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Investigating EFL Teachers' Awareness of Dyslexia in Primary Schools in Jijel

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Declaration

We hereby declare that the dissertation entitled “Investigating EFL Teachers’ Awareness of Dyslexia in Primary Schools in Jijel” is our own work and all the sources we have used have been acknowledged by means of references. We also certify that we have not copied or plagiarized the work of other students or researchers partially or fully. In case any material is not documented, we shall be responsible for the consequences

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Date: 18/6/2023

Dedication

In the Name of Allah, the Most Gracious, the Most Merciful

All praises are due to God alone, the Sustainer of the World

With all love that covers my heart

I would like to dedicate this modest dissertation to:

To the most precious blessing I have

To my beloved mother and father “Annem Nwidyouch and Rabah”

may Allah bless and protect them.

The ones who have always been there for me, supporting me, believing

in me and taking good care of me.

The ones who have always been my guiding lights through the dark;

my guiding lights in my entire life.

The ones who have made countless sacrifices so that I could be the

person who I am.

To my brilliant brothers “Yasser and Haytem” and my lovely and

only sister “Meriem” for always standing behind my back.

To the spirit of my uncle “Ibrahim” who will live always in my heart

Thank you all!

I love you!

Hibat Ellah

Dedication

In the name of Allah, the most Merciful, the most Gracious

I dedicate this modest work to:

*My beloved and wonderful parents, **DJAMEL** and **FARIZA**, for their unconditional love,*

patience, sacrifices, guidance and support that they have given me. I greatly

appreciate your encouragement. I love you!

*To my lovely, kind-hearted, and strong grandmother, **ZOULIKHA**. May Allah bless and*

protect her.

*To my uncle **Mourad** and his family*

*To my sweet sister **Djinane** for her endless love*

*To my dearest brothers **Mouhammed**, **Loukmen** and **Ayoub***

*To my partner in this work **Hibat Allah***

To all my family and friends

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Abstract

The present study attempts to investigate EFL primary school teachers' awareness of dyslexia in Jijel. It aims to determine EFL primary school teachers' level of awareness of dyslexia, examine teachers ability to handle and guide dyslexic students' to reduce their reading and writing difficulties, and provide a better understanding of teachers' perceptions of the effectiveness of teaching strategies used to support dyslexic learners. For the sake of reaching these aims, a teacher questionnaire, which included the Dyslexia Belief Index (DBI) test, was used and administered to thirty-five out of ninety-three EFL primary teachers in Jijel, Algeria. The findings have revealed that the vast majority of EFL primary school teachers in Jijel lack knowledge about dyslexia as well as about how to manage dyslexic learners' reading and writing problems. In addition, they have portrayed no clear perceptions of the effectiveness of teaching strategies used to support dyslexic learners. Hence, it is recommended that primary school teachers undergo special training in order to acquire the essential skills to fulfil the requirements of appropriately teach EFL learners facing such learning challenges.

Key words: Learning disability, dyslexia, teachers' awareness

List of Abbreviations

ACLD: Adults & Children with Learning & Developmental Disabilities

aMRI: Anatomical Magnetic Resonance Imaging

ASHA: American Speech-language-Hearing Association

CLD: Council for Learning Disabilities

DBI: Dyslexia Belief Index

DDH: Double-Deficit Hypothesis

DNA: Deoxyribonucleic Acid

DCCD: Division for Children with Communication Disorders

DysTEFL: Dyslexia for Teachers of English as a Foreign Language

EFL: English Foreign Language

ELT: English Language Teaching

FL: Foreign Language

IRA: International Reading Association

L1: First Language

LCDH: Linguistic Coding Differences Hypothesis

MRI: Magnetic Resonance Imaging

MSL: Multi-Sensory Structured Learning

NACHC: National Advisory Committee on Handicapped Children

NJCLD: National Joint Committee on Learning Disabilities

RAN: Rapid Automatized Naming

VWFA: Visual Word Form Area

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General Introduction

1. Background of the Study

Dyslexia is a common universal learning difficulty that affects a widespread, extensive number of learners (Lama, 2019). It is specifically defined as a neurodevelopmental disorder that has a negative impact on reading, spelling, and pronunciation skills, resulting in writing difficulties because spelling and pronunciation are involved (Cardillo et al, 2018). English is one of the most widely used languages in the world and this is why learning it has become mandatory in order to effectively communicate one's thoughts and ideas around the world (Rao, 2019). In a learning environment where EFL has become compulsory in most school curriculums (Nijakowska, 2010), dyslexic students are not exempt from this requirement. This obligation can, unfortunately, be extremely difficult for dyslexic individuals, not only because of the language difference but also because of potential obstacles they may face in the classroom due to ineffective teaching strategies (Daloiso, 2017).

There are several studies that have examined teachers' knowledge of dyslexia .One of the main research works about teachers' awareness of dyslexia is that of Wadlington & Wadlington (2005), who examined how 250 students at a southern regional university and US faculty members perceived and understood dyslexia. They studied a variety of types of educators, including speech therapists, special education teachers, secondary general teachers, university faculty teachers, and elementary general teachers. They created a 30-question survey called the Dyslexia Belief Index (DBI). In their study, Wadlington & Wadlington (2005) discovered that the educators lacked enough knowledge of dyslexia and that the majority had misconceptions about the condition. Accordingly, Wadlington &

Wadlington (2005) concluded that there was a need to provide more information and pieces of training to educators regarding dyslexia.

Teachers' knowledge and awareness of dyslexia are critical in recognizing students' needs, developing positive attitudes toward affected students and assisting them in overcoming challenges and increasing their accomplishment levels (Elias, 2014). According to a survey conducted by the Japanese Ministry of Education, teachers are not even aware of whether or not their students have dyslexia (Kataoka et al., 2004). Similarly, in New Zealand, Elias (2014) reported that secondary school teachers are unaware of the reading and writing challenges of dyslexic learners and lack the pedagogical understanding to fulfil the requirements of learners with dyslexia. These findings led to the conclusion that teachers urgently need dyslexia training. Similar findings were found in a study conducted in Portugal by Sónia (2012), which revealed that teachers there are unaware of this learning disability. They said that even if they were, they could not help because they lack the pedagogical skills required to fulfill the needs of dyslexic students.

Previous studies have revealed that teachers frequently have incorrect assumptions with regard to reading difficulties. Furthermore, some teachers have unfavourable attitudes toward dyslexic students due to ignorance and lack of knowledge about the condition (Wadlington & Wadlington, 2005). Teachers continue to think that a student's poor performance is caused by either a lack of intelligence or sluggishness (Wormald, 2015). As a result of teachers' lack of knowledge about the learning disability, the dyslexic learners can develop further problems and the condition can become even worse (Wadlington & Wadlington, 2005).

The aforementioned studies provide useful conclusions that determine the direction of this research as they pave the way to its relevance. There are several studies in different countries about dyslexia and the findings of these studies showed that teachers lack

knowledge and awareness of dyslexia as they have also misconceptions regarding dyslexics reading and writing difficulties. The main focus of this study is to explore teacher's awareness of dyslexia in Algeria in primary schools. This research also seeks to investigate teachers' ability to manage and guide dyslexic learners to reduce their reading and writing challenges as well as exploring teachers' perceptions about the effectiveness of teaching strategies used to support dyslexics.

2. Statement of the Problem

In this globalized world, there is an increased requirement to learn EFL. Beginning with the academic year 2022-2023, the English language has become taught in primary schools in Algeria, following a presidential decree. However, learners with dyslexia may severely struggle with this requirement. There are several studies in different countries about dyslexia and the importance of teachers' awareness of it. In Algeria there are few studies about dyslexia and most of them are middle school case studies. If teachers do not have sufficient knowledge of dyslexia and how their lack of knowledge can affect pupils' language learning, this may lead to worsening the dyslexic learners' condition even more. The present study, hence, attempts to conduct an investigation about primary EFL teachers' awareness of dyslexia in Jijel, Algeria.

3. Aims of the Study

The aim of the current study is to explore the EFL primary school teachers' awareness of the concept of Dyslexia in primary schools in Jijel, Algeria. This provides a better understanding of teachers' perceptions about dyslexia and to which extent they are aware of it. The study also seeks to investigate teachers' ability to handle and guide dyslexic students' to reduce their reading and writing problems. Furthermore, it examines teachers' knowledge of the effectiveness of teaching strategies for supporting these students.

