> Physical structure Individualized schedules Work system Visual structure of materials in tasks and activities		
---	--	--

Appendix H
Test of Articulation

الحرف (Letter)	موجود (+) (exists)	غير موجود (-) (does not exist)	ابدال (substituted by)
أ			
ب			
ت			
ث			
ج			
ح			
خ			
د			
ذ			
ر			
ز			
س			
ش			
ص			
ض			
ط			
ظ			
ع			
غ			
ف			
ق			
ك			
ل			
م			
ن			
ه			

Appendices

			و
			ي

Appendix I
Easy to Difficult Sounds

ب-م-و-ف	الحروف الشفوية
س-ز-ص	الحروف الاسلية
ث-ذ-ظ	الحروف اللثوية
د-ت-ط	الحروف النطعية
ر-ن	الحروف الذوقية
ل-ض	حروف حافة اللسان
ي-ش-ج	الحروف الشجرية
ك-ق	الحروف اللهوية
ح-خ-ع-غ-ه	الحروف الحلقية

Appendix J
Puzzles



Summary

The aim of this research work is to investigate how the autistic children are taught in order to develop their language in two mental disabilities centers in Tlemcen. It relies on a sample of two speech language pathologists. Moreover, data were collected qualitatively using two research instruments: a structured interview directed to the speech-language pathologists and a structured classroom observation. The main results revealed that both SLPs misunderstand the methods of teaching autistic children, and thus face serious difficulties when dealing with them. Consequently, this affects autistic children negatively.

Key Words: autistic children, develop their language, mental disabilities. Speech-language pathologists.

Résumé

Le but de ce travail de recherche est d'étudier la manière dont les enfants autistes sont enseignés afin de développer leur langage, dans deux centres pour handicapés mentaux à Tlemcen. . Il s'appuie sur un échantillon de deux orthophonistes. De plus, les données ont été collectées qualitativement à l'aide de deux instruments de recherche: un entretien structuré destiné aux orthophonistes et une observation en classe structurée. Les principaux résultats ont révélé que les deux orthophonistes comprenaient mal les méthodes d'enseignement des enfants autistes et se heurtaient donc à de sérieuses difficultés. Par conséquent, cela affecte négativement les enfants autistes.

Mots-clés : les enfants autistes, développer leur langage, handicapés mentaux. Les orthophonistes.

الملخص

الهدف من هذا البحث هو استكشاف كيفية تعليم الأطفال المصابين بالتوحد من أجل تطوير لغتهم وكذلك في مركزين للإعاقات العقلية في تلمسان. يعتمد على عينة من اثنين من أخصائيي أمراض النطق. علاوة على ذلك، تم جمع البيانات نوعياً باستخدام أداتين بحثيتين: مقابلة منظمة موجهة إلى أخصائيي أمراض النطق واللغة وملاحظة القسم. أظهرت النتائج الرئيسية أن أخصائيي أمراض النطق واللغة يسيئون فهم أساليب تعليم الأطفال المصابين بالتوحد، وبالتالي يواجهون صعوبات خطيرة عند التعامل معهم. وبالتالي، هذا يؤثر على الأطفال المصابين بالتوحد سلباً.

الكلمات المفتاحية: الأطفال المصابين بالتوحد، تطوير لغتهم، للإعاقات العقلية، أخصائيي أمراض النطق واللغة.