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**Primary School Teacher's Awareness about Dyslexia: Case Study
of Five Educational Institutions of Tlemcen**

Dissertation submitted to the Department of English as a partial fulfilment of the
requirements for the degree of Master in Language Studies

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Declaration/Statement of Originality

I hereby declare that **Primary School Teacher's Awareness about Dyslexia: Case Study of Five Educational Institutions of Tlemcen** is my own work and that all sources that I have used have been indicated and acknowledged. It contains no material previously published or written by another person nor material, which has been accepted for the qualification of any other degree or diploma of a university or other institution. I also certify that the present work contains no plagiarism and is the result of my own investigation, except where otherwise stated.

Safia Abir REMACI

Dedication

I dedicate this modest work to:

My parents

Who fostered my craziness and my creativity.

My husband

Who was supportive and encouraging.

My future students

All whom I love

My haters

And of course to **ME**

Aknowledgments

In the name of ALLAH the most gracious, the most merciful

All praise is to ALLAH for providing me with the courage and the ability to carry out this study.

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Abstract

Teachers deal with pupils who have various types of learning difficulties, which may be symptoms of some specific learning disabilities such as dyslexia, a language-based disorder characterized by difficulty in reading, word recognition, spelling, reading fluently, decoding and difficulty in speaking.

The present study intend to investigate primary school teacher's awareness for this disability and their ability to identify pupils who might be dyslexic. In order to answer the research questions of the study, a case study including 60 teachers from various primary schools in Tlemcen, Algeria was undertaking. Moreover, it uses a mixed methods approach to qualify and quantify the data collected, a questionnaire for teachers, semi-structured interview and classroom observation.

Accordingly, this work emphasizes that awareness and acquaintance among primary schools teachers in Tlemcen of dyslexia is poor. Hence, it is recommended that all teachers need to have compulsory training programs that stress the understanding of learning disabilities especially dyslexia and the importance of accommodating learners' needs.

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List of Abbreviations

ADI International Dyslexia Association
BDA British Dyslexia Association

GENEGAL INTRODUCTION

Visual disabilities, hearing problems, and even mental retardation have been the focus of scholars' attention for a long time. However, with the progression of the educational system, attention is shed on a particular group of pupils who are better off from these disabilities but have learning problems and difficulties, which impedes their accomplishment. One of these challenges is reading difficulty, known as dyslexia. Reading and writing are so important in the learning process where a learner's success in other disciplines is mostly dependent on these skills. If these skills are poor or incorrect, it leads to a lack of understanding of the subject and poor educational achievement. This reading issue encompasses various symptoms including poor spelling, reading fluency, and difficulty in expressing oneself. Discrimination and social exclusion may be the result of non-diagnoses of dyslexia.

Teachers, in general have to interact with a variety of learners and be familiar with their requirements. Teacher awareness refers to recognition and comprehension of a phenomenon in the educational system. At the primary level, it is a crucial to identify children with this learning disability because dyslexia is a sub-discipline of learning impairments. It is reasonable to assume that teacher's awareness and understanding of special needs are weak because the term dyslexia is an unknown and confusing term for many teachers. The purpose of this work is to investigate to what extent the primary teachers in Tlemcen which may be considered as a sample of the Algerian school as a whole, are aware of this disability and to better understand their perceptions about it in addition to their ability to identify dyslexics and manage an educational session with those pupils.

Consequently, this research attempt to answer the following questions:

1. How well are primary school teachers informed about dyslexia?
2. Are they able to identify dyslexic pupils in their classes?
3. Do they know how to manage their classrooms with dyslexic and non-dyslexics?

These questions led to formulate the following hypotheses:

1. Teachers' understanding of dyslexia is low.
2. The ability of teachers to identify dyslexic children is limited.
3. The ability of teachers to manage classrooms with dyslexic and non-dyslexics children is poor.

To achieve the previous established objectives, it drives me to design a case study seeking to collect qualitative and quantitative data from a variety of sources relying on a two types of research instruments namely questionnaire, and classroom observation. The results will be analyzed based on a mixed approach combining qualitative and quantitative methods. The current work is structured into three chapters. The first chapter tackles the theoretical framework. It is divided into two main ideas; the former gives an overview of learning disabilities and mainly dyslexia taking into consideration its causes, symptoms, characteristics and neurological aspects of this phenomenon. The latter focuses on the situation of the teachers' awareness of about dyslexia in primary schools, especially on the pedagogical aspect. In addition it discusses the possible reasons of this lack and some common misconception about this pathology. The second Chapter is concerned with the practical part and raises two main issues. The first provides a description of the methodology used with a detailed description of the data collection procedures and the research tools. The second handles the analysis and interpretation of the data collected. Furthermore, this chapter also aims to answer the research questions by confirming or disconfirming the research hypothesis and then ends with the research findings. At last, the third chapter discusses potential solutions to the research problem highlights a set of pedagogical activities, strategies, and recommendations that aims helping teachers to recognize dyslexic pupils and make working with them easier.

CHAPTER ONE

Literature Review

1. Introduction

This chapter attempts to highlight some issues regarding dyslexia. It aims at analysing teachers' awareness of this phenomenon and their perceptions of dyslexic children in the Algerian school. This work begins by looking at the definitions; causes; characteristics and neurological aspects of this disability. It also shed light on dyslexic's behavior in the classroom, adding to some common misconceptions about dyslexia.

1.2 Learning Disabilities

When people are asked what schools are for, a common reply is: to help children learn (Santrock, 2001, p.238).

The subject of learning difficulties is recent in the field of special education. There has been a long-standing focus on disabilities, such as auditory, visual, and mental retardation disabilities. However, as the educational system evolved, attention has begun to be paid to another category of children who are better off with these disabilities, but suffer from learning problems and difficulties, especially on the academic side, which hampers their achievement. In many countries, the term learning disability is used to describe pupils who are not making appropriate progress in school, particularly in basic skill areas such as language, reading and numeracy.

1.2.1 Definition of learning disabilities

For more than four decades, there has been a debate about what constitutes a definition. Samuel Kirk first coined the term in 1960s. He used the term 'learning disabilities' when he delivered a speech to an educational conference. According to kirk (1962) Learning disability is defined as a disorder or delay in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subjects resulting from a psychological handicap caused by possible cerebral dysfunction and/or emotional or behavioral retardation, sensory deprivation, or cultural and instructional factors.

This Definition was current for a short period of time before falling out and being amended or modified in light of fresh knowledge or changing opinions. The following definition is used in the US, under the reauthorized and amended version of the Individuals with Disabilities Education Act of 1997:

Specific learning disability means a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written, that may

manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or environmental, cultural or economic disadvantage (cited in Lyon, 2002, p.47).

Many experts use the following alternative definition:

... Learning disability is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (i.e. sensory impairment, mental retardation), social and economic disturbances or environmental influences (i.e. cultural differences, insufficient/inappropriate instruction, psychogenic factors) it is not the direct result of those conditions or influences (Hammill, Leigh, McNutt & Larsen, 1981, p.689).

Even after defining learning disabilities, operationalizing the concept to establish criteria for identification is challenging.

1.2.2 Types of Learning Disabilities

A lot of study has gone into identifying different forms of learning disabilities. The broadest categories are those that highlight the exact skill area in which the individual is having problems:

- severe reading disability (dyslexia)
- severe problems with arithmetic and mathematics (dyscalculia)
- severe problems with written expression and handwriting (dysgraphia)
- severe spelling difficulties (dysorthographia)
- severe problems in recalling names, symbols and vocabulary (dysnomia)

These several forms of learning disabilities are not mutually exclusive, and an individual may struggle in more than one of the categories listed above. Dyslexia, for example, affects many elements of literacy development, such as reading, writing, and spelling, and many dyslexic individuals struggle with arithmetic.

1.3 Dyslexia

According to the statistics of the National Bureau of Statistics (2012) published by the ministry on National Solidarity and Family, thirty per cent of the school population have specific learning difficulties and six per cent have specific reading disability “dyslexia”. Dyslexia is described as a specific language-based disorder characterized by difficulties in the development of accurate and fluent word decoding skills, usually associated with insufficient phonological processing and rapid naming abilities. These difficulties in word decoding are unexpected in relation to learner’s age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment (Fletcher et al., 2002).

Before going into details about the term "dyslexia," it is useful to understand its background. In 1878, a German neurologist named Adolph Kussmaul was interested in adults with reading problems. He used the term “word blindness” to describe his patients’ difficulties of reading and writing. After nine years, the term was switched to the current term “dyslexia” by the German ophthalmologist Rudolph Berlin.

1.3.1 Definition of Dyslexia

Ott (1997) claims that there are more than 50 definitions may be discovered in the literature in an attempt to get the appropriate one concerning dyslexia.

One reason for this diversity can be contributed to the fact that dyslexia has been the concern of many disciplines that view dyslexia from different angles in return (Miles, 1995).

Traditionally, dyslexia has been connected with the assumption that certain students' trouble reading is due to visual defects, notwithstanding their average intelligence. Scientific research that present inconsistent conclusions concerning the origins of dyslexia arose around the turn of the century, resulting in a crisis in defining this learning disability accurately. Recently, there has been renewed discussion over dyslexia, with many people denying its existence. Pennington (2002).

According to (Elliot et al., 2014), Dyslexia is an unexpected reading issue. It is the type of reading trouble children experience when nothing else is bothering them except the fact that they have not mastered the code, or how to read and spell words. In addition, they have strong language skills, have had excellent instruction, and are not second-language learners. It is a conundrum since their capacity to understand words has been impaired, preventing children from learning to read and write.

Tonnesen (1997) added that tuition has no effect on dyslexia. Dyslexics might take years and years to improve their reading and writing skills. On the other hand, dyslexia has an advantage in that these students are generally skilled with language. Furthermore, they have average or greater oral language comprehension, which is a skill that will serve them well in the future.

Persistent difficulty of learning to read indicates that, despite their teacher's best efforts, the learner continues to fall behind their classmates in reading. The youngster begins school like everyone else, but struggles to acquire the fundamentals of word decoding. As a result, by the conclusion of the school year, the rest of the class has caught up and this student has fallen behind. Olsen (2002).

According to (Shaywitz, Morris et al., 2008), the main feature of dyslexia is that the student's reading is "effortful and sluggish," rather than fluent.

Dyslexia is difficult to define since it does not lend itself to a simple definition. .

According to Rice and Brooks (2004), dyslexia can be characterized in more than one manner, but each version explains a distinct notion. The definition of dyslexia by Tunmer and Greaney (2010) illustrates how it differs from other types of reading problems; he succeed in defining dyslexia by dividing it into four parts:

Tunmer and Greaney (2010) claimed that dyslexia is a group of learning disabilities that manifests itself when accurate and/or fluent reading and writing skills, particularly phonological awareness, develop slowly or with difficulty. This might entail issues with reading, writing, spelling, numeracy, or musical notation, among other things. Despite having access to learning options that are effective and suitable for most other youngsters, these issues continue.

Moreover, dyslexics can be found at all levels of success, and they may also have a variety of secondary characteristics that need to be addressed, such as difficulty with auditory and/or visual perception, planning and organizing, short-term memory, motor abilities, or social interaction.

They added that dyslexics frequently adopt compensatory tactics, which can mask their difficulties. People with dyslexia can also develop compensating strengths, which can help them improve in their education.

Furthermore, they stated that early identification, followed by a systematic and sustained process of highly individualised, skilled teaching, primarily focused on written language, with specialist support, is essential for learners to participate in the full range of social, academic, and other learning opportunities across the curriculum.

However, Lyon's definition focuses more on the characteristics of dyslexia; he stated that dyslexia is a learning difficulty caused by a neurological problem. It is marked by problems with accurate and/or fluent word recognition, as well as poor spelling and decoding skills. These challenges are usually caused by a phonological component of language impairment, which is often overlooked in connection to other cognitive talents and successful classroom instruction. Problems with reading comprehension and a lack of reading experience might stifle the development of vocabulary and background knowledge as secondary repercussions. Lyon(2003).

Definitions have shifted in the previous decade to include phonological impairment. According to Reid(2005), dyslexia is typically characterized by difficulties in Phonological processing, working memory, rapid naming, and automaticity of basic skills. Thus, even after a century of research, dyslexia remains a contentious subject in developmental neurology, psychology, and education.