4. Significance of the Research Study

This research provides an insight of teachers' awareness of dyslexia of EFL primary school teachers in Jijel, Algeria, their pedagogical skills and perceptions about the reading and writing challenges of dyslexic learners. The significance of this study lies in highlighting the challenges the teachers face when teaching English to dyslexic students in primary schools. It also emphasizes the importance of raising awareness of those in charge in the ministry of education to take into consideration the need for EFL primary school teachers' to have knowledge of dyslexia.

5. Research Questions

This study seeks to answer the following research questions:

- What is the EFL primary school teachers' level of awareness of dyslexia?
- Are teachers able to handle and guide dyslexic students' to reduce their reading and writing difficulties?
- What are EFL teachers' perceptions of the effectiveness of teaching strategies used to support dyslexic students?

6. Methodology of the Research Study

The present research is a descriptive study that adopts a quantitative method. In order to come to a good grasp of the topic under investigation and to answer the previous questions, a questionnaire is designed to report EFL primary school teachers' knowledge and awareness of dyslexia. As far as the sample and population are concerned, the questionnaire addresses to thirty-five out of ninety-nine EFL teachers' of primary schools in the province of Jijel, Algeria.

7. Structure of the Study

The current research begins with a general introduction that precedes two chapters. The first chapter is devoted to the literature review while the second chapter is devoted to the fieldwork. The first chapter consists of two sections. The first section covers dyslexia as a

learning disability. It includes the definitions of learning disabilities and dyslexia. Furthermore, it covers the different causes, symptoms and features of dyslexia. Also, it focuses on dyslexia in foreign languages and dyslexic reading and writing problems in foreign languages. The second section addresses teachers' awareness of dyslexia. It introduces some research studies on teacher's awareness of dyslexia. It sheds light on EFL teachers' perceptions of teaching strategies. Furthermore, this section encompasses teachers' training and ELT classroom as well. It also captured teaching strategies and intervention for dyslexic students. Finally, the section discusses the role of EFL teachers' in the management of dyslexic learners and the reasons behind teachers' lack of awareness regarding the condition. As for the second chapter, it represents the practical part which covers the instruments used for gathering data, the analysis of the data collected, interpretations, and discussion of the main findings generated by the teacher questionnaire. At last, the limitations of the study are highlighted, and some pedagogical recommendations are provided.

Chapter One: Dyslexia and Teachers' Awareness of the Condition

Introduction

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Chapter One: Dyslexia and Teachers' Awareness of the Condition

Introduction

This chapter is an overview about developmental dyslexia and teacher' awareness of the disorder. On one hand, the first section presents an overview about dyslexia as a learning disability. It begins with definitions of learning disabilities in general and dyslexia in particular. It, then, introduces the various causes, symptoms and features of dyslexia. This section also provides a shot about dyslexia in foreign languages and the different reading and writing challenges that dyslexic learners may face. On the other hand, the second section sheds light on teachers' awareness of dyslexia. It introduces some research studies on teachers' awareness of dyslexia in addition to EFL teachers' perceptions of teaching strategies. Moreover, this section encompasses teachers' training and ELT classroom. It also presents teaching strategies and interventions used to support dyslexic learners. In the end, the section discusses the role of EFL teachers in the management of dyslexic learners and the reasons behind teachers' lack of awareness regarding dyslexia.

1.1 Dyslexia as a Learning Disability

1.1.1 Definition of Learning Disabilities

The term "learning disability" was first coined by Kirk in his manual "Educating Exceptional Children" in 1962 (Kirk & Kirk, 1983). The following definition of learning disabilities is regarded as the first official definition:

A learning disability refers to retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, spelling, writing, or mathematics resulting from a possible cerebral dysfunction and/or emotional or behavioural disturbance and not from mental retardation, sensory deprivation, or cultural or instructional factors. (Kirk & Kirk, 1983, p. 20)

The National Advisory Committee on Handicapped Children (NACHC) developed a definition in 1967; a definition widely used in the United States for law and funding: A specific learning disability refers to a disorder in one or more of the fundamental psychological processes involved in understanding and using language, whether it is spoken or written. This disorder can manifest as an imperfect ability to listen, think, speak, read, write, spell, or perform mathematical calculations. It encompasses conditions such as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. However, it does not include children who have learning difficulties primarily due to visual, hearing, or motor handicaps, mental retardation, emotional disturbance, or disadvantages related to environmental, cultural, or economic factors. (Torgesen, 2004).

In 1986, after much deliberation, The National Joint Committee on Learning Disabilities (NJCLD), composed of ASHA, ACLD, CLD, DCCD, IRA, and the Orton Dyslexia Society, agreed that learning disabilities encompass a diverse range of disorders characterized by significant difficulties in acquiring and utilizing skills related to listening, speaking, reading, writing, reasoning, or mathematics. These disorders are inherent to the individual and are believed to stem from dysfunction in the central nervous system. They

can occur at any point throughout a person's life. While individuals with learning disabilities may also experience challenges in self-regulation, social perception, and social interaction, these factors alone do not qualify as learning disabilities. It is worth noting that learning disabilities can coexist with other disabilities, such as sensory impairments, mental retardation, or severe emotional disturbances, as well as external influences like cultural disparities or inadequate and inappropriate instruction. However, they are not caused by these conditions or influences. (Kirk & Kirk, 1983).

Kirk's definition of learning disability focuses on possible cerebral dysfunction and emotional/behavioural disturbance, while NACHC definition provides a broader range of conditions that fall under the category of specific learning disabilities. However, NJCLD definition represents the broadest current consensus in the field .It is the only definition that highlights the serious nature and heterogeneity of learning disabilities. It also admits that they can emerge at any age, and points out that they often coexist with other developmental disabilities and social disadvantage .It shifts the field's focus to the internal nature of learning disabilities. It emphasizes the cognitive, linguistic, and academic nature of learning disabilities (Kirk & Kirk, 1983). However, all definitions agreed on the characteristics of a learning disorder for instance, writing, reading and spelling problems. They are also in agreement on that a learning disability is not due to social or cultural influences and nor is it due to ineffective classroom instruction.

1.1.2. Definition of Dyslexia

Dyslexia comes from the Greek word “dys” which means difficulty with and “lexicos” or “lexis” which means words or language (Unni, 2014). There are two varieties of dyslexia that should be recognized before providing any information concerning the disorder; developmental dyslexia and acquired dyslexia. When a child is born with this

condition, the former is the case; it typically has hereditary components. Yet the latter is the outcome of brain damage (Casalis, 2004). Consequently, throughout this research, developmental dyslexia will be the main emphasis. Several definitions have been presented for dyslexia. However, agreement on one definition remains a challenge for researchers; the literature has more than 50 definitions of dyslexia in an effort to find the most accurate one (Ott, 1997). The fact that dyslexia has been a focus for several fields, which in turn examine dyslexia from many perspectives, might be attributed as one factor in this variety of definitions (Miles, 1995).

In 1968, the International Federation of Neurology provided one of the earliest working definitions of dyslexia. The federation defines Specific developmental dyslexia as: “A disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and socio- cultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin” (Ott, 1997, p.3). This definition refers to the influence of instruction and socio-cultural factors. Additionally, dyslexia is “a disorder in children who, despite conventional classroom experience, fail to attain the language skills of reading, writing and spelling commensurate with their intellectual ability” (Ott, 1997, p. 2).

One of the most prominent definitions of dyslexia is that of the International Dyslexia Association (2002). This definition focuses more on the characteristics of dyslexia. It comes as follows:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary

consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (as cited in Ahmad et al, 2018, p.2171)

It is worth mentioning that there is no known treatment for dyslexia and that it is not a sickness; it is seen as a complicated neurobiological-based disorder that will persist throughout one's life (Special Needs Education, 2010).

1.1.3. Causes of Dyslexia

1.1.3.1. Genetic Causes

Genetic theory is one of the earliest attempts to explain the causes of dyslexia. “It presupposes the connection between the occurrences of the disorder and inherited anatomical and functional features of the central nervous system, determining the existence of difficulties in reading and spelling” (Nijakowska, 2010, p. 35). It is estimated that a child with an affected parent or sibling is thought to be at a high risk of developing dyslexia (Nijakowska, 2010). Evidence supporting the hereditary hypothesis and environmental factors is derived from family and twin studies which allowed researchers to draw a meaningful conclusion about the legitimacy of genetic and environmental influences on dyslexia (Olson et al. 1989; Ramus, 2006). According to Olson et al (1989), word recognition and phonological decoding skills are strongly influenced by genetics; however, orthographic coding skills are less heritable.

Molecular genetics research seeks to identify specific genes (DNA sequences) or gene markers that can be responsible for the disorder's development. Admittedly though, dyslexia is not caused by a single gene, but rather a result of the combination and cooperation of multiple genes (Ramus, 2006). It is most likely that the risk of inheriting

dyslexia is determined by a combination of the influence of many small-effect genes and environmental factors (Hulme & Snowling, 2009 as cited in Nijakowska, 2010). Actually, there is no evidence of any presence of specific genes linked to dyslexia (Vellutino et al., 2004). Despite the fact that no single gene responsible for dyslexia has been identified, the approximate locations of a number of gene loci have been mapped (Fisher & Smith, 2001 as cited in Nijakowska, 2010). Additionally, a number of studies have suggested that the regions on chromosomes 1, 2, 3, 6, 15, and 18 may contain genes that predispose to dyslexia (Fisher & Francks, 2006). According to Fisher and Smith (2001), “the isolation of gene variants that might possibly be responsible for dyslexia remains a major research challenge, having great potential benefits for early diagnosis of individuals at risk for dyslexia” (as cited in Nijakowska, 2010, p.37).

1.1.3.2. Neurobiological Causes

Moving on from the heritability aspect in dyslexia, the focus now turns to the analysis of brain structures and functions, with an emphasis on identifying brain abnormalities in individuals with dyslexia. Poor phonological processing is a key challenge for children with dyslexia, thus one may anticipate specific deficits in the structure and/or function of the brain regions responsible for language processing. People with dyslexia typically show different brain structure, activity and function from people without the condition. The most commonly utilized techniques in research on brain structure are Post-mortem studies as well as non-invasive anatomical magnetic resonance imaging (aMRI) (Vellutino et al, 2004).

Multiple magnetic resonance imaging (MRI) studies on individuals with dyslexia have revealed that the asymmetry of language areas in the temporal lobe is often diminished or reversed. The most common functional variations observed in the brain are characterized by reduced activity (known as hypo activation) specifically in the left

temporal, parietal, and fusiform (VWFA) regions. These findings suggest a lack of differential sensitivity to the demands of reading, indicating that individuals with dyslexia may exhibit decreased neural responsiveness in these areas. Right- and left-hemispheric areas occasionally show increased activations in dyslexia (Maisog et al, 2008).

Furthermore, areas that exhibit functional abnormalities are also detected in the cerebellum, namely in lobule VI, appear to co-localize with structural gray matter differences in dyslexia. The abnormality is characterized by greater cell size (Stoodley & Stein, 2013). Moreover, the cerebella of dyslexic brains had more big neurons and fewer tiny neurons, which might indicate difficulties with cerebellar input (Nicolson & Fawcett, 2001). The left superior longitudinal fasciculus, which contains the arcuate fasciculus and corona radiata fibers, frequently exhibits diminished organization or volume (Vendermosten et al., 2012). Moreover, impaired function of the magnocellular system causes instability of binocular fixation, which causes visual disorientation and causes letters to move around. Dyslexics have vulnerable binocular control, according to research. When trying to observe small letters, their eyes display instability resulting in unstable vision and visual reading failures (Stein & Walsh, 1997). Post-mortem research on dyslexics revealed that their lateral geniculate nucleus magnocells were disorganized and 20% smaller than those of non-dyslexic (Livingstone et al, 1991).

1.1.3.3. Cognitive Factors

1.1.3.3.1. Phonological Coding Deficit Hypothesis

The most commonly accepted cognitive explanation for dyslexia is that it is caused by a phonological deficit (Stanovich & Siegel, 1994). According to phonological coding deficit hypothesis, dyslexic children have a particular disruption in the representation, storage and/or retrieval of speech sounds. It explains dyslexics' reading difficulties by pointing out that learning to read an alphabetic system necessitates understanding the

grapheme-phoneme correspondence (Ramus et al., 2003). The general conclusion has led to a growing agreement that the inability to acquire phonological awareness and alphabetic coding skills is the most prominent cause of reading difficulties experienced by learners with dyslexia (Vellutino et al., 2004). Put simply, problems in developing phonological awareness and alphabetic coding skills are thought to be caused by inadequate phonological coding, which is characterized by poorly defined phonological representations in many situations (Griffiths & Snowling, 2002). The phonological theory, therefore, proposes a direct relationship between a cognitive deficit and the behavioural problem to be described. On a neurological level, it is often considered that the disorder is caused by a congenital failure of left-hemisphere perisylvian brain regions underpinning phonological representations or linking phonological and orthographic representations (Ramus et al., 2003).

1.1.3.3.2. Double-Coding Deficit Hypothesis

The double-deficit hypothesis (DDH) suggests that there are two distinct underlying factors of dyslexic difficulties, Specifically, the phonological core deficiency and the speed impairment (Wolf & Bowers, 1999). According to Wolf and O'Brien (2001), the processes behind naming speed are unquestionably a second basic defect in dyslexia, often independent of phonological processing and manifesting itself in both children and adults, as shown by various study findings. The serial naming speed, which is often assessed by RAN, is the most effective way to identify processing rate deficiencies. The reactions of participants are examined in terms of the time required to verbally name high-frequency visual stimuli given in a random order, such as numbers, letters, colors, or objects (Vukovic & Siegel, 2006; Wolf & O'Brien, 2001). Cirino et al. (2005) state that slow word recognition abilities might translate into slow word naming speeds, which frequently leads to reading problems. In other words, it makes sense to expect some turbulence in a child's

reading development if they have trouble acquiring enough quick processing rates. Cirino et al. (2005) emphasize that poor visual naming speed may be responsible for slower word decoding without affecting accuracy, and as a result, reading comprehension may be significantly reduced.

The rapid naming impairment of the phonological deficit allows for the identification of three main subtypes of reading-impaired individuals. The phonological deficit subtype is more explicitly used to describe slow readers who solely exhibit phonological processing issues while still exhibiting normal naming speed. The naming speed deficit subtype, in contrast, describes reading-impaired people who possess adequate phonological and word attack abilities but who have substandard naming speed and subsequent comprehension difficulties. Finally, the most infamous and severely disordered poor readers adhere to the double-deficit subtype, which is characterized by low-grade increases in both phonological processing and quick naming (Wolf & Bowers, 1999).

1.1.3.3.3. The Cerebellar Deficit Hypothesis

Another major cognitive explanation for dyslexia is named as Cerebellar Deficit Hypothesis. According to Nicolson and Fawcett (1999), automaticity deficit hypothesis, also known as cerebellar impairment hypothesis, explains problems in acquiring reading, spelling and phonological skills. Moreover, the cerebellum has a function in motor control and in automating over-learned activities; thus, it plays a part in speech articulation as well as carrying out skills such as reading and writing. Consequently, when articulation is impaired, it results in inadequate representation of sounds and a deficiency in automating skills leads to weak connection between written letters and their corresponding sounds (Ramus et al., 2003). According to the proponents of the hypothesis in question, in order to reduce reading and spelling challenges faced by learners with dyslexia, the related sub

skills should be automated through specialized education and the use of properly developed, supervised, and long-term training programs (Nijakowska, 2010).

1.1.4. Symptoms and Features of Dyslexia

As previously mentioned, dyslexia is a language-based learning disability with a wide range of symptoms and features. The symptoms of this disorder, however, vary across individuals which makes describing the actual condition of this syndrome extremely difficult (Nijakowska, 2010). Furthermore, the way this learning disability expresses itself in one individual changes dynamically throughout their life, as age education, therapeutic activities, and compensatory methods may all play a part in enhancing dyslexics' features. As a result, some qualities at one point in time may disappear, decline, or predominate until maturity. (Bogdanowicz, 1997c, 1999; Mickiewicz, 1997; Snowling, 2001a, cited in Nijakowska, 2010). Dyslexia is a specific learning difficulty with a neurobiological origin and males are more likely to experience it than females, that is to say it is congenital, genetic-inherited, runs in families, and constitutional in origin (Ott, 1997).