1.4 Causes of dyslexia

When first researchers, reading authorities and clinicians began to search for the causes of dyslexia they searched for one factor as the main source of the problem. Even though the technological developments that have allowed researchers to visualize the brain functions of dyslexia, the exact causes are still unclear. According to Rief and Stern (2010), dyslexia is a hereditary neurological ailment that frequently runs in families since it appears to have a genetic foundation.

Possible causes of dyslexia may be grouped into three main deficit theories after many years of research, which are: The Phonological deficit theory, the Magnocellular deficit theory and the Cerebellar deficit theory.

1.4.1 The phonological deficit theory

Bishop and Snowling (2004) proposed the phonological deficit theory and it is related to the weaknesses in phonological skills which involve hearing and manipulating sounds in spoken language (e.g. phonemes, syllables) and they are necessary for developing strong word reading skills.

This theory is based on the idea that dyslexics have trouble processing phonological information and Snowling (2000) added that dyslexics have serious difficulties in storing, representing and retrieving sounds. Despite the fact that the phonological deficit hypothesis was the most popular causal explanation for much of the late twentieth century, several

scientists criticized it such as Stein and Walsh. According to them dyslexia is caused by a sensory deficiency in the big nerve cells in the eye called "magnocells." "The magnocellular deficiency theory" is the name of the inquiry into this notion.

1.4.2 The Magnocellular Deficit Theory

According to this idea, dyslexia's visual, learning, and processing problems are caused by a malfunction in the magnocellular system and it postulates that the magnocellular route is selectively disturbed in some dyslexic persons, resulting in visual processing impairments and aberrant binocular control and visuospatial attention via the posterior parietal cortex. The channel between the retina and the visual cortex of the brain is called "magnocells," and it transmits information about fast movement or changes in the surroundings.

According to Tilly(2008), Dyslexics have a problem with their visual magnocellular system, which is the component of the neural system that allows animals to see. Until the inquiry of Nicolson and Fawcett, who developed the cerebellar deficit hypothesis, the phonological and magnocellular deficit theories were the prevalent ideas. Stein (2001)

1.4.3 The Cerebellar Deficit Theory

According to this view, dyslexia is caused by a minor cerebellar impairment. The cerebellum is in charge of smooth movement, maintaining posture and balance, controlling motor learning, and automating learned abilities. Furthermore, the cerebellum controls motor systems by relaying information from the frontal brain and sensory systems to a motor error system that corrects errors. The cerebellum, for example, conveys information essential for limb movement correction when it receives input from the visual system Stoodley and Stein(2011). Additionally, Nicolson and Fawcett claim that direct and indirect cerebellar causation can create issues with writing, spelling, and reading. In addition, dyslexic learners' handwriting has been connected to the idea of cerebellar dysfunction. As a result, it is possible that the cerebellum's dysfunction causes dyslexic learners' incapacity to execute.

In summary, the phonological hypothesis describes the difficulties dyslexics have with phonological processing. The magnocellular theory proposes that dyslexic persons' issues are linked to visual and auditory deficiencies. The cerebellar theory thus indicates that learning and automaticity are connected to a deficit in central processing.

1.5 Dyslexia and the Brain

For many years, it was typical for parents and teachers to wrongly think that a person with dyslexia struggled to read or learn language skills because they were just not clever enough or did not study hard enough. Yet, according to Galaburda (1985) dyslexia is a language-based impairment with a neurological foundation, not related to individual's intelligence or motivation. Furthermore, studies of anatomical abnormalities in the brains of people of all ages reveal disparities between those with and without reading disabilities.

Let us take a quick glance at the brain to provide some framework for understanding what causes dyslexia and how a dyslexic brain functions.

The brain is primarily of three major parts: the cerebrum, the cerebellum and the brainstem.

a) The Cerebrum¹

The left and right hemispheres of the brain are separated by a large wrinkled section of the brain. Based on the visible grooves or fissures that can be observed, each hemisphere is further separated into four lobes. The occipital lobe is located in the back of the skull, the frontal lobe is located on the forehead and the parietal and temporal lobes are located in the middle.

Broca's region on the frontal lobe and Wernicke's area on the rear half of the temporal lobe are two tiny areas directly associated to language that are particularly crucial for reading (near the occipital lobe).

b) The cerebellum

It controls physical motor control - muscle movements, posture, and balance - and is located at the back of the head. It has been linked to reading, although it mostly serves to keep you alert.

c) The brainstem

This smaller portion, which is connected to the spinal cord, regulates eye and mouth movement, as well as sensory signals (heat, cold, pain, bright, loud), respiration, hunger, awareness, heart function, body temperature, and involuntary motions such as coughing and sneezing.

¹. The largest part of the brain. Areas within the cerebrum control muscle functions and control speech, thought, emotions, reading and writing. <https://www.cancer.gov/publications/dictionaries/cancer-terms>

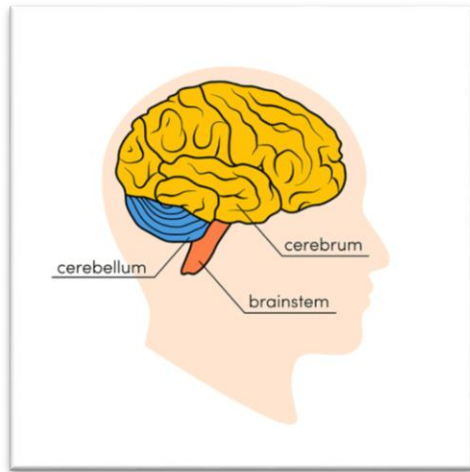


Figure 1.1 The three major parts of the brain. Brunswick (2009)

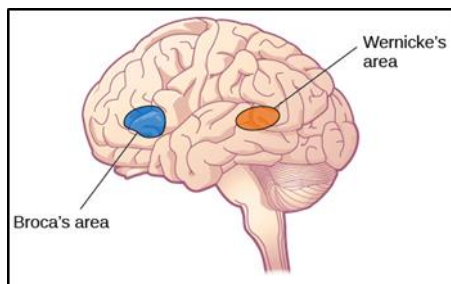


Figure1. 2. Broca and Wernicke's areas location. Brunswick (2009)

The brain also composed of two types of matter: gray matter and white matter. When we look at a brain, we observe gray matter, which is largely made up of nerve cells. Its major role is to process data. While the white matter is located in the deepest areas of the brain and is made up of connective fibers wrapped with myelin, a covering meant to promote neuron transmission. White matter is principally in charge of information transport throughout the brain. Dehaene (2009)

Booth and Burman (2001) discovered that dyslexics have less gray matter in the left parietotemporal region than nondyslexic. However, a lack of gray matter in this area of the brain may result in difficulties comprehending language's sound structure (phonological awareness).

In addition, many persons with dyslexia have less white matter in this location than average readers, which is significant since greater white matter is associated with improved reading ability (Deutsch et al, 2005). Less white matter may impair the capacity or efficiency of brain areas to communicate with one another. Other structural investigations

of persons with and without reading difficulties have revealed variations in hemispherical asymmetry. Most right-handed, nondyslexic people's brains are asymmetrical, with the left hemisphere bigger than the comparable region on the right.

Heim and Keil (2004), on the other hand, discovered that right-handed patients with dyslexia exhibit a pattern of symmetry (right equals left) or asymmetry in the other manner (right larger than left). The specific source of these size disparities is unknown, but they appear to be linked to dyslexic people's reading and spelling difficulties.

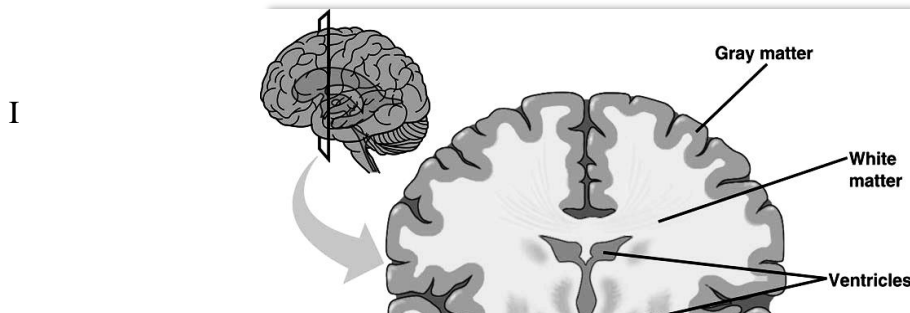


Figure 1.3 A schematic drawing of the human brain, indicating the two main tissue classes (gray matter and white matter) and the ventricles (filled with cerebrospinal fluid) on a coronal slice. Brunswick (2009)

1.6 characteristics and signs of dyslexia among primary school pupils

Since the current dissertation focuses on primary school teachers 'awareness about dyslexia, it is more appropriate to focus on the its characteristics and signs in primary school children.

1.6.1 Characteristics of dyslexia among pupils

According to Reid (2008), dyslexia is defined by three main characteristics: difficulties with word reading, spelling, and/or reading fluency. A learner with dyslexia will have one or more of these deficits, although the degree may vary among pupils. Dyslexia manifests differently in various kids since it occurs on a spectrum of severity. As a result, dyslexia does not have a consistent profile; it might manifest differently in various persons. Clinical signs and symptoms may also overlap or coincide with other diseases, known as co-existing or comorbid ailments, adding to the complication.

However, several distinguishing characteristics distinguish dyslexia from other forms of reading and writing challenges, impairments, and disorders. Dyslexia is a language-based reading disorder. The following are the main features of dyslexia:

- Poor spelling: Problems with learning to spell or correctly spelling words, particularly familiar terms.
- Poor fluency: Slow, incorrect, or strained oral reading (slow reading rate).
- Poor decoding: difficulty in reading or sounding out unfamiliar words properly.
- Poor reading comprehension: Even if spoken language comprehension abilities are good, poor decoding and restricted fluency might obstruct reading comprehension in moderate to severe cases.

Dyslexic pupils fear reading aloud and read slowly Reddic (2010). According to Brunswick (2009), dyslexic students may have a limited vocabulary and difficulties spelling, thus they frequently choose simpler terms that are easier to spell; for example, instructors frequently discover the same word spelled differently in the same piece of writing.

According to The International Dyslexia Association (2004), the following are the primary sources for these characteristic difficulties, which can be found in psychological evaluations:

- Phonological awareness deficits, including difficulty segmenting (or breaking apart), blending (or putting together), and manipulating (or modifying) spoken syllables and sounds in words.
- Poor phonological memory or working memory (difficulty remembering knowledge about sounds and words in order to read or to spell).
- Weak phonics skills, beginning with learning the names of letters and the sounds that go with them; after learning the letters and their sounds, the reader must apply that knowledge to written words. This procedure necessitates orthographic mapping, which involves matching spoken sounds (phonemes) to appropriate letters or letter patterns (graphemes).
- Difficulties with rapid naming of common objects, colors, numbers, or letters of the alphabet.

1.6.2 Signs of dyslexia among primary school pupils

Dyslexia has been referred to as a "hidden handicap" because kids with dyslexia may demonstrate cognitive talents that hide their challenges. Examining common strengths alongside usual weaknesses might thus be instructive in understanding the symptoms of dyslexia.

The specific strengths and challenges of pupils with dyslexia at different ages and stages are presented in the following table:

Grade level	Signs	Qualities
Preparatory class to grade 2	<ul style="list-style-type: none"> ○ Confuses names or pronunciations of letters with similar sounds (e.g., the letters ح/ه...س/ص). ○ Difficulties in naming letters, connecting letters to sounds, or mixing sounds. ○ Words are mispronounced because sounds are mixed together (الم/علم). ○ Has a family history of reading and spelling problems. ○ Confusion between left and right; lag in hand dominance. ○ Has difficulty remembering the alphabet, numerals, days of the week, and other sequences. 	<ul style="list-style-type: none"> ○ Imaginative thinking ○ curiosity ○ acceptance of fresh ideas ○ maturity regarding their age
Grade 2 to 3	<ul style="list-style-type: none"> ○ Has trouble breaking spoken words down into sounds or syllables. ○ Complains about how difficult reading and spelling are, or avoids reading. ○ Has difficulty reading/spelling sounds in order. ○ Reading is either incorrect, sluggish, or not automatic. 	<ul style="list-style-type: none"> ○ The capacity to address real-world issues. ○ Excellent listening comprehension. ○ Understands new topics quickly. ○ Large speech vocabulary. ○ Solving puzzles is enjoyable.