Certainly, in terms of linguistic abilities, dyslexia is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities (Lyon, Shaywitz & Shaywitz, 2003). Dyslexic children are late-talkers; they begin speaking late, they cannot tell rhyming words, they reverse letters and numbers (especially p and b, w and m, 3 and 5), they change or omit word parts, they have difficulty breaking words into their component sounds, and recognizing sounds within a word -phonological processing- (d-o-g) (Cimermanova, 2015). With regard to spelling, young students at risk for dyslexia frequently make multiple errors when writing and dictating; in contrast to other youngsters, they consistently struggle to remember and correctly distinguish between the language sounds and their corresponding graphic symbols, or letters. They occasionally also write words oddly, such as from right to left in reverse, or utilize mirror representations of the

letters (Nijakowska, 2010). Concerning the non-linguistic behaviours, Cimermanova (2015) mentioned that “confusion with before and after, left vs. right confusion, difficulty remembering and following directions, difficulty with motor skills and organization, attention. Many dyslexic children show problems with handwriting, processing speed, working memory” (p. 40).

Although a cluster of these symptoms may be present, it is unlikely that a dyslexic individual would experience all of them. It is challenging to pinpoint exactly what dyslexia is because of how and to what extent these symptoms appear. Due in large part to the individual's dyslexia, one dyslexic person may experience quite different symptoms than another, “The prognosis depends on individual strengths and weaknesses, on the individual learning strategies, on the degree of dyslexia, on when the diagnosis was made and on appropriate tuition” (Ott, 1997, p. 5).

Ranaldi, (2003) in his book “Dyslexia and Design & Technology” summarizes some of the areas that illustrate the variety of possible dyslexia difficulties:

- reading hesitantly;
- misreading, making understanding difficult;
- difficulty with sequences, e.g. getting dates in order;
- poor organization or time management;
- difficulty organizing thoughts clearly;
- erratic spelling;
- processing at speed;
- misunderstanding complicated questions, though knowing the answer;
- finding the holding of a list of instructions in the memory difficult, though able to perform all the tasks;
- remembering people, places and names of objects;

- tiring more quickly than a non-dyslexic person – far greater concentration is required;
- deciphering a passage correctly yet not getting the sense of it;
- great difficulty with figures (e.g. learning tables), reading music or anything which entails interpreting symbols;
- learning foreign languages;
- inconsistent in performance;
- may omit a word or words, or write one twice;
- very likely to suffer from constant nagging uncertainty;
- great difficulty in taking good notes because cannot listen and write at the same time;
- when looking away from a book they are reading or a blackboard from which they are copying, they may have great difficulty in finding their place again;
- works slowly because of difficulties, so is always under pressure of time.

(pp. 14-15)

1.1.5. Dyslexia in Foreign Languages

Significantly, learning foreign languages has become essential in today's multilingual societies. Hence, fulfilling the foreign language (FL) requirement at schools and universities places a great burden on dyslexic students'. Furthermore, the link between the challenges that learners face when learning their native language and foreign languages has been proposed as a reasonable explanation for dyslexic students 'underperformance in languages (Nijakowska, 2010). Obviously, foreign language learners who have special learning difficulties share a variety of features of language functioning that may impair their ability to learn a foreign language (Sparks et al., 1989).

The linguistic coding differences hypothesis (henceforth LCDH) is well-known for explaining dyslexics' poor performance in learning a foreign language. This hypothesis originated from native language studies in reading conducted by Vellutino and Scanlon (1986), who discovered that students with reading difficulties displayed deficits primarily in the phonological and syntactic, but not semantic, aspects of language (as cited in Sparks, 1995). According to Sparks and Ganschow 1991, 1993a, 1995a; Sparks, Ganschow, and Pohlman 1989, student's proficiency in the phonological, syntactic, and semantic components of their native language serves as the basis for successful FL learning, which is based on native language proficiency. Therefore, both native and FL learning depend on fundamental language learning mechanisms, so problems with one language skill are likely to have an adverse impact on both language systems (as cited in Sparks, 1995). Consequently, it is reasonable to conclude that L1 deficiencies, including dyslexia, hinder the development of FL proficiency.

1.1.6. Dyslexia Reading and Writing Problems in Foreign Languages

Learning foreign languages is nowadays necessary to function in diverse communities. Accordingly, learning a foreign language in the Algerian educational system is an integral and a compulsory part for any regular student. In fact, the major challenge with dyslexics is that they have trouble learning their primary language, let alone foreign one (Cimermanova, 2015) obviously, fulfilling the foreign language educational requirement poses a substantial burden on learners with dyslexia, who exhibit various degrees of difficulty in acquiring a foreign language. (Nijakowska, 2010). Learners with dyslexia face different reading and writing difficulties as well as related issues such as short working memory and problems with automaticity in language, which have a significant impact on their ability to learn a language (Cimermanova, 2015). It is widely recognized that reading and writing are closely related and as far as the phonological and

orthographic knowledge are concerned, writing and reading abilities seem to be based on the same fundamental cognitive and linguistic processes (Berninger et al., 2002).

1.1.6.1. Reading Problems

To correctly pronounce a word, it is important to be able to recognize a set of written symbols, put them together, and match them with the correct sounds of the language. Dyslexia, however, makes it difficult to learn phonological awareness skills. This, in turn, causes dyslexic students to struggle with reading. They may struggle, for example, to split words into syllables, detect rhyming words, and recognize similar or unlike sounds. As a result, dyslexic students' reading abilities may be extremely slow and erroneous. Moreover, dyslexics have poor working memory, which makes it difficult for them to retain and remember information that they have just been given (Daloiso, 2017). As a result, individuals may be unable to retain visual information about specific phrases or the physical actions required to speak these words. It can also be difficult for dyslexic learners to understand spoken language because they are slower at recognizing the sounds within a syllable and the differences between syllables due to auditory processing difficulties caused by dyslexia (Olagboyega, 2008).

According to Daloiso (2017), dyslexia affects processing speed, making it difficult to make certain skills automatic. This is why individuals may take longer to respond to activities that require quick answers, and they may be slower at completing tasks that require more than one ability at once.

In addition, Lopez and Campoverde (2018) indicated that dyslexic learners are likely to have problems with reading comprehension due to their issues with reading. Thus, future difficulties in making progress in learning English as a foreign language will arise if the dyslexic learner is unable to comprehend the reading passages content. However, it is

crucial to understand that, even though people with dyslexia have problems in reading, this does not imply that they are intelligently inferior.

Ranaldi (2003) summarizes some of types of problems experienced in reading:

- hesitant and laboured reading, especially out loud;
- omitting or adding extra words;
- reading at a reasonable rate, but with low level of comprehension;
- failure to recognize familiar words;
- missing a line or reading the same line twice;
- losing the place or using a finger or marker to keep the place;
- difficulty in pinpointing the main idea in a passage;
- finding difficulty in using dictionaries, directories and encyclopaedias. (p. 15)

1.1.6.2. Writing Problems

Learning to spell is a significant challenge for individuals with dyslexia when they first start learning to write. Their phonological deficiencies hinders the development of orthographic knowledge (Fayol et al., 2009). .In other words, learners with dyslexia struggle to make connections and store word representation of word-specific spelling patterns (Bruck, 1993). This is especially true in the English language, where spellings are frequently irregular and these norms must be learned implicitly (Tsesmeli & Seymour, 2006).

Another aspect of writing that orthography can influence is word choice. Berninger et al (2008) stated that “many participants in our research studies lament that they cannot write compositions that express their ideas without limiting those ideas to the words they think they can spell without embarrassment.” (p. 17).

Additionally, dyslexics may mix up some similar-looking letter, such as the letters B and D. A learning impairment called dysgraphia, which can cause people to write words and letters backwards or have trouble with letter formulation, is frequently present alongside dyslexia (Flora, 2009 cited in Madden, 2021). Learners with dyslexia struggle with silent letters and punctuation as well. Furthermore, they can have difficulty writing by hand; actually hold the pen (Madden, 2021).

The handwriting skill is another element that may make it challenging for dyslexics to write; spelling may be a contributing element in their sluggish handwriting. Berninger et al. (2008) believe that “students with dyslexia do have a problem in automatic letter writing and naming, which was related to impaired inhibition and verbal fluency and may explain their spelling problems” (p. 1). Accordingly, Arfe, Dockrell, and Berninger (2014) stated that “If children with dyslexia are struggling with spelling, they may show more pauses in writing to try and process the spellings of words. If so, then they slow down the process of transcription, leading to slower writing than would be expected” (p. 194). It’s apparent that the slow writing skill with children or adults with dyslexia is not slow in itself, but rather the poor spelling ability of dyslexics while writing leads them to pause, which would slow down the overall writing process (Arfe et al., 2014). Obviously then, dyslexics’ slow writing skill is due to their poor spelling ability which causes them to stop while writing and slows down the writing process in general.

Ranaldi (2003) summarized some of types of problems experienced in writing:

- poor standard of written work compared to oral ability;
- poor handwriting with badly formed letters;
- good handwriting, but production of work is extremely slow;
- badly set out work with spellings crossed out several times;
- words spelled differently in one piece of work;

- difficulty with punctuation and grammar;
- confusion of upper- and lower-case letters;
- writing a great deal but ‘loses the thread’;
- writing very little but to the point;
- difficulty in taking notes in lessons;
- difficulty in organizing work and personal timetable. (p. 15)

1.2. Teachers’ Awareness of Dyslexia

1.2.1. Research Studies on Teacher’s Awareness of Dyslexia

It is widely acknowledged that a dyslexic learner’s success on all fronts academic, social, and emotional depends greatly on the teacher's knowledge and management of dyslexia. However, study has shown that educators usually fail to recognize dyslexia (Hayes, 2000; Karande et al., 2009; Kataoka et al., 2004). According to an investigation conducted by the Japanese Ministry of Education, some teachers were even uncertain whether or not their students had dyslexia (Kataoka et al., 2004).

The typical educational teacher can be a positive factor when it comes to assisting learners in overcoming their learning challenges. Research, however, demonstrates that this is not always the case when instructors are unaware of a child's cognitive disability (Kataoka et al., 2004). Sparks and Ganschow (1996) in their study hypothesized that some learners would be rated by foreign language teachers as having lower motivation, poorer attitudes, and/or higher levels of anxiety if their language learning abilities were perceived as weaker than other learners by the teachers, and this would cause them to make erroneous assumptions about students who have dyslexia. According to Kataoka et al. (2004), this kind of ignorance hinders the educational achievement of the learners with dyslexia.

Teachers' awareness of learning disabilities is crucial for effective remediation and intervention (Kataoka et al., 2004). Being at the center of the learning process, primary school instructors must be able to identify dyslexic tendencies in children and assist them in overcoming the condition. Unfortunately, the majority of English instructors in elementary schools are not adequately knowledgeable about dyslexia. (Denton et al., 2020). According to Denton's study, 57% of instructors had only a passing familiarity with dyslexia, and 70% acknowledged that they had previously encountered dyslexic students in their classrooms and they were powerless and helpless. This feeling of helplessness affects how well the instructor and pupil get along with one another. Others have poor standards of the child, while others have been reported to insult and even bodily punish students with learning disabilities. Some instructors also tend to blame the student's lack of development on their own ineffective teaching techniques (Karande et al., 2009; Kataoka et al., 2004).

The term dyslexia is still confusing for the majority of teachers. Teachers frequently struggle to distinguish between dyslexic students and slow learners. Moreover, the legal and ethical responsibilities that go along with this word confuse them (Wadlington et al., 1996). Unfortunately, this lack of teachers' awareness has negative impacts on learners with dyslexia. As a matter of fact, the majority of dyslexic learners attend mainstream schools which is a worrisome situation. This indicates that teachers are overburdened attempting to deal with dyslexic learners at the expense of others (Wadlington et al., 1996). Sparks et al (2004) examined the relationship between foreign language teachers' perceptions of learners' affective traits and proficiency. The results show that FL teachers could not identify low proficient learners who were grouped by native language in terms of affective traits. They were able to identify low proficient learners when they were grouped by foreign language competence and foreign language aptitude. Hence, FL teachers perceive low foreign language proficiency, including dyslexia, are driven by affective

factors rather than overall lower level of language skills (Sparks et al., 2004). Furthermore, foreign language teachers assess students' proficiency in FL based on their speaking abilities, which can make it difficult to recognize dyslexic students because they can be more proficient in speaking than in writing (Sparks et al., 2004).

Fekih (2019) investigated the awareness and familiarity of Algerian English as a Foreign Language (EFL) teachers regarding dyslexia and their perspectives on students with this condition. A purposive sample of 42 EFL teachers from various regions in Algeria (North, South, West, and East) participated in the research. The investigation began with a web-based questionnaire focusing on teachers' awareness and knowledge of reading difficulties. Subsequently, semi-structured interviews were conducted with 15 EFL teachers to delve deeper into their understanding and comprehension. Additionally, two focus group discussions involving 8 teachers were held to gain further insights. The findings revealed that a significant majority of the surveyed Algerian EFL teachers lacked awareness of dyslexia and instead associated it with other disabilities. Moreover, participants' responses demonstrated that their limited knowledge of dyslexia led to misconceptions about affected learners, perceiving them as lazy, unintelligent, or incapable of learning. Overall, the study highlighted the overall poor awareness and familiarity of dyslexia among EFL teachers in Algerian middle schools. Consequently, it is strongly recommended that all teachers undergo mandatory training programs focusing on understanding learning disabilities, particularly dyslexia, and emphasizing the importance of accommodating learners' needs.

1.2.2. Teaching Strategies and Intervention for Dyslexic Students

The significance of early identification and intervention for children with dyslexia has been emphasized for a long time (Snowling, 2013). Thus, a general aim is to recognize

dyslexia at an early stage of development so that intervention can be taken to limit or prevent reading problems (Snowling et al., 2011). According to Futch & Fuchs (2006), such a strategy ought to be more successful than one that requires waiting for children to struggle with reading before 'diagnosing' dyslexia (as cited in Snowling et al., 2011). Therefore, there are different teaching strategies and interventions that could help students with dyslexia to reduce their reading and writing difficulties, giving them the best chance of academic success.

1.2.2.1. Multi-Sensory Structured Learning Method

The most frequently suggested method is the multi-sensory structured learning (MSL) method, which teaches language components such as sound, spelling system, vocabulary, grammatical structures, and the four skills (listening, reading, speaking, writing) by simultaneously engaging the auditory, visual, tactile, and kinesthetic sensory pathways (Nijakowska, 2016). A person with dyslexia learns to read and spell words by hearing, seeing, and pronouncing them. They also make plasticine models of the words and form them from wooden, sponge, or plastic letters. Finally, they trace the words on different surfaces, including paper, carpet, and sand, and then they write them (Bogdanowicz 2000; as cited in Nijakowska, 2013, Ott 1997). According to Nijakowska (2013), the direct and explicit presentation of the rule system in a FL is one of the most distinguishing features of the MSL approach. Thus, it presupposes that dyslexic FL learners will be directly and explicitly familiarized with a language's phonological, orthographic, morphemic, and syntactic structure. On the other hand, synthetic/analytical instruction should also be used effectively, where dyslexic students are taught how to disassemble larger units into their component parts and how to reassemble the parts in the correct order. Additionally, another essential element of the MSL is repetition and over

learning, which are used to ensure automaticity as well as to boost memory and rate of access.

1.2.2.2. Drilling

According to Ahmad et al (2018), drilling is a useful and important strategy for teaching dyslexic learners reading and writing skills. Hence, it is the practice of repeating a word or phrase after the teacher until the students can pronounce it correctly (Rahmani, 2017). By writing a word and asking the student to repeatedly write what has been written, the teacher can drill the proper spelling. This will make it possible to remember information (Ahmad et al, 2018).