	<ul style="list-style-type: none"> ○ When reading, he or she relies on visuals or memory. ○ Similar-looking letters and words are mixed together. 	
Grade 3 to 5	<ul style="list-style-type: none"> ○ Oral language talents are far superior to writing ability. ○ Confuses similar-sounding phrases. ○ Uses ambiguous Language. ○ Has difficulties reading new words and sounding out multisyllable words. ○ There are no ways for sounding out new words. ○ Has a poor self-esteem or anxiety. ○ Has difficulty memorizing dates, names, numbers, random lists, and math facts. ○ The spoken vocabulary is less extensive than the hearing vocabulary. 	<ul style="list-style-type: none"> ○ Understanding of stories told to him. ○ Strong cognitive abilities include conceptualization, logic, imagination, and abstraction. ○ Large vocabulary regarding their age.

Table1.1: Signs and Qualities of dyslexic pupils.

1.7 A Dyslexic Child in the Classroom

According to sandman (2014), dyslexic pupils are generally clever, but the disorder makes learning difficult. Teachers that have dyslexic kids in their classrooms can have a huge beneficial impact on their students' educational progress. . Some of the challenges that dyslexic pupils face are in acquiring the literacy skills (i.e., learning to read, spell, express their thoughts on paper and acquire adequate use of grammar). However, a dyslexic child who struggles to develop these skills can also experience a great deal of agony and stress when he/she may feel mentally abused by their peers within the school environment.

An article “Pupils with Dyslexia in The Classroom” published in Las Vegas (2022) mentioned that pupils with dyslexia One of the most essential aspects of dyslexia is its impact on behavior. When a person's dyslexia is not addressed and treated appropriately, it can lead to a variety of behavioral disorders. These behavioral disorders can take many various forms, but here are a few that are frequent among dyslexics who have not gotten effective dyslexia therapy. As mentioned in the article the following are the most common behavioral consequences that might arise when a dyslexic youngster is not properly treated for his or her learning difficulties. These issues may be avoided with careful therapy, and the kid can recognize that, while they learn differently, they are just as capable of achieving as the pupils around them.

a. Resignation

If learning issues are not addressed, students with learning difficulties tend to disengage from educational contexts over time. Many dyslexic children lose interest in academic activities because they believe they are beyond assistance. They will never be able to study as well as others, no matter how hard they try. They get resigned to the challenges they face, pupils who are experiencing these issues may be seen as lazy, even if their actions are more a result of their lack of confidence in their ability to do the duties that have been assigned to them.

b. Acting out

Dyslexic pupils who have not received treatment for dyslexia, they may begin to act out and have disciplinary troubles. This might emerge in a variety of ways. Outgoing pupils may try to disrupt academic work and reading time by cracking jokes and diverting other students' attention away from the given job. This is a coping method for them to divert attention away from their failure to perform at the required level. Dyslexic youngsters may sometimes act out of frustration when they observe others performing chores that makes them feel insufficient. As a result, kids act out in front of their peers as well as the teacher.

c. Avoidance

This is a prevalent behavioral issue among dyslexic youngsters who utilize it as a coping method. A dyslexic will frequently use a number of methods to avoid reading, spelling, or writing simply because they are aware of

their language challenges and wish to avoid any situations in which those issues are revealed. To escape circumstances that require reading, a dyslexic youngster may begin to crack jokes, act out in other ways, or even run away. A dyslexic child do not hate being in school, he/she simply hate being put in a position where he/she knew that he/she would fail. Furthermore a dyslexic child will face consequences for their avoidance techniques, but they will still choose to use them rather than facing a situation that may cause them humiliation, he also use a number of methods to avoid doing homework, reading books, or engaging in any other activity that they find scary because of their language difficulties. They may avoid these situations since they are tough and demanding for them.

1.8 Misconceptions about Dyslexia

'A letter or word reversals' is a widespread myth regarding dyslexia; parents and instructors believe that pupils who encounter such reversals have the disease; however, this is not a reliable sign because these reversals can occur in early learners. Adams (1990) proposed that these reversals reflect pupils' developmental levels rather than the probability of dyslexia. Most children, on the other hand, do not maintain these developmental reversals for long, but those with dyslexia appear to.

Another common misunderstanding regarding dyslexia is that males are more affected than girls as stated by (Shaywitz et al., 1990). Nevertheless, boys and girls are virtually equally affected by the disease (Shaywitz et al. 1990). According to Ness and Southall, this misconception stems from the fact that boys are over-identified with dyslexia as compared to girls because boys participate in externalizing behavior, which is perceived as confrontational and disruptive to classroom learning (2010). Moreover many people believe that dyslexia can be outgrown (Tremaine Foundation, 2010), which is not true because dyslexia is a lifelong disease (Shaywitz et al. 2003) and intervention and remediation are only done to minimize the symptoms of this disorder and assist those with dyslexia read better.

Another common misconception about dyslexia is that high-achieving students with good grades cannot have dyslexia .Shaywitz(2013). However, students with dyslexia who receive appropriate intervention can succeed academically, but they will always need compensatory skills to read and learn, as Shaywitz emphasizes (2013).

According to Badian (2005), many people believe that persons with dyslexia see the text leap or move when reading. This myth indicates that dyslexia is a visual impairment, while dyslexia is largely a phonological loss that requires auditory processing and memory.

Badian(2005).

Individuals with dyslexia do not perceive words differently; rather, they struggle to make and retain the links between the symbols on the page and the sounds they represent

(Tunmer & Greaney 2010).

Furthermore, many think that dyslexia is caused by laziness. Teachers and parents may believe that their bright pupils who struggle academically are not putting out enough effort. As a result, they counsel them to work harder and read more. Students with dyslexia, on the other hand, work hard, and their workload is frequently three times that of their colleagues without dyslexia, simply because they are taught to strive harder (Denhart, 2008).

Lastly, according to William and Lynch (2010), students with dyslexia are judged to have poor intellect. Teachers and parents who are unfamiliar with dyslexia believe that pupils who struggle to read have an intellectual handicap, but they really have a phonological deficit. According to William and Lynch (2010), several research findings show that children with dyslexia have normal to above-average intellect.

1.8 .1Teachers' Awareness about Dyslexia

Due to inclusion, more and more pupils with special educational needs are studying in general education classrooms.As a result, general education teachers are more responsible for students with dyslexia in inclusive settings as highlighted (Harr-Robins et al., 2012).He also added that it is the job of teachers to ensure that their educational requirements are satisfied in mainstream classes so they can succeed academically.

Many researchers discovered that ignorance of a pupil with dyslexia might cause teachers to think negatively about people who struggle with reading issues. (Kenny et al., 2003) mentioned that for the most part, those with reading disabilities may be perceived as slow or unintelligent, and that they might not receive adequate support and assistance from their teachers in the classrooms due to ignorance and misunderstanding of dyslexia. Teachers are still convinced that underachievement was either due to the lack of intelligence or laziness and still believe that any child can learn and succeed if he is motivated enough. Furthermore, pupils with dyslexia as a result of teachers' unawareness might suffer from low self-esteem, They may feel alienated, isolated, and embarrassed also they may feel like an outsider in their own classroom, unable to cope with their classmates.

Townend(2002).This very exact kind of ignorance can be fatal to the learning-disabled student's academic success. Hayes(2000).

As Kataoka (2004) mentioned, the lack of awareness implies that intervention is delayed, or never occurs at all, even if teachers are aware, many report feeling powerless because they do not believe they have the requisite abilities to assist. As a result, they feel a sense of powerless and helplessness, which has an impact on the working relationship between teacher and his pupil. Some teachers have low expectations of the kid, while others put the child's lack of development on their own lack of teaching skills, , while others have been reported to insult and even physically punish learners who suffer from learning disabilities (Karande et al., 2009). This can only mean that pupils with learning disabilities will be severely disadvantaged.

Dyslexia is still a confusing term for most teachers as reported by Wadlington (2005), in addition they pointed out that teachers frequently hold incorrect views regarding reading difficulties. Their research found that unfavorable attitudes against persons with dyslexia exist in schools due to ignorance and a lack of information about the illness. As a result of teachers' lack of awareness of dyslexia and late intervention, afflicted pupils may develop further problems where the situation can be even worse. Nevertheless, teachers frequently struggle to distinguish between dyslexic and slow learners. (Wadlington et al., 1996). It is regrettable that, rather than being a minority in special schools or special needs classrooms, most children with dyslexia may attend regular schools. As a result, teachers may feel overwhelmed while dealing with dyslexic students at the cost of others (Wadlington et al., 1996). According to Wadlington and Wadlington (2005), Teachers' views can have a detrimental impact on how students perceive themselves, since some may think themselves foolish or inferior, affecting their academic and personal life. First, Learners face embarrassment as a result of their bad test grades, then suffer from despair and anxiety as a result of the repeated succession of failures; this is called as the "snowball effect."

Teachers may be concerned about dyslexia in a variety of ways. They may be unmotivated to learn more about dyslexia, and this lack of desire may be attributed to the fact that schools do not provide adequate ongoing support to teachers once they are hired, They may fail at modifying or adapting work to accommodate the needs of the dyslexics.

Wadlington(2005). Over and above that, teachers often do not give parents the benefit of the doubt when it comes to their child's lack of ability, believing that parents are not experts in understanding optimal practices for their children. Robuck(2007).

Fekih (2018) noted that teachers in Algeria lack the awareness needed to teach struggling readers where he stresses the need for raising teachers' consciousness of dyslexia. In addition, this lack of understanding and awareness might be detrimental to the academic

progress of persons with educational special needs. The unfavorable sentiments do not end with considering them as uninspired pupils; some refer to such kids as "Class Clowns" and humiliate them because of their underachievement. Smart(2011). Similarly, Fekih argued that as a result of their ignorance, pupils with dyslexia would continue to face difficulty in reading where their academic progress may be negatively affected.

Elias (2014) claimed that Teacher knowledge and awareness of dyslexia are critical in understanding the learners' requirements, developing positive attitudes toward affected learners, and assisting them in overcoming their challenges and raising their attainment levels. In contrast, a study conducted by Japan's Ministry of Education revealed that teachers are unaware whether their students are experiencing specific learning issues(Kataoka et al., 2004), and in the same manner. Sónia (2012) discovered in her research performed in Portugal that instructors are unaware of dyslexia and feel helpless to help since they are not pedagogically equipped to address the needs of their dyslexic pupils. Furthermore, Serra (2008) emphasized the importance of raising awareness among not only teachers but also the educational system as a whole, claiming that children with learning disabilities like dyslexia, dysgraphia, or dyscalculia are the ones we see most in schools and are the ones most neglected by our educational system. Elias (2014) added that teachers require further training to help them be well educated and equipped to address the requirements of their students, particularly those with dyslexia.

Dyslexia may be bewildering difficulty for most teachers due to system neglect and/or other causes that require more investigation. It should be noted that teacher unawareness has negative consequences for those with dyslexia where those in Algeria might not be different.

1.8.2 Why this lack of awareness?

According to Wadlington (2005), there are several factors other than the instructors' attitude that might explain this lack of awareness. For example, a lack of access to important material, insufficient pre-service training, or a lack of ongoing professional development. Nonetheless, there are many teachers who are able to perform their best in all situations, no matter how demanding or challenging they may be. Most of the time, the teacher has a variety of problems in providing a unique classroom experience for all learners, he must face everyday pressure and stress in order to assure the success of all students in the

classroom, not to mention the additional challenges of educating individuals with dyslexia. As a result, the issue is not just to supply adequate learning materials or to employ proper assessment procedures, but also to be held accountable for the educational performance of all learners in their care.

The reason why teachers do not acknowledge dyslexia as a real disability is due to the lack of teacher training in the field of dyslexia. Wadlington and Wadlington (2005). As a result, so many parents report that several teachers refuse to accept the diagnosis of dyslexia, and they believe it is principally due to ignorance of the phenomenon. They also mentioned that there are various misconceptions about dyslexia; many believe that dyslexia only affects individuals during their schooling career, but only few know that it is, indeed, a lifelong disability. They suggested that the involvement of school administration and/or local authorities is the major reason for teachers' lack of knowledge, claiming that school management does not play a significant enough role in teacher understanding of dyslexia. A lack of accountability is another reason for lack of awareness. Teachers often believe that the duty for special education falls on all teachers, not simply the one in charge of a school's special needs department. Hayes (2000). He also added that it is critical for students that teachers see themselves as special needs teachers in order to deliver quality education to all students. Furthermore, the fact that special needs teachers show a more positive attitude toward learning difficulties, dyslexic students have a higher chance of succeeding in their courses. As a result, teachers' knowledge is critical to the achievement of dyslexics. Any teacher who lacks understanding and compassion reports a greater degree of stress (Karande et al, 2009).

Forlin and Jobling (2003) prove that the lack of pre-service and in-service training in the area of dyslexia is the most important reason for lack of awareness.

1.9 Conclusion

This chapter outlines crucial facts about learning disabilities and about dyslexia in a focused way by tracking its different causes; characteristics; signs of this phenomenon. This chapter also includes the brain and dyslexia, dyslexic pupils' behavior in the classroom and some common misconceptions about dyslexia. In addition, it focuses on the situation of primary schools teachers' awareness about this pathology. The methodology of the research study will be discussed in the next chapter.

CHAPTER TWO

Data Collection and Analysis

2.1 Introduction

This part of the study intend to investigate teachers' knowledge about dyslexia among primary schools. It also aims at assessing their abilities to identify dyslexic children and their ability to manage educational sessions containing dyslexic and non-dyslexic pupils. Thus, after reviewing the existing literature, this chapter represents the practical part of this study; it outlines the study methodology, research methods, target population and sample selection. It also includes a description of research questionnaire and classroom observation. Furthermore, this section offers a detailed analysis, interpretation, and discussion of the results obtained.

2.2 The Choice of Methodology

One of the most difficult considerations in a research article is deciding the research technique to utilize to collect data. Since the ultimate goal of this study is to investigate teachers' awareness, assumptions and knowledge concerning dyslexia, the descriptive method is regarded as the best approach that corresponds to the topic's quality and type.

2.3 Population and Sampling

In order to address this topic properly the choice of the target population must be adequate and precise. For that reason, the study's target population is primary school teachers in Tlemcen while the sample consisted of 60 teachers of 05 primary schools in Tlemcen, but only 48 teachers returned the questionnaire. In addition, the teachers were picked at random; they are from different gender and age.

2.4 Research Instruments

This research relies on two different instrument are used for gathering data; namely questionnaire and classroom observation.

2.4.1 Questionnaire

A questionnaire collects data about participants' feelings, knowledge, and attitudes. It may be used to collect data from a large number of people in a short amount of time .Mulumba(2008). A questionnaire is regarded the most appropriate measurement tool since it ensures anonymity and asks the identical questions to all participants and they are free of the pressure that could develop while completing the questionnaire in the presence of a researcher when completing the questionnaire in addition to the fact that it is less time consuming.

After undertaking the literature review of dyslexia and teachers' awareness, a questionnaire was designed by the researcher in order to meet the research goal and the research questions. The questionnaire has been addressed to primary school teachers. The questionnaire was designed to assess teachers' awareness and understanding of dyslexia.

2.4.2 Description of the questionnaire

The questionnaire items were created to answer the study questions. The questionnaire is also intended to assess primary school teachers' awareness of dyslexia. Moreover, the items are original and were designed to produce easy, suitable, and exact responses. The questionnaire include 14 questions of different forms (close-ended, open-ended, multiple-choice, and Likert scale questions) and they are grouped into two sections.

The first section is about demographic information, and the second one consist of questions about the level of knowledge of dyslexia, perception of the ability to detect dyslexic students and perception of managing educational sessions that consist of both dyslexic and non-dyslexic pupils.

- **Section one: Demographic information**

The aim of this section is to obtain information about the respondents (teachers), namely their gender, age, their level of education and their teaching duration.

- **Section two: Teaching Experience and Dyslexia Awareness**

consist of 10 different questions, it is intended to investigate teachers' capacity to identify children with learning disabilities and their experience in identifying hidden signs of dyslexia in indirect way plus their ability to manage a classroom sessions that contain dyslexic and non-dyslexic pupils.

Q1: seeks to investigate teachers' general consciousness to manage a classroom session with both dyslexic and non-dyslexic pupils.

Q2: aims at shedding light on how teachers identify children that have reading difficulty.

Q3: investigate teachers' capacity to identify hidden signs of dyslexia in indirect way.

Q4: seeks to know if dyslexics tested the same way as the other pupils, plus a justification for the answer.

Q5: intended to know whether teaching pupils with learning disabilities makes the teacher more attentive or stressful.

Q6: asks teachers according to their point of view what can be done to overcome reading difficulty

Q7: seeks to explore what suggestions teachers give when they are asked what can be done to help those pupils learn more effectively.

Q8: this question is associated to teachers experience; it intended to know what makes a good learning environment according them.

Q9: aims to know if teachers think that therapists' sessions are beneficial for them.

Q10: was added to reveal teachers 'perspective about those children who have reading difficulty and many other signs appear on them, whether they see it q normal thing or have a scientific explanation.

2.5 Classroom observation

A formal or casual observation of teaching in a classroom or other learning environment is known as a classroom observation. Classroom observations are frequently used to offer teachers with constructive critical feedback aimed at improving their classroom management and teaching skills. Fellow teachers, administrators, or instructional experts typically conduct them. As an extension of formal job-performance reviews, school administrators observe instructors on a regular basis. There are two types of classroom observation:

1. .Structured/unstructured observation: the investigator can arrange his observation ahead of time to make it more structured, or he can just take notes about the observed situation.
2. Participant / non-participant observation: the researcher might be a participant in the observed situation or simply observe it without interacting.

Structured and non-participant observation was used in the current study. It was used during educational sessions that took place in the classroom. However, the goal was to observe how teachers interact with dyslexic pupils, their awareness of dyslexia, their ability to identify dyslexic children and how could they manage the classroom sessions.

2.6 Data Collection Procedure

Teachers were asked if they wanted to participate in this study, hence, the questionnaires were handed by hand to teachers in the school where they teach and details were given of how to fulfill the questionnaire. Due to several challenges that our country faced, such as a lack of time the poor feedback received. Consequently, questionnaires were distributed again to primary school teachers but the feedback was again strictly insufficient to meet with the methodological properties.

Moreover, the researcher requested permission from teachers to collect data through observation and she attended several classroom sessions with different teachers in several primary schools.

The findings of classroom observation and the completed questionnaire were instantly captured.

2.7 Ethical considerations

The welfare of the participants should be taken into consideration when conducting a research. Researchers are obligated to preserve the rights of participants. In this investigation, the following ethical principles were followed:

Confidentiality and anonymity: The fact that participants were not asked to put their names on the questionnaire confidentiality and anonymity were ensured in this study.

Deception, informed consent and right to withdraw: In this study, participants were fully informed of the study's goal in order to provide the most accurate replies possible. The aim of the study was clearly stated on the questionnaire, allowing participants to make an educated decision about whether they wanted to participate or not.

Furthermore, the participants were informed that they had the right to withdraw from the study at any time or the right to withdraw their questionnaire after having completed it.

Protection from harm: There was no psychological or physical risk to any of the participants in this research.

2.8 Data Analysis

2.8.1 Analysis and Interpretation of Teachers' Questionnaire

- **Section one : Demographic information**

Q1. Gender:

1- Male

2- Female

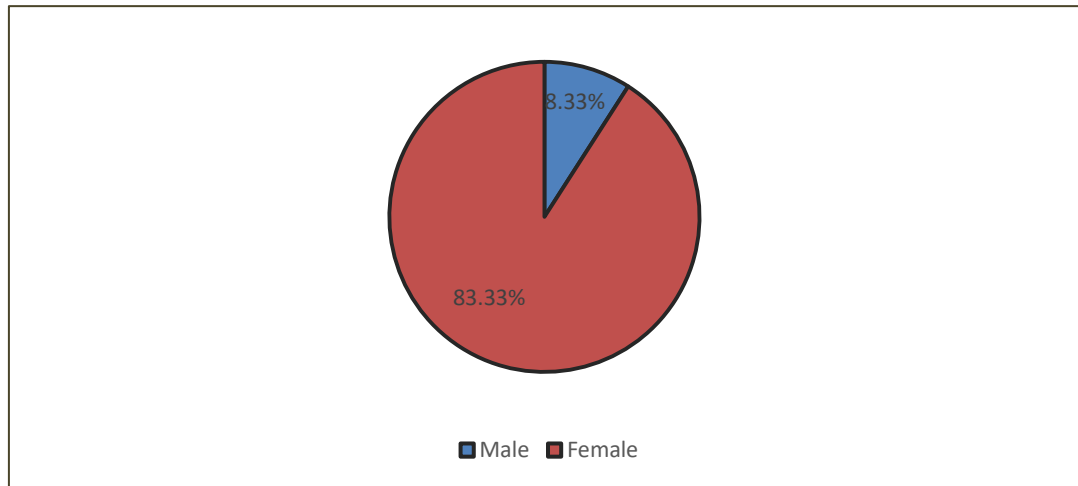


Figure 2.1 Primary schools teachers’ gender

This question seeks to elicit teachers’ gender; Figure2.1 obtains the rate of male and female at the primary schools.

Q2.Age

1-20 to 29 years

2-30 to 39 years

3-40 to 49 years

4- more than 50 years

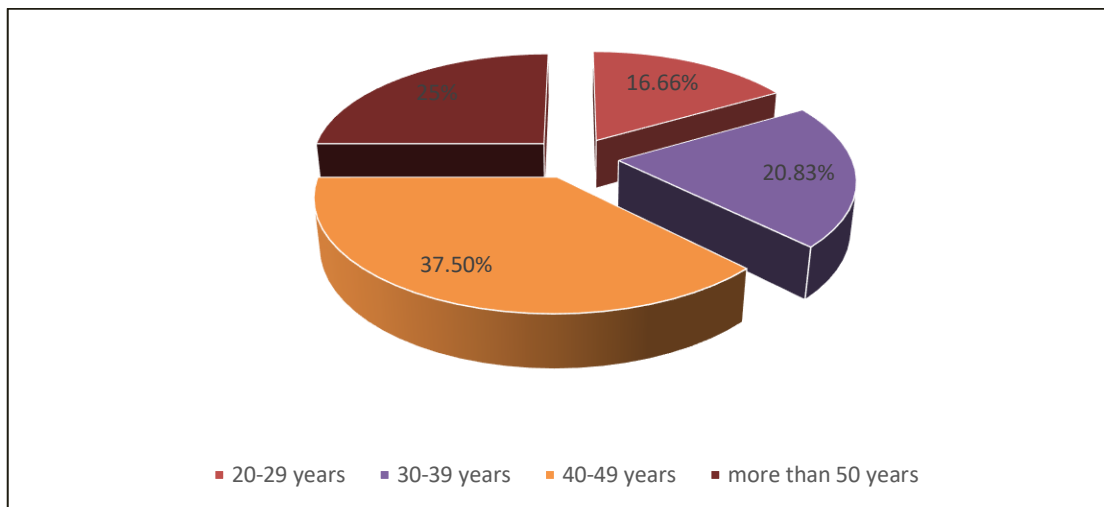


Figure 2.2 Primary schools teachers’ age

This question intends to explore teachers’ age. Figure2.2 above reveals that the majority of the sample teachers (37.5%) have from 40 to 49 years old while (20.83%) of them have age that range from 30to 39 years old. Teachers who have 20 to 29 years old represent (16.66%) of the target population and the rest have more than 50 years old and they go for (25%).

It appears that the most of teachers are not very young. They might have a knowledge about dyslexia.

Q3. For how long have you been teaching?