1.2.2.3. Modelling

Crombie (2000) pointed out modelling as another effective teaching method for dyslexic students. Thus, learners are given a model of written work that they can copy or revise as necessary. This could consist of word and picture cards, with vocabulary on one side and a matching image on the other side. The students can then arrange the cards in a sentence, which they can use as a guide and then copy. However, dyslexic students may be unable to produce significant written work. Before any written homework is sent home, it must be checked. Mistakes can occur even when students have a model to follow. Consequently, Teachers must be aware of this in order to ensure accuracy.

1.2.2.4. Differentiation

Differentiation is essential for all students with special needs to gain access to EFL learning. EFL teachers should consider the needs and abilities of students with dyslexia, as well as all students with specific or general learning difficulties (Rontou, 2012). Edwards (1998; as cited in Crombie, 2000, p. 118) defined differentiation as a “planned process of intervention in the classroom designed to maximize potential based on individual needs”. According to Ahmad et al (2018), many teachers use differentiation in activities to cater to

the individual needs of dyslexic language learners. Moreover, Crombie (2000) stated that differentiation allows students to demonstrate their abilities and find satisfaction in their learning. Teachers can differentiate material in a task; they can accept different types of responses based on the abilities of their students, in a way that makes all students feel as though their work is valued. In a listening exercise, for example, differentiating material by task may entail some students writing their responses, while others draw them and others record them on audiotape.

1.2.2.5 Metacognition

Metacognition could also be considered as one of the effective teaching strategies for dyslexic learners. Hence, Learning styles and reasoning abilities should be given more consideration. Students with dyslexia frequently fail to recognize and control their own thinking and reasoning processes. Therefore, students can use metacognitive strategies to plan and monitor their learning processes. Knowing how to learn and being able to reflect on and analyze the process of learning as a whole, rather than just its content and final outcome, are skills that must be incorporated into a training program designed to overcome dyslexic difficulties (Nijakowska, 2013).

According to Nijakowska (2016), teachers are responsible for providing a suitable, encouraging learning environment. This can be accomplished by implementing a number of enabling solutions, modifications, and accommodations to facilitate the access of the curriculum and ensure equal educational opportunities for all students. Dyslexic learning differences can be accommodated in a variety of ways; however, an individualized approach is required to take into account the various learning needs, strengths, and weaknesses of dyslexic students.

1.2.3. EFL Teachers' Perceptions of Teaching Strategies

Various foreign language teachers are faced with the challenge of teaching learners with dyslexia. According to Nijakowska (2014), the available knowledge and current research findings on dyslexia and effective instructional strategies appear to offer EFL teachers with relevant and sufficient facts to make educational decisions about teaching methods when working with dyslexic students. However, “an apparent lack of enthusiasm and relative reluctance of teachers with regard to implementing research-validated educational activities can be observed” (Ritchey and Goeke 2006; Philips et al. 2008, as cited in Nijakowska, 2014, p.130).

Nijakowska (2014), investigated the professional development needs of foreign language teachers in terms of inclusive practices and dyslexia and found that EFL teachers have little background information with regards of the language learning processes of students with dyslexia as well as inclusive instructional methods, and they are not given the proper initial and in- service training opportunities. In other words, EFL Teachers are unfamiliar with the appropriate teaching strategies and procedures for improving the language learning processes of dyslexic children. It appears that this is due to a lack of adequate training on dyslexia and learning differences through the course of studies, as well as a limited number of courses available to teachers in-service that would enable them to obtain qualifications to successfully teach foreign languages to dyslexic students.

1.2.4. Teacher’ Training and ELT Classroom

Learning a foreign language is improbable to be easy for dyslexic students. Their problems with reading and writing, Memory issues, as well as difficulties with the automaticity of language processing can be obstacles (Schneider & Crombie, 2003). Hence, students with dyslexia require adequate instruction and support from their teachers in order to ensure that they successfully attain the necessary levels of proficiency in a foreign language. However, EFL teachers frequently lack a sufficient understanding of the

nature of dyslexia and the challenges it presents in learning a foreign language. Consequently, they repeatedly express the need for training and clear guidance on how to deal with dyslexic students (Nijakowska, 2014).

According to Nijakowska (2014), The DysTEFL-dyslexia for teachers of English as a foreign language project- is a multi-lateral Comenius project that was carried out by a collaboration of seven partners from six European nations. The project seeks to increase pre- and in-service EFL teachers' training of dyslexic students' foreign language learning demands .It offers a theoretical framework for understanding the nature of dyslexia as well as practical recommendations for classroom instruction, task, curriculum design, and assessment. Moreover, the course provides language teachers with a diverse set of beneficial teaching strategies and resources to improve the quality and effectiveness of foreign language instruction for dyslexic students. As a result, the impact of DysTEFLproject can significantly contribute to narrowing the obvious gap in foreign language teacher training programmes.

1.2.5. The Role of EFL Teachers' in the Management of Dyslexic Students

It is important that all students receive high-quality assistance when they start school. It is even more crucial if the student has a learning disability such as the case of dyslexia. The role of the teacher is to support dyslexic students and adjust the educational environment to foster successful learning, giving them all the assistance and attention they may need to make up for their EFL deficiencies and utilize their strengths as effectively as possible (Ranaldi, 2003).

Baroness Mary Warnock suggested that teachers have a crucial role in the assessment process that every teacher in every school is accountable for recognizing a student's difficulties, determining exactly what that student can and cannot do, and then either providing support themselves or ensuring that it is given by another party (Came & Reid,

2007. Cited in Reid, 2011). She goes on to say that if this was done early enough, in many cases the difficulties could be overcome. She continues by saying that a child who is frustrated by his or her failure to learn or do something that others seem to be able to do will get into problems because they will academically fall behind their peers, which eventually will make from going to school a misery. She emphasizes the significance of early evaluation ownership by teachers, as is early diagnosis, in order to stop the spiral of failure that frequently follows the academic performance of students with reading and writing challenges. (Reid, 2011).

1.2.6. Reasons Behind Teachers' Lack of Awareness of Dyslexia

There are many reasons why school instructors are unfamiliar with how to recognize and manage dyslexia. Apathy among teachers toward acknowledging dyslexia as a "real disability" remains a glaring fact. The primary reason of teacher ignorance of dyslexia is due to a dearth of teacher training in the field of dyslexia. (Wadlington&Wadlington, 2005). According to a research conducted by Carroll, Forlin, and Jobling (2003), there is a severe lack of pre-service and in-service training in this field. Many parents report that instructors refuse to recognize a dyslexia diagnosis, which they assume is due to a lack of understanding of the condition. Numerous myths about dyslexia continue to persist, according to research. For instance, a common misconception is that dyslexia only affects people while they are in school. Few individuals are aware that it is a permanent impairment (Wadlington&Wadlington, 2005).

The role played by school management and/or local authorities is another reason behind teachers' lack of awareness. Wadlington and Wadlington (2005) assert that teachers' knowledge of dyslexia is not sufficiently influenced by the school's management. It is the managements' responsibility to ensure that teachers are well- equipped with methods for identifying and managing learning disabilities (Wadlington & Wadlington, 2005).

Accountability is a third reason behind the lack of teachers' awareness of dyslexia. Generally, education instructors believe that managing and identifying learners with learning disabilities is the responsibility of special education teachers (Hayes, 2000). Not only special needs department but all teachers have the responsibility of special education (Peer & Reid, 2001). To provide all students with a high-quality education, it is essential that all instructors see themselves as special needs educators. As a matter of fact, dyslexic learners have a better chance of succeeding in their classes because special needs instructors have a more positive attitude toward learning challenges (Hayes, 2000). The success of dyslexic students depends on teachers being conscious of this, as many of them report feeling stressed out when their teachers don't comprehend and care about them (Karande et al., 2009).

Conclusion

dyslexia is a learning disorder that affects a person's ability to read, spell, write, and sometimes speak. It is a neurodevelopmental condition that is characterized by difficulties with accurate and fluent word recognition and by poor spelling and decoding abilities. Therefore, teachers play a crucial role in guiding and supporting dyslexic students to facilitate successful learning, and its effectiveness relies on teachers' understanding of the condition and their knowledge of diverse teaching techniques aimed at enhancing reading and writing abilities.