1-less than 05 years

2- 05 to 10 years

3-11 to 15 years

4- more than 16 years

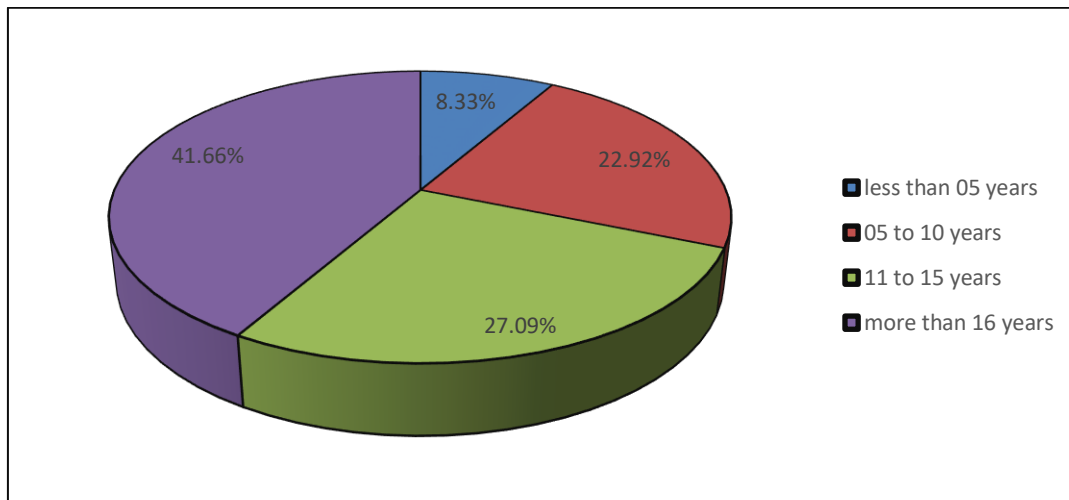


Figure 2.3 Primary schools teachers' years of teaching

As it appears in figure2.3, the majority of the sample teachers (41, 66%) have over 16 years of teaching experience, (27, 09%) for 11 to 15 years and (22, 92%) for 05 to 10 years. However, only less than half of the whole sample have been teaching from a considerable amount of time, less than 05 years for (8.33%). We conclude from these results that having teachers aware of dyslexia can be quite promising; especially that the great part of them will most likely be in serves for long time.

Q4. What is your level of academic qualification?

1-License degree

2-Magister degree

3-Master degree

4-Doctorat degree

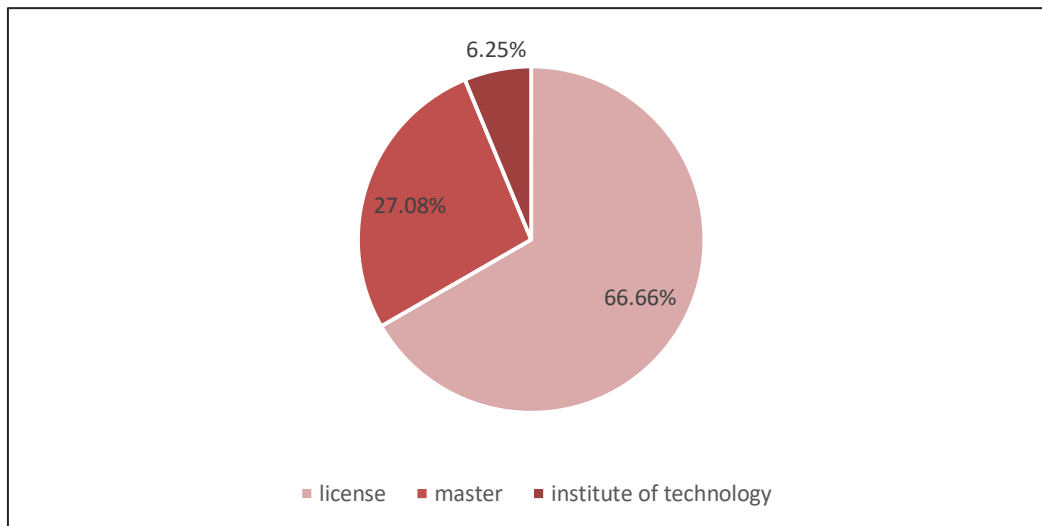


Figure 2.4 Primary schools teachers' professional degree

Figure 2.4 shows that the majority of the teachers (66.66%) have a License degree and (27.08%) have a Master degree. As we can notice that (6.25%) from the teachers sample answered differently, they completed their studies in the institute of technology. Thus, one may conclude that the whole sample of teachers have an average academic qualifications, which may imply that these teachers have not taken several courses that may cover numerous concerns in teaching, most likely learning impairments and dyslexia.

- **Section two:**

Q1. How can you manage an educational session that contains several types of pupils?

This question aims to investigate whether teachers identify children with learning disabilities from those who do not have and how could they manage a classroom session. The answers were different a quite interesting but unfortunately not all teachers answered this questions and some of them were out of the track.

The majority of teachers take into consideration that they teach different types of pupils and they remarked that some of their pupils have learning disabilities. Their answers were interesting, some of them prepare lessons and simplifies them so children with learning disabilities understand the lesson as the other pupils, other teachers does not move to the next lesson until those children get it right while some teachers during their session they simplifies terms and give a lot of examples to help their pupil understand. Sadly, many teachers did not answer this question while others think that all pupils are the same, some of their answers comes as the following:

- *It is normal; all pupils learn the same way.*
- *I give lessons the same way to all pupils.*

- *Children should revise their lessons at home with the help of their parents.*
- *I give my lesson then asks them if they understood, all of them say yes*

Q2. How could you identify pupils that have reading difficulties? How you deal with them?

When asking pupils to read and they read slowly and start stuttering that how (52.08%) of the sample teachers recognize children with reading problems while (20.83%) detect them through spelling activities. Moreover, many teachers said that children with reading issues find reading sessions boring and always want to escape them and few teachers claimed that those pupils do not talk a lot and have no friends and others said that they see letters backwards and mix between letters that sound the same.

- How to deal with them?

Approximately all sample teachers deal with them by asking them to read more and more, others advise them to revise the letters at home. In addition, some teachers teach them to spell new word and even reward them when reading correctly. A countable number of teachers agreed that additional reading sessions would be beneficial.

It is clearly that teachers can recognize pupils with reading problems and they seek to help them but the method differ from teacher to teacher.

Q3. Do these pupils have other difficulties?

Yes

No

The objective behind this question is to investigate teachers' capacity to identify hidden signs of dyslexia in indirect way. All sample teachers' answer was "yes". Apparently, teachers have some knowledge about dyslexia and might they might recognize dyslexic children.

Q4. Have you noticed other signs/ symptoms from the following:

Hearing difficulty Hypermobility

Seeing difficulty Reverse letters when writing

repeated spelling mistakes play the clown role inside the classroom

Memorizing problems Stuttering when reading

Laziness Difficulties copying from the board or the book Trouble maker being calm in an exaggerated way

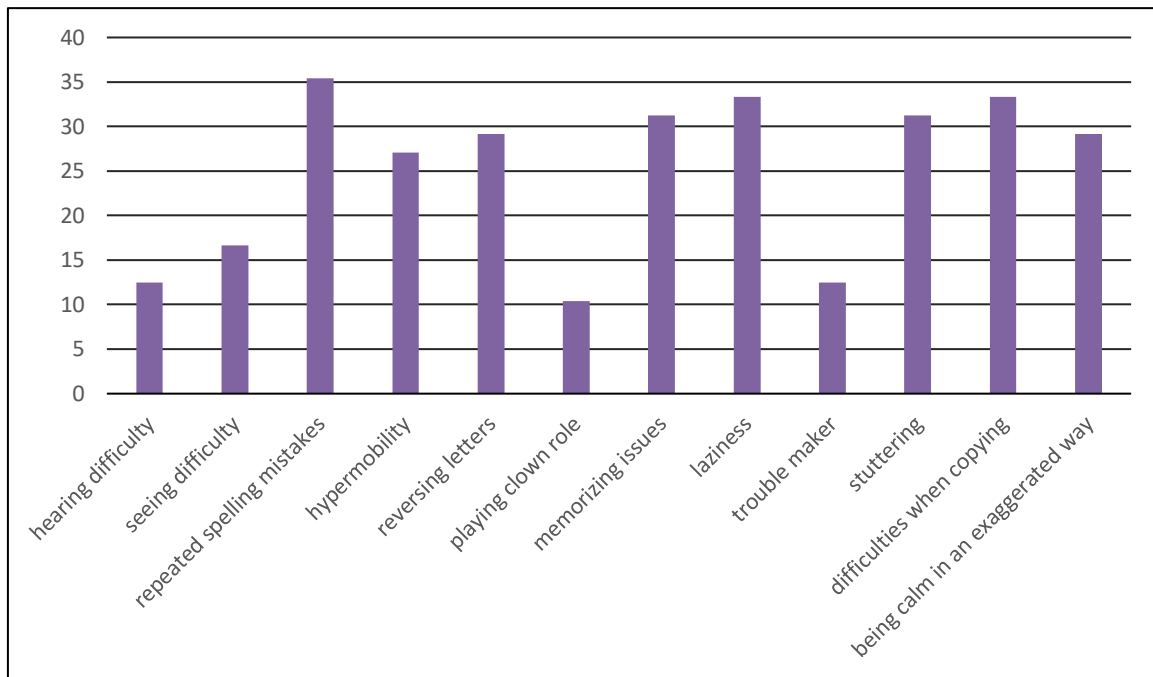


Figure 2.5 Dyslexia Signs and their Recognition by Teachers

Teachers' answers indicate that the majority of them know about dyslexia.

Q5. Do pupils with learning disabilities test the same way as the rest? Justify your answer

Yes

No

All answers were "yes", all teachers test their pupil the same way

- **Justification**

Unfortunately, the majority of teachers did not answer this part of the question. Some answers were repeated:

- *The school admonition oblige us to test and evaluate all pupils the same way.*
- There is no time to test them alone.
- I prepare the pupils before tests.

In addition, many teachers justified their answer by saying that all pupils are the same so they test them the same way.

Q6. does teaching pupils with learning disabilities makes you more attentive or stressful?

Justify

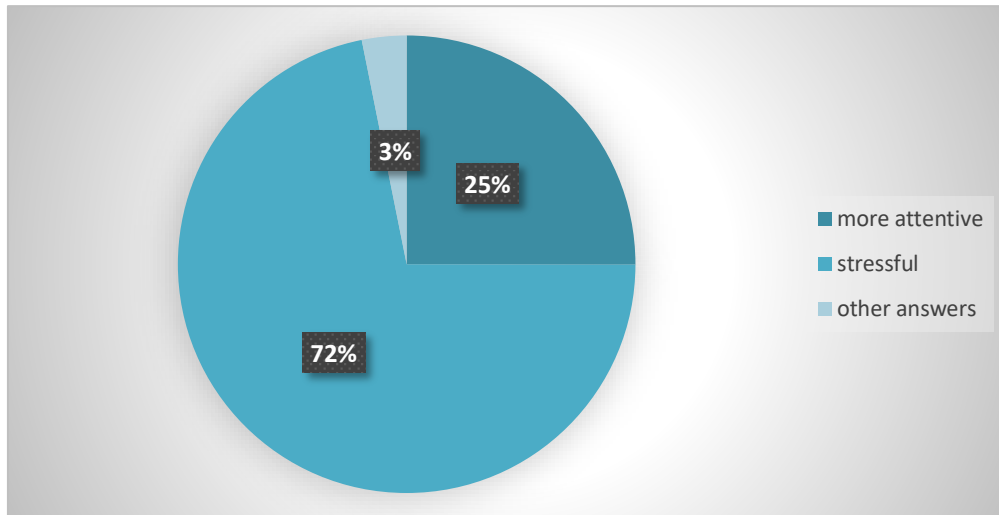


Figure 2.6 Teachers' attitude.

The results obtained clearly demonstrate that more than the half sample teachers (72%) do not feel at ease while teaching dyslexics. it makes them stressful while (25%) of them are more attentive during the session. (3%) have other answers.

- **Justification**

The majority of teachers who feel the stress justified their answer saying that the lack of time does not allow them to be more attentive and too many of them said that they are not specialist to deal with children with learning difficulties.

Being more attentive makes children feel that there are no differences between them and encourage them to overcome their difficulties. These were the (72%) of sample teachers' answers.

Other responses were as follow:

- *I am here to teach, they are not my responsibility.*
- *The administration should take care of them.*
- *I think those children have problems at home.*

According to these results, most of the teachers do not know how to manage a classroom with dyslexic and non-dyslexic pupils

Q7.According to you, what can be done to help those children overcome their reading difficulty?

The aim of this question is obviously clear and teachers' answers were captivating.

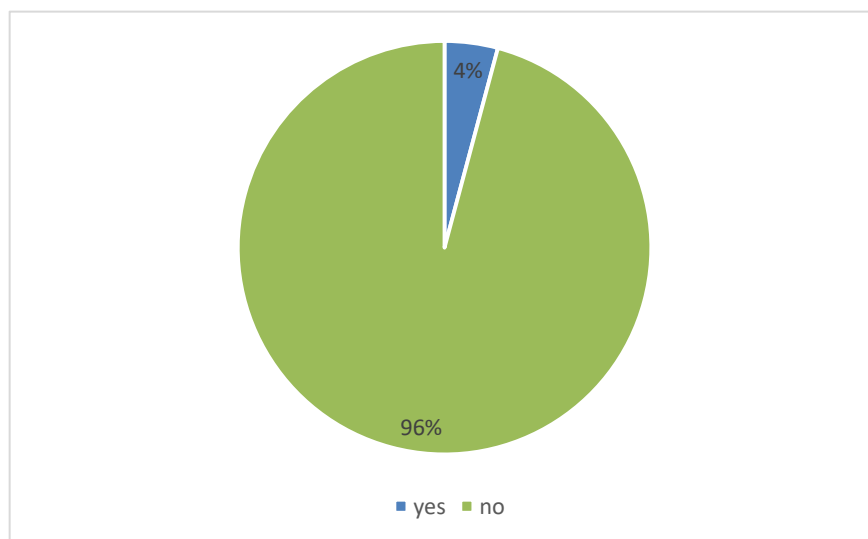
16 teachers agreed that the help of specialists, speech therapists would help them a lot while 10 of them see that reading a lot even at home and reading aloud will help them.

Moreover, 05 teachers suggested the help of the children parents, they said that the parent

must be patient with them and ask them to read very often. According to the rest of teachers, repetition is beneficial; they ask their pupils to repeat letters, words and sentences, and small paragraphs each time. Some teachers see that rewarding might help them a lot and encourage them to read. Few teachers see that it should be extra sessions for those children to help them overcome their difficulties and should take care of them from the beginning (from the first year).

Q8.. Have you received any special-needs education training, whether pre-service or in-service?

Yes No



to the

According to data

presented

Figure 2.7 Primary schools teachers' educational training. Above, the majority of English teachers (96%) did not receive any educational training regarding special educational needs of learners, while (4%) did. This raises crucial questions on the role that the concerned authorities play in this regard; especially that it is well known that they have regular seminars with inspectors throughout the year.

Q9. Do you agree that therapists' sessions would be beneficial for them?

Yes No

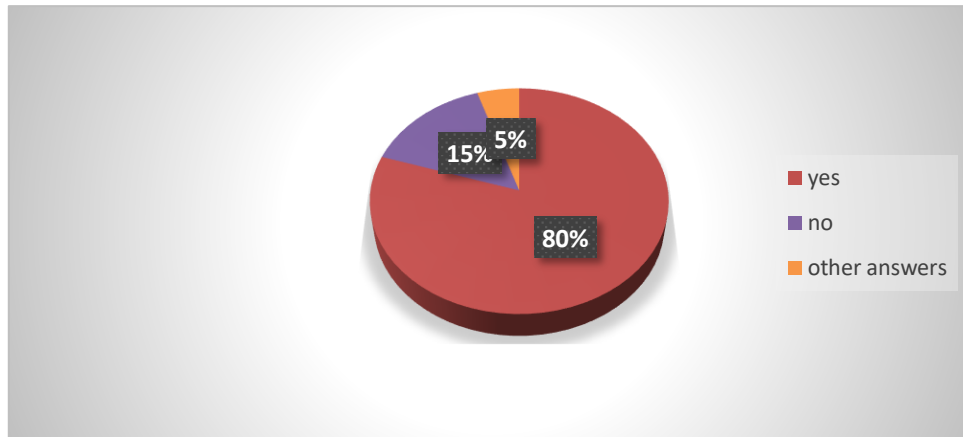


Figure 2.8 teachers 'agreement on therapists' sessions

Figure10 shows that the majority of teachers (80%) said yes while (15%) do not agree. However, some teachers have other opinion; their responses were as follow.

- *It depend on the child case and personality.*
- *They are just kids and their parents should help them at home, because there is a lack of time.*
- *It is not a matter of therapy; the program is hard and not suitable.*

We may conclude that teachers are aware that they teach dyslexic children and they need special care.

Q10. Do you think what those children with learning difficulties face have a scientific explanation or it is a normal thing? Justify your answer.

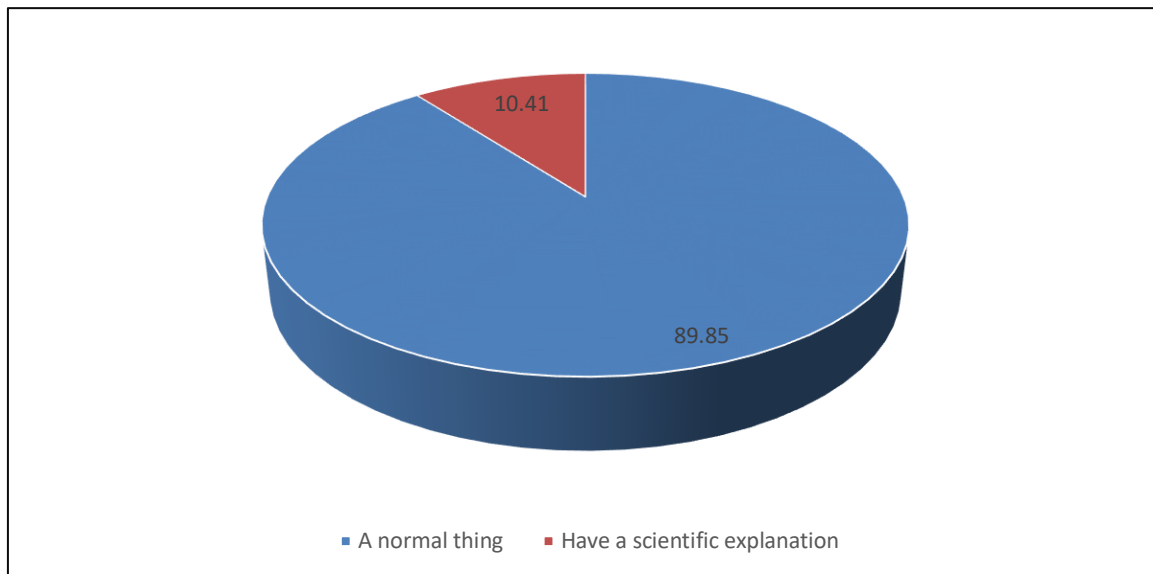


Figure 2.9 teacher's recognition of dyslexic pupils and dyslexia.

Approximately all teachers (89.85%) see it as a normal thing when (10.41%) believe that there is a scientific explanation behind what those children face. (See figure 2.9).

- **Justification**

89.85% of the teachers' sample had similar answers. According to them, those are just kids and still learning to spell and to read plus the lessons and activities, which are not suitable for their ages make, it hard for them. Furthermore, they also agreed that parent do not help them at home in a god way.

However, 05 teachers (10.41%) assumed that there is a scientific explanation, and their answers were very impressive, all of them detect that many of those children might be dyslexics.

2.8.2 Analysis and Interpretation of Classroom Observation

Observation was conducted to explore teachers' awareness of dyslexia and to assess their knowledge and their ability to recognize and manage dyslexics.

The observation was conducted in several sessions organized in different Tlemcen primary schools, where teachers were observed in the manner they interact with dyslexic children, if they are aware of their existence, and if they truly grasp what the term "dyslexia" signifies.

According to the findings, the vast majority of the observed teachers were unaware of the term dyslexia; also, they were unable to identify dyslexics in their classroom. As a result of their unawareness of dyslexia, they obviously did not know how to manage their dyslexic

pupils. However, few teachers (around 10%) who were observed were aware of the term dyslexia and attempted to identify and manage their classrooms that contains dyslexics.

In order to analyze the data collected, a number of hypotheses was put in place, which were grouped in three key area:

1. Hypothesis relating to teachers ‘knowledge about dyslexia

Teachers' understanding of dyslexia is limited. The theory was shown to be correct. Teachers' understanding of dyslexia was either inadequate or extremely terrible. Furthermore, there is no relation between teachers' gender and their knowledge about Dyslexia. The hypothesis was supported. Knowledge of dyslexia was found to be similar, irrespective to participants' gender. Both groups showed inadequate knowledge of dyslexia. According to the findings, there is no significant variation in teachers' knowledge about dyslexia; based on the number of years they have been teaching the study believed that teachers with more than 16 years of experience would be more educated about dyslexia. Since the median score for all groups indicate that teachers have poor knowledge of dyslexia, irrespective of the number of years they have been teaching. The implication is that schools should provide ongoing professional development in this area if teachers are to increase their awareness and management levels of dyslexia. Both groups of teachers; newly qualified and older teachers, are in need of continued training and support.

2. Hypothesis relating to teachers ‘ability to identify dyslexics

The capacity of teachers to detect dyslexia is poor. This theory is found to be correct.

The results revealed that teachers' ability to recognize dyslexic pupils was either inadequate or extremely bad since the majority of the sample teachers have dyslexic children and were not aware about their presence in their classrooms and it makes sense that teachers have poor knowledge about dyslexia.

3. Hypothesis relating to teachers ‘ability to manage a classroom with dyslexic pupils

Teachers' ability to manage classroom sessions with dyslexics is weak. The findings supports hypothesis 1 and 2 that stated teachers' knowledge of dyslexia and ability to identify characteristics are poor. Teachers have inadequate knowledge of dyslexia and weak ability to identify characteristics, so they are unable to manage a classroom session that contains dyslexics.

2.9 Summary of the findings

The conclusion that can be derived from the questionnaire and classroom observation data is that there is an urgent need for additional dyslexia education that targets both teachers and parents. However, an examination of the findings collected from primary teachers' questionnaire revealed that around half of the target demographic are unaware of it. Hence, few of them were able to identify some characteristics of dyslexia but they were unable to provide convincing responses.

The following points are noted after comparing and studying the results acquired from both instruments:

The majority of teachers reported that they did not receive any educational training or any input about dyslexia and since in most cases dyslexia signs become more apparent in the first years of education, It is critical to urge the appropriate authorities to take action to include educational training for teachers.

Approximately all teachers were unable to detect or manage dyslexia in their classes. As a result, all of the theories have been confirmed.

This is an incentive to provide some thoughts and recommendations to enhance the way primary schools deal with dyslexic pupils. The goal is to raise awareness among teachers as change agents that this phenomenon is worth addressing since it may impede children's mental and intellectual development.

2.10 Conclusion

This chapter outlines the study's practical work. It represents the methodology used in the research study, research instruments and the population. The actual work was carried out at various primary schools in Tlemcen. This chapter gives a detailed analysis and discussion of the data obtained from the teachers' questionnaire and classroom observation, which are the research tools used in this study. This chapter also discusses ethics in research.

CHAPTER THREE

Recommandations and Suggestions for Further Rsearch

3.1 Introduction

This chapter attempts to make some suggestions and to give some pedagogical recommendations for teachers to enrich their knowledge about learning disabilities especially dyslexia and to help them identify dyslexic children. These recommendations and suggestions will also help them managing an educational session with dyslexic and non-dyslexic pupils. This chapter also discusses several teaching strategies which can be applied to aid pupils overcome their learning difficulties. Lastly, this chapter discusses the limitation of the study and provides suggestions for further research.