Chapter Two: Field Work

Introduction

2.1. Population and Sampling

2.2. Research Instrument

2.3. The Teacher Questionnaire

2.3.1. Description of the Teacher Questionnaire

2.3.2. Analysis of the Teacher Questionnaire

2.3.3. Discussion of the Overall Results

Conclusion

Introduction

The first chapter presented the theoretical part related to this study, while the present chapter is devoted to the practical part. It presents an investigation of EFL teachers' awareness of dyslexia in primary schools along with their readiness to teach dyslexics. In this chapter, the choice of research methodology used together with the research tool, target population and sample selection are explained. In addition, a detailed analysis and interpretation of the collected data, as well as a discussion of the findings obtained are provided.

2.1. Population and Sampling

The current study targets a population of EFL teachers of primary schools at Jijel district. Following random sampling procedures, the sample is made up of 35 out of 93 EFL teachers in 99 different primary schools. The choice of primary school teachers has been made according to the following reasons:

- The importance of teachers' awareness of dyslexia and their crucial role in its early identification and management.
- The lack of research studies on dyslexia at the level of primary schools in Algeria as most of the studies, if not all, have just targeted teachers of middle schools. This is because English was just lately introduced to Algeria primary schools following a presidential decree in 2022.

2.2. Research Instrument

Since the present study is descriptive and involves a quantitative research method, a designed questionnaire is adopted. The teacher questionnaire used aims at investigating EFL primary school teachers' awareness of dyslexia and their readiness to teach English to dyslexic students. It has been employed as a research instrument to gather quantitative data from the participants. According to Dornyei (2003), questionnaires undoubtedly are the most commonly used data gathering instruments in statistical work. It allows the researchers to gather standardized answers since all respondents reply at the same set of questions as it saves time and efforts. Furthermore, questionnaires are defined as " any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers " (Brown, 2001, p. 6). The choice of questionnaire meets the requirements of this research as it enabled us to investigate EFL teachers' awareness of dyslexia in primary schools.

2.3. The Teacher Questionnaire

2.3.1. Description of the Teacher Questionnaire

The teacher questionnaire comprises 45 items. The questionnaire includes both closed-ended and open-ended questions. Closed-ended questions require teachers to respond “yes” or “no” or to choose one answer from a set of choices .Open-ended questions require the participants to answer in an open-text format .The questionnaire contains three sections: Background Information, Teachers’ Awareness of Dyslexia Test (DBI) by Wadlington & Wadlington (2005), and Teachers’ Readiness to Teach Dyslexic Pupils. Each section has a specific objective and is designed to gather a certain set of data.

The first section is devoted for teachers’ background information. It is made up of four questions (Q1-Q4). Teachers were requested to specify the highest degree they hold. Also, they were asked to provide the number of their years of experience in teaching EFL and if it is their first year of teaching English. Moreover, they were required to indicate whether they had received any pre-service or in-service special educational training. These questions were designed to elicit information about the sample, as it is crucial to know their background in the present research.

The second section entitled “Teachers’ Awareness of Dyslexia Test (DBI) by Wadlington & Wadlington (2005)”. Is an adaptation of Wadlington & Wadlington Dyslexia Belief Index (DBI) test. The researchers used the pilot study results to show that the DBI was valid in terms of its content and psychometric properties. Additionally, they found the DBI to be a practical tool to utilize. It has been specifically developed as a tool for examining EFL teachers’ awareness of dyslexia and it enabled the researchers to obtain a large amount of information in a short period of time. Participants considered the instrument non-threatening and simple to use. The purpose of using DBI was to investigate teachers’ awareness with regard to dyslexia, rather than conducting a test that could consume teacher’ time and potentially be intimidating for them. The DBI consists of thirty

items. The response alternatives for these items were presented in a Likert scale and were factual statements of one sentence. This scale gives four answers: 1= know it's false, 2= probably false, 3= probably true, or 4= know it's true. Teachers were asked to tick the box next to each statement that best represented their choice. Each statement aims to investigate a certain aspect of knowledge about dyslexia, mainly, definition, characteristics, treatment, symptoms, instructions, impact of the disability, school environment and origin. The statements 1 and 7 aimed to explore teachers' familiarity of the definition of dyslexia (dyslexia is a learning disability that effects language processing, writing and/or speaking abilities). Furthermore, the statements 2, 5, 10, 17, 18, 21, 22, 27, 28 ,29 and 30 main purpose was to examine teachers' abilities to recognize the different characteristics of dyslexia (individuals with dyslexia have below average intelligence, an individual can be dyslexic and gifted, they often excel in science, music, art and / or technical fields, college learners with dyslexia seldom do well in graduate school, most poor readers have dyslexia, the brains of dyslexics are different from those without it, some students with mild dyslexia may not experience problems due to dyslexia until middle school or later, dyslexics may comprehend a passage very well but be unable to pronounce words, dyslexics usually exhibit the same characteristics with similar degrees of severity, word reversal is the major criterion in the identification of dyslexia and they may pronounce words in a passage very well but be unable to comprehend it). In addition, statements 3 and 6 were set to probe teachers' perceptions of the treatment of dyslexia (dyslexia can be managed by diet and/or exercise and physicians can prescribe medication to help dyslexia). Moreover, statements 4, 23 and 25 focused on investigating teachers' knowledge about the different symptoms of dyslexia (dyslexics have trouble understanding the structure of language especially phonics, dyslexics are more consistently impaired in phonemic awareness than any other ability and they are usually poor spellers). Besides,

statements 8 and 20 were designed to investigate teachers' perceptions of the instructions and teaching strategies that used to teach dyslexics (multisensory instruction is absolutely necessary for students with dyslexia to learn and students with dyslexia need structured, sequential, direct instruction in basic skills and learning strategies). Additionally, statements 9 and 11 were stated to probe teachers' understanding about the impact of dyslexia (in school, dyslexia only affects the student's performance in reading as well as it causes social, emotional, and/or family problems).

Statements 12, 13, 16, 19, 24 and 26 were sought to know teachers' awareness of dyslexia in school environment (most special education teachers receive intensive training to work with students with dyslexia, most regular education teachers receive intensive training to work with dyslexics, giving dyslexic students accommodations such as extra time on tests, shorter spelling lists, special seating is unfair to other students, in school, classroom placement should be decided on an individual basis, schools usually diagnosis dyslexia through the administration of a nationally recognized standardized test, and after three to five hours of instruction, educators can work competently students with dyslexia). Moreover, statements 14 and 15 were demonstrated to examine teachers' familiarity of the origin of dyslexia (dyslexia is hereditary and it is caused by poor home environment and/or poor reading instruction).

Section three entitled "Teachers' Readiness to Teach Dyslexic Pupils" includes eleven questions (Q1- Q11). Teachers were first asked whether they have ever taught a dyslexic pupil and how they could know that the pupil is dyslexic (Q1-Q2). Questions 3 and 4 were designed to investigate whether the teachers' former education and life experiences have prepared them to teach dyslexic pupils. Next, questions 5 and 6 were posed to determine whether the teachers have ever searched for how to teach a pupil with dyslexia and the sources from where they searched for information about dyslexia. After that, questions 7

and 8 aimed to explore if EFL teachers believe that dyslexics' reading and writing challenges can be overcome and how can they be overcome. Then teachers were asked about what they would do to ensure that dyslexic students obtain comparable if not identical learning outcomes as their non-dyslexic peers (Q9). The last questions 10 and 11, in this section, were sought to investigate whether the teachers know any teaching strategies that are effective in supporting dyslexics.

The printed version of this questionnaire was distributed to 35 EFL teachers in Jijel primary schools and collected from April 16, 2023 to May 10, 2023.

2.3.2. Analysis of the Teacher Questionnaire

Section One: Background Information

Question 1: What is the highest degree you hold?

Table 1

Teachers' Highest Degree of English

Option	Number of respondents (N)	Percentage (%)
Licence	28	80%
Master's	7	20%
Magistère	0	0%
Doctorate	0	0%
Total	35	100%

The first question was designed to know the teachers' highest degree in English teaching. As shown in the Table 1, it appears that 80 % of the teachers hold the Licence degree, while 20% of them hold the master's. However, none of the participants holds the Magistère or the Doctorate degree. These results clarify that the majority of EFL primary school teachers are adequately qualified.

Question 2: How long have you been teaching English?