3.2 Recommendations and Suggestions

Reading and writing are considered to be two of the most basic and natural skills that everyone can perform. Reading and writing influence significantly the ability to learn all the other subjects, but they have a strong impact on pupils' ability to establish a successful school career. Nevertheless, what if some pupils' ability to read and write is one of the challenging things to perform? As a result, completing academic activities may be such a strain; especially because many educational institutions across the world rely heavily on students' writing productivity in monitoring and evaluating their performance. This example situation is similar to what dyslexic students confront on a daily basis. In such circumstances, the teacher's position can be a game-changer in the educational careers of such students.

In the light of the investigation undertaken above, educating individuals with learning disabilities may be achieved by providing them with useful learning strategies. Based on the findings of this study, a number of pedagogical recommendations for teachers can be suggested in order to ameliorate their knowledge of dyslexia in addition to some of the most successful teaching strategies for teaching primary school pupils with learning disabilities such as dyslexia.

- Essentially, it seems urgent for teachers to enrich their knowledge about learning disabilities on general and about dyslexia in particular, teachers should not view dyslexia just as a reading impairment in a narrow sense, but rather should pay attention to all of its symptoms.
- Moreover, Teachers need to remember that dyslexia may create low motivation, excessive anxiety, and a bad attitude, not the other way around, which is why they should not jump to conclusions about their pupils' learning attitudes.

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- This study calls on the relevant authorities to pay greater attention to these types of learners, for example, they may construct educational training courses for teachers, both per-service and in-service, or create dedicated centers for them because approximately all of the participants said they had received any form of dyslexia training. It is noticed that, if so many instructors teach without training, dyslexic learners would be disadvantaged since their teacher will lack the knowledge and abilities to meet their particular educational requirements. The majority of instructors do not see the value in acquiring the information and skills necessary to manage dyslexia in their classrooms. The consequence is that the majority of dyslexic learners in Algeria are taught by teachers who lack the necessary tools to manage dyslexia.
- Furthermore, the establishment of a Special Needs Assistance Unit in every school in the country is required due to the necessity for ongoing in-service training and support. The government should hire learning support instructors who are competent to assist dyslexic students in a more customized structured program, which the classroom teacher cannot deliver. This type of unit would consist of a group of support professionals who are in charge of the academic, social, and emotional well-being of the students.
- In addition, this study suggests that instructors learn more about the psychology of learning because it enables a teacher to understand how to start the learning process, how to motivate, how to remember, and how to learn, as well as how the teaching process works. Educational psychology aids teachers in guiding pupils in the appropriate path in order to improve their capabilities.
- The current research also suggests that parents take their precautions to discover any potential dyslexia risk in their children at an early age. It specifically urges families not to keep their children in front of the television all day or to allow them to play with phones and computers at a young age. Rather, it advises parents to spend as much time as possible talking and playing with their children.

3.3 Teaching strategies

When teaching pupils with learning disabilities mainly with dyslexia and at the primary school level, teaching strategies play an important role in the success of the educational

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process and Understanding children with learning disabilities is crucial for teachers in order to offer a pleasant learning environment. There are several strategies that can be employed for pupils with dyslexia however; teachers should constantly keep in mind that not all kids with dyslexia will respond to the same strategies. According to (Pollitt et al., 2004) It is essential for teachers to determine what will work best for each pupil.

Pupils with dyslexia at primary schools require particular teaching strategies to boost their learning because this is a vital period for pupils' learning development. Children with dyslexia may have increased difficulties understanding the curriculum and will become increasingly conscious of their poor performance in reading, writing, and spelling when compared to their classroom peers if adequate help and teaching are not provided.

Moreover, less access to written materials can have an impact on their enrichment, ideas, skill practice, knowledge acquisition, and love of reading.

The Revised Code of Practice (2001) emphasizes the need of pupils progressing at a consistent rate in primary school in order to learn the abilities they would need in adulthood. Furthermore, the function of experienced teacher is critical in ensuring that growth is maintained at the individual level. As a result, teaching dyslexic children in order to help them improve their learning frequently necessitates teachers devising adopted ways to aid their learners. Assessment strategy, multimodal teaching strategy, reading strategy, numeracy strategy, and dyslexiafriendly classroom strategy are among the techniques that may be arranged according to their importance and application efficacy. According to Dymock and Nicholson (2013) assessment help planning suitable teaching programmes for dyslexics.

➤ Assessment

According to the International Dyslexia Association (2004), assessment is viewed as a tool to assist students in learning, growing, and maturing effectively. Assessment is a method for gathering and analyzing data on pupils' learning experience, accomplishments, and development. The learning perspectives are designed and the teaching process is tailored based on the evaluation results. Assessment also aids in determining the amount of success attained by particular teachers and institutions, as well as making rational decisions. It is critical to maintain the psychological safety of students while generating greater learning results. As a result, a conducive learning environment must be developed in the classroom, where pupils are not afraid to ask questions or make mistakes.

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Each school specifies the techniques and processes for measuring students' learning accomplishments and development while developing its curriculum. They must consider their pupils' learning achievements, needs, and capacities. Teachers familiarize themselves with the suggestions of pre-primary teachers or the joint group of pre-school teachers when developing learning accomplishments and evaluations for students in grade 1.

Types of Assessment

As the official website of the European Commission of Educational Systems (2022) mentioned, there are several types of assessment and all of them are used to assess pupils' progress and achievements.

- a. **Formative educational assessment:** this type of assessment help recognize some early characteristics of dyslexia. Formative educational assessment is used to assist students in learning by developing learning objectives, directions, particular steps, and learning perspectives. Formative educational assessment is offered throughout the learning process, even outside of the classroom, by monitoring students' behavior, interaction, collaboration, and so on.

Observation, interview, conversation, task analysis and consideration, and other procedures for formative educational evaluation are used.

Students are given information, primarily orally, but also in writing as necessary. In that scenario, the teacher makes a note in the practice books, test-paper sheets, accomplishment booklets, and so on. Information is provided about every pupil's learning process and current achievements or failures and what he/she should do to improve his/her performance.

- b. **Diagnostic assessment:** This form of assessment is intended to diagnose the existing condition, determine a student's accomplishments and development, and plan future learning opportunities. Diagnostic assessment is carried out in accordance with the evaluation criteria that have been negotiated in advance with the students. It is often conducted at the start and conclusion of a new learning phase (topic or course). Depending on what is to be assessed (the assessment aim), various diagnostic assessment procedures, such as practical and creative activities, tests, project work, and so on, can be utilized. Pupils should not be assigned more than one diagnostic task each day.

Short remarks give information about learning successes (tests and other assignments) for students and parents.

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- c. **Generalized summative assessment:** On completion of a shorter or longer schooling term (project, trimester, semester, year, etc.) and on completion of the primary education curriculum, a generalized summative evaluation is employed. This is a summary of a learner achievements throughout the course of a school year. The progress accomplished throughout a school-determined educational time is evaluated. The teacher considers indicators of the pupil's success levels as outlined in the Primary Curriculum. The outcomes are recorded in a Primary Education Diary, an electronic diary, or any other achievement assessment form selected by the school and/or teacher (the pupil's learning achievements and progress assessment records, assessment files, achievement booklets, electronic diary, and so on).

Assessment provides a greater help when identifying dyslexics. The first step in discovering characteristics and even strategies for dyslexic children is dyslexia testing. The British Dyslexia Association stated mentioned that the assessment itself may involve observing your children in their learning environment, talking with key adults involved with children's' learning, and asking them to take part in a series of tests.

According to the (BDA), these tests may examine pupils':

- Language development and vocabulary
- Reading and writing abilities
- Memory
- Logical reasoning
- The speed they can process visual and auditory (sound) information
- Approaches to learn

Assessment is intended to determine whether a child has dyslexia or not. It gives a definitive diagnosis of dyslexia, as well as a more complete view of the child's strengths and weaknesses and his cognitive profile.

- **Multi-sensory teaching strategy**

Multi-sensory teaching is an important part of teaching dyslexic kids. Effective education for dyslexic kids is similarly explicit, direct, cumulative, intense, and focused on language structure. Multisensory learning is the simultaneous use of visual, auditory, and kinesthetic-tactile pathways to improve memory and learning of written language. In

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learning to read and spell, links are routinely created between the visual (language we see), auditory (language we hear), and kinesthetic-tactile (linguistic symbols we feel) pathways (International Dyslexia Association, 2017).

According to Margaret Byrd Rawson, a former President of the International Dyslexia Association (IDA), dyslexic kids require a different approach to language instruction than is used in typical classes. They must be gradually and completely taught the fundamental parts of their language—the sounds and the letters that represent them—as well as how to put and take them apart. For conscious organization and retention of their information, they must practice having their writing hands, eyes, ears, and voices all functioning together." She added, Teachers that employ this method help children to detect speech sounds in words (phonemes) by speaking in front of a mirror or exaggerating their mouth movement. By uttering sounds for letters they see or writing letters for sounds they hear, students learn to relate speech sounds (phonemes) to letters or letter patterns. Students may repeat five to seven words that are dictated by the teacher and contain the sound of the new letter or pattern, the pupils find the sound that is the same in all the words as they learn a new letter or pattern. They may then find the new letter by looking at the words written on a sheet of paper or on the whiteboard.

Furthermore, other stages of language acquisition use the same approach of mixing movement with speech and reading. Hand gestures can be taught to assist students remember the meaning of a term. Students can use word cards to make phrases or physically move the words in sentences into different categories. They may rearrange sentences to form paragraphs. A three-dimensional, tactile assistance can be used to teach the parts of a tale. Overall, the hand, body, and/or movement are employed to aid language understanding and production.

Learners with dyslexia may struggle with fundamental language abilities such as speech sound (phonological) and print (orthographic) processing, as well as the development of brain networks that connect speech and print. Reading and spelling brain connections must grow to connect several brain regions and communicate information with appropriate speed and precision. The majority of dyslexic kids have poor phonemic awareness, which means they are ignorant of the function sounds play in words. These kids may also struggle with rhyming, mixing sounds to form words, and segmenting words into sounds. They have problems learning to recognize words automatically ("by sight") or quickly enough to facilitate comprehension because they have trouble creating links between sounds and symbols.

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In addition, when using a multisensory method, kids benefit from learning alphabetic patterns and words while engaging all learning modalities. Dr. Samuel Terry Orton, who was among the first to identify dyslexia in pupils, proposed that teaching the "fundamentals of phonic association with letter shapes, both visually presented and duplicated in writing until the proper connections were built up" would help students of all ages (International Dyslexia Association, 2017).

The following are some examples about multi-sensory activities cited in "Multi-Sensory Instruction in the Classroom" (2019):

- **Arm tapping:** This lesson uses multi-sensory review to assist pupils in mastering irregular words. The teacher prepare a stack of cards with the terms children are learning to begin this exercise. Then the teacher state the word one by one while holding the card in front of him/her with his/her non-dominant hand. Make sure the card is at eye level for the pupils since they must concentrate on viewing the text. Pupils should always arm tap from left to right using their dominant hand. However, children that are right-handed lay their right hand on their left shoulder. The left hand of a left-handed pupil is placed on the right wrist of a right-handed learner. While tapping down your arm with your flat hand, say each letter of the word. When students have tapped out each letter, state the whole word again while sweeping left to right (shoulder to wrist or wrist to shoulder). Think of it as underlining the Word.

Air writing: It is often referred to as "sky writing" since it employs muscle memory to reinforce the letter and sound that each letter produces.

It allows children to stand and use their dominant arm to air write. Students should move from their shoulder to encourage substantial muscle activation. Tell your kids to envision the letter in a different color. While air writing, have youngsters speak the letter name and sound.

- **Writing in sand/Shaving cream:** To promote letter-sound correlation, this multisensory method employs visual, auditory, and tactile pathways. Teachers can prepare sand or shaving cream ahead of time by using cookie sheets, plastic trays, tables, paper plates, or other mediums. The teacher makes a well-known sound. The learner repeats the sound, then writes the letter that creates that

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sound with their pointer and middle fingers while verbalizing the letter name and sound (/b/ b says /b/). They are gaining access to thousands of nerve terminals that send patterns to the brain by writing with their fingertips.

If using this method for complete words rather than letters, it is preferable to make sure to select phonetic terms that match typical spelling patterns.

3.3.1 Reading strategies

The International Dyslexia Association (2017) stated that learners with dyslexia may struggle with reading fluency. They frequently struggle to acquire sight words. Some sight words do not follow regular spelling conventions and are not decodable. Nonetheless, these are frequent terms that kids must know rapidly in order to become competent readers. Children with dyslexia should remember these words using mnemonic methods or rote repetition so that they may be recognized quickly and do not need to be decoded. This minimizes the overall reading processing strain. Moreover, readers with dyslexia put forth a lot of effort to decode new words. They are frequently sluggish to pronounce words, which has an adverse effect on understanding since they miss the meaning of the phrase. The process of reading becomes easier and more automatic as word recognition and decoding abilities increase.

Hence, this challenge can be solved by employing reading strategies. According to Squires (2002) and IDA (2014), these are the most effective strategies:

- Find decodable books. Reading material with plenty of familiar single and closed syllable words will help with decoding. Texts should also include widely used sight words as well as a few difficult terms. These books place exactly the perfect amount of strain on the dyslexic brain.
- Prepare them for success. Pupils who are having difficulty reading might feel disheartened whether the book is too challenging or too easy. Readers who reject in books may grow disheartened, and those who struggle with advanced books may become frustrated. Parents and teachers may aid by providing a variety of books that will assist pupils in developing fluency and creating the optimum conditions for improving reading abilities. To offer kids a sense of satisfaction in their study, begin with short decodable books and progress to decodable chapter

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novels. If these books do not fit into classroom teachings, make them available as free reading for which students may earn incentives.

- Give pupils who are struggling a break. Schoolwork and classroom activities can be stressful for dyslexic kids. Allowing pupils to take regular reading breaks can be an useful coping tactic. Remember that children with dyslexia require downtime to recharge their batteries.
- For the 1000th time, I read tales. Encourage youngsters to read their favorite books aloud to a loved one. Reading at home, enable pupils experience feelings of literacy accomplishment in a welcoming and low-risk setting. Rereading familiar texts can also improve your speed, accuracy, and confidence, which is an ideal combination for fluency.
- Make reading enjoyable. When a youngster is having difficulty reading, we may feel compelled to encourage him or her to study harder. This is done in the aim of improving reading abilities with more practice. Ineffective practice, on the other hand, can actually impede progress, especially if the kid or parents end up in tears. Because practicing is enjoyable and gratifying, child-centered practices ensure that kids are more engaged in their learning. Children like spending quality time with their parents or participating in an engaging classroom story hour with appropriate reading material. Spend time with them by reading to them. Encourage the student's younger siblings to take on the job of reading to the children.

3.3.2 Writing strategies

A child's capacity to come up with outstanding ideas for their written work is unaffected by dyslexia. Kate Saunders, chief executive officer of the British Dyslexia Association, claims that some dyslexics are excellent writers with fantastic creative ideas.

However, there are several instances where writing might be very difficult.

They often struggle to order the letter groups in a word correctly. Certain letters may be written backwards. They may have trouble connecting a sound to the letters that express it, and they may have trouble remembering the form of a word. These

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spelling difficulties may be irritating for a youngster, who is attempting to express their ideas on paper. Moreover, the combination of difficulties those children with dyslexia may face means that many of them work very slowly. Teachers and parents frequently find that dyslexic students produce less written work than their classmates do, and that what they do write does not reflect their academic competence or comprehension of a topic.

As mentioned by (BDA), the following are beneficial writing strategies for dyslexic children

1. Hand writing tools

If a pupil struggles with handwriting fluency, there are several writing aids available, ranging from special pencils to slanted work surfaces. 'Spending some time making sure he is sitting properly and clutching their pen appropriately, a triangular-shafted pen or pencil might facilitate a proper handwriting grip. In addition, encouraging him not to press down too hard as he practice moving his hand across the paper.

2. Help them with key words

Dyslexic youngsters can focus on the structure and content of their writing if part of the strain of thinking about spelling is removed. 'For example, students may have a box of keywords on their table — regularly used terms and phrases connected to the task to use as prompts while they're writing.

3. Allow computer work

Dyslexic youngsters may find it much easier to write on a computer than by hand, especially for longer works. You may introduce the spellchecker as kids become older, although it does require some spelling knowledge because some errors may not be picked up. Dictation software can also be beneficial for youngsters who struggle with writing.

4. Listen to stories outloud

Reading aloud to them and encouraging them to listen to audiobooks can help them write better. Because reading for enjoyment is difficult for dyslexics, listening to tales might help them comprehend how written varies from spoken.

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Children with dyslexia typically benefit from having someone helping them arrange their work, this could take the form of brainstorming a topic, writing a paragraph plan, or listing key points that they need to include in their written work.

5. Break tasks into chunks

Written activities might appear difficult for children with dyslexia because they write slower than their classmates. Encourage them to break down assignments into manageable portions, such as by asking them to write a paragraph at a time, followed by praise or a reward. Simply being there to help them in getting started on their writing may be beneficial.

6. Encourage planning

Children with dyslexia frequently benefit from having someone help them in planning their work. This might include brainstorming a topic, drafting a paragraph plan, or making a list of crucial elements to include in their written work.

7. Don't obsess about accuracy

While proper spelling and good handwriting are crucial, the content of children's writing is just as important. Instead of continuously pointing out their mistakes, make sure you offering them appropriate praise and acknowledgment for their ideas and creativity.

3.4 Dyslexia Friendly Learning Environment

The obstacles faced by dyslexic learners differ from one person to the next, thus the focus of teachers should be on making the learning environment as inclusive and helpful as possible. Inclusive is 'a sense of belonging: feeling appreciated and valued for who you are; experiencing a level of supporting energy and dedication from others so that you can accomplish your best job' (Miller 2002).

This study suggests some ways for creating a welcoming learning environment. They involve preparing inclusive classes and conducting assessments and feedback. According to Miller (2002) and Blue (2021), these are some helpful ways to create a good learning environment:

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1. Offer learners choices

Give learners a choice in how they engage with activities to make learning more engaging and inclusive. During a listening assignment or while preparing for a speaking task, learners could 'draw' instead of writing notes.

2. Create a supportive and collaborative classroom culture

A teacher can create a supportive and collaborative classroom atmosphere by getting to know everyone of his pupils and encourage them to get to know each other. This will make learners feel more at ease while considering alternative approaches to tasks and asking for help.

3. Have L-shaped cards available

Allow learners to use L-shaped cards to frame sections of textbook pages and help them concentrate their attention. Encourage students to cover reading texts with a simple sheet of paper and reveal one line at a time while they read. When teaching reading skills, these are effective strategies for all students.

4. Spend some time explicitly teaching exam strategies

Spend some time clearly explaining test methods, such as how to approach specific exam objectives, and break them down into basic stages.

5. Use concept- checking questions

To ensure that your students comprehend a new term or grammatical item, teachers might use concept-checking questions (CCQs). CCQs are preferable than just asking, "Do you understand?" "What items do you know that are quick?", "What is the opposite of quick?", or "Are snails quick?" are some examples of CCQs for the word quick. Teachers also can use pictures of objects or gestures to check pupils' comprehension.

6. Offer lots of opportunities for learners to recap and review language

Provide plenty of opportunity for learners to study and recap language; particularly from test wordlists and using a variety of approaches to assist students memorize new words, such as sketching, music or rhythm, movement, gesture, and visualization.

7. Try different approaches to giving feedback

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Teachers might talk to their learners about what kind of feedback they like. Make a brief video or audio clip with the teacher's remarks, since hearing the teacher's voice might feel more personal and supportive than receiving written criticism in red pen.

8. Remember that assessment should be ongoing

It is important to remember that evaluation is not the conclusion of the learning process; it is only the beginning. If you return anything to a student to fix, double-check the following version and provide feedback on it as well. Because the difficulties that dyslexic students face frequently lead to a lack of confidence, it is important to remember to provide positive feedback to encourage them and boost their self-esteem.

3.5 Limitation of the study

Many challenges hindered the process of obtaining the target goal while conducting this research:

- The biggest issue was the lack of positive feedback; many teachers did not return the questionnaires that were given to them. In addition, many schools refused to enable us to speak with their teachers.

- Another challenge for the research was sample size; this study was intended to reach as many teachers as possible, but due to the aforementioned obstacles and some issues that our country is facing, the research sample was limited to a small percentage of teachers, implying that the findings cannot be applied to a larger population.

- Another key aspect was time limits; additional time would be beneficial for doing this study on a wide sample of teachers in order to obtain more reliable results using various research tools.

- Another limitation is the lack of resources, particularly in the areas of dyslexia.

3.6 Suggestions for Further Research

This study suggests potential ambitious future studies based on the available literature and limitations faced while conducting this research namely:

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- Replicating Sparks and Ganschow (2004) experiment to investigate foreign Language teachers' perceptions of students' academic skills, affective characteristics, and proficiency in order to see if teachers perceive learners who have poor language skills, such as dyslexia, as having poor learning attitude
- Investigating dyslexic pupils' opinions concerning teachers' attitude towards them.
- Conducting an experiment to investigate dyslexics' problems in writing skill. For instance, the focus can be directed to dyslexics' choice of vocabulary as recommended by Dockrell and Berninger (2014). Alternatively, investigating dyslexics handwriting speed as a replication of (Berninger et al., 2008) study.
- This study suggests that the translation of the word “dyslexia” in Arabic “Eusr alqira'a” ,which literally mean difficulty with reading, should be reconsidered or changed into more accurate term, because great part of people perceive dyslexia as a reading disorder solely. This has been inspired from the difficulties that the researcher faced while interviewing speech therapists about dyslexics' problem with writing skill. Having a more accurate term can change people's attitude in perceiving dyslexia as a reading disorder only.
- This study strongly suggests doing statistical studies to determine the number of dyslexic students in Algeria. It is well known that dyslexia affects one out of every ten people; however, it should be noted that these statistics are specific to English-speaking countries such as the United Kingdom and the United States, and it has previously been clarified that dyslexia is a universal disorder whose effects vary depending on the type of language. As a result, statistical analyses of the number of dyslexics in

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Algeria can either validate or refute these figures. Furthermore, it will aid in the conduct of future research.

General conclusion

Even after a century of research, dyslexia remains one of the most contentious issues in the field of developmental neurology, psychology and education. Owing to the fact that dyslexia is sometimes referred to as an ambiguous and invisible impairment (Nalavany et al., 2013). There is limited agreement among researchers on the definitions, causes and characteristics of dyslexia. Yet, over the last decade, the scientific research on dyslexia has made significant advances in the issue of this pathology.

This work investigates primary school teachers' awareness of dyslexia and their ability to identify dyslexic pupils in their classroom. This study also analyses teachers' ability to manage a classroom session with both dyslexic and non-dyslexic children.

One of the most important findings of this study is that Tlemcen primary school teachers have poor knowledge about dyslexia and a clear misconception of this phenomenon.

In addition, the findings support the notion that teachers' lack of knowledge about this pathology puts pupils at danger of discrimination.

Moreover, this study makes it clear that learners with dyslexia who study at more advanced levels report having greater difficulty with reading than with other skills. Furthermore, the findings of this work point out that primary school teachers of Tlemcen are unable to identify dyslexics in their classroom.

Surprisingly, the analysis and interpretation of the data collected shows that Tlemcen primary school teachers are incapable to manage their classroom sessions with both dyslexic and non-dyslexic pupils. In addition, these data confirm that pupils who have dyslexia do not receive any interest neither from teachers, nor from the concerned authorities.

Research studies relating to children with learning disabilities and to the situation of dyslexia in the Algerian school is of a great lack. Consequently, the current study advocates for more teacher education to identify dyslexia's characteristics and signs at all academic levels, as well as the development of training for teachers.

Additionally, this research opens the door to a wide range of future works. In one

hand, more research on the conditions of dyslexic children and their rights to social inclusion is needed. In the other hand, this work provides an opportunity to investigate the education system for the Algerian primary schools. Besides, a larger research of teachers' understanding of dyslexia in children, especially schools from rural regions, is needed

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