Table 2

Teachers' Experience in Teaching English

Option	Number of respondents (N)	Percentage (%)
1-5 years	33	94, 28%
6-10 years ¹	1	2, 86%
More than 10 years ¹	1	2, 86%
Total	35	100%

In this question, teachers were expected to state how long they have been teaching English. The results shown in Table 2 indicate that 94, 28% of the teachers have from one to five years of teaching experience, while only 2, 86 % of them have from five to ten years of experience. Similarly, 2.86% of the participants have been teaching English for more than ten years. This data elucidates that the vast majority of teachers can have favorable knowledge of dyslexia.

Question 3: Is it your first year in teaching English in the primary school?

Table 3

Teachers' Experience in Teaching English in Primary Schools

Option	Number of Respondents (N)	Percentage (%)
Yes	35	100%
No	0	0%

Total	35	100%
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Teachers in this question were required to state whether it was their first year in teaching English in primary schools. The data displayed in Table 3 show that it is the first year for all teachers in teaching English in primary schools. The results of this question conclude that all EFL primary teachers do not have enough experience in teaching dyslexic pupils in primary schools.

Question 4: Have you received any pre-service or in-service special education training?

Table 4

English Teachers' Special Educational Training.

Option	Number of Respondents (N)	Percentage (%)
Yes	1	2, 86%
No	34	97, 14%
Total	35	100%

In response to this question, teachers were asked whether they had received any pre-service or in-service special education training. From the data obtained and demonstrated in Table 4, it is evident that the majority of English teachers (97, 14%) did not receive any pre-service or in-service special education training. While only 2, 86 % of them did. These results bring up important inquiries about the involvement of the relevant authorities in this regard.

Section 2: Teachers' Awareness of Dyslexia Test (DBI) by Wadlington &Wadlington (2005)

Table 5

The DBI Results/Teachers' Awareness of Dyslexia

Statements	Know it's false	Probably false	Probably true	Know it's true	Total
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1. Dyslexia is a learning disability that affects language processing	3 (8.6%)	2 (5.7%)	16 (45.7%)	14 (40%)	35 (100%)
2. People with dyslexia have below average Intelligence.	8 (22.9%)	8 (22.9%)	17 (48.6%)	2 (5.7%)	35 (100%)
3. Dyslexia can be managed by diet And/or exercise.	5 (14.3%)	5 (14.3%)	22 (62.9%)	3 (8.6%)	35 (100%)
4. Individuals with dyslexia have trouble understanding the structure of language, especially phonics	0 (0%)	18 (51.4%)	9 (25.7%)	8 (22.9%)	35 (100%)
5. An individual can be dyslexic and gifted.	2 (5.7%)	8 (22.9%)	14 (40%)	11 (31.4%)	35 (100%)
6. Physicians can prescribe medication to help dyslexia.	6 (17.1%)	4 (11.4%)	22 (62.9%)	3 (8.6%)	35 (100%)
7. Dyslexia often affects writing and/or speaking abilities.	1 (2.9%)	6 (17.1%)	10 (28.6%)	18 (51.4%)	35 (100%)
8. Multisensory instruction is absolutely necessary for student with dyslexia to learn.	0 (0%)	0 (0%)	20 (57.1%)	15 (42.9%)	35 (100%)
9. In school, dyslexia only affects the student's performance in reading (not in math, social studies, etc.).	6 (17.1%)	5 (14.3%)	15 (42.9%)	9 (25.7%)	35 (100%)
10. People with dyslexia often excel in science, music, art, and/or technical fields.	3 (8.6%)	15 (42.9%)	12 (34.3%)	5 (14.3%)	35 (100%)
11. Dyslexia causes social, emotional, and/or family problems	3 (8.6%)	19 (54.3%)	5 (14.3%)	8 (22.9%)	35 (100%)

12. Most special education teachers receive intensive training to work with students with dyslexia.	6 (17.1%)	12 (34.3%)	10 (28.6%)	7 (20%)	35 (100%)
13. Most regular education teachers receive intensive training to work with students with dyslexia.	17 (48.6%)	7 (20%)	8 (22.9%)	3 (8.6%)	35 (100%)
14. Dyslexia is hereditary.	23 (65.7%)	7 (20%)	1 (2.9%)	4 (11.4%)	35 (100%)
15. Dyslexia is caused by a poor home environment and/or poor reading instruction	5 (14.3%)	5 (14.3%)	18 (51.4%)	7 (20%)	35 (100%)
16. Giving students with dyslexia accommodations such as (extra time on tests, shorter spelling lists, special seating, etc. is unfair to other students.	7 (20%)	3 (8.6%)	18 (51.4%)	7 (20%)	35 (100%)
17. College students with dyslexia seldom do well in graduate school.	5 (14.3%)	14 (40%)	16 (45.7%)	0 (0%)	35 (100%)
18. Most poor readers have dyslexia	19 (54.3%)	11 (31.4%)	4 (11.4%)	1 (2.9%)	35 (100%)
19. In school, classroom placement (e.g., special or general education) should be decided on an individual basis.	0 (0%)	8 (22.9%)	1 (48.6%)	10 (22.6%)	35 (100%)
20. Students with dyslexia need structured, sequential, direct instruction in basic skills and learning strategies.	0 (0%)	0 (0%)	24 (68.6%)	11 (31.4%)	35 (100%)
21. The brains of individual With dyslexia are different from those of people Without dyslexia.	16 (45.7%)	11 (31.4%)	6 (17.1%)	2 (5.7%)	35 (100%)
22. Some students with mild dyslexia may not experience problems due to dyslexia until middle school or later.	4 (11.4%)	15 (42.9%)	14 (40%)	2 (5.7%)	35 (100%)

23. Children with dyslexia are more consistently impaired in phonemic awareness (i.e., ability to hear and manipulate sounds in language) than any other ability.	3 (8.6%)	12 (34.3%)	16 (45.7%)	4 (11.4%)	35 (100%)
24. Schools usually diagnose dyslexia through the administration of a nationally recognized standardized test.	8 (22.9%)	7 (20%)	16 (45.7%)	4 (11.4%)	35 (100%)
25. Individuals with dyslexia are usually extremely poor spellers.	2 (5.7%)	21 (60%)	8 (22.9%)	4 (11.4%)	35 (100%)
26. After three to five hours of instruction, most educators can work competently with students with dyslexia.	5 (14.3%)	12 (34.3%)	17 (48.6%)	1 (2.9%)	35 (100%)
27. Individuals with dyslexia may comprehend a passage very well but be unable to pronounce words.	12 (34.3%)	8 (22.9%)	9 (25.7%)	6 (17.1%)	35 (100%)
28. Individuals with dyslexia usually exhibit the same Characteristics with similar degrees of severity.	4 (11.4%)	7 (20%)	18 (51.4%)	6 (17.1%)	35 (100%)
29. Word reversal is the major criterion in the identification of dyslexia.	4 (11.4%)	5 (14.3%)	21 (60%)	5 (14.3%)	35 (100%)
30. Individuals with dyslexia may pronounce words in a passage very well but be unable to comprehend it.	5 (14.3%)	8 (22.9%)	18 (51.4%)	4 (11.4%)	35 (100%)

Table 5 shows the results of DBI test which was adopted to investigate teachers' awareness of dyslexia based on thirty statements. In the analysis of DBI, the answers "know it's false" and "probably false" in results are considered as the participants believe the statement is false, while the answers "know probably true" and "know it's true" are considered that the participants believe the statement is true.

In the first statement of the DBI, the participants were required to state whether dyslexia is a learning disability that affects language or not. 45, 7% of the participants opted for “probably true” and 40% for “know it’s true”. However, 8, 6% of teachers opted for “know it’s false” and 5, 7% for “probably false”. According to these findings, the majority of primary EFL teachers (85, 7%) know that dyslexia is a learning disability that effects language processing.

In the second statement the EFL teachers’ knowledge about whether people with dyslexia have below average intelligence or not was tested. 48, 6% of teachers went for “probably true” and 5, 7% for “know it’s true”; whereas, 22, 9% of the participants went for “know it’s false” and 22, 9% for “probably false”. The results show that 54, 3% of the participants believe that dyslexics have below average intelligence. This indicates that EFL teachers in primary schools have wrong perceptions of dyslexics’ level of intelligence.

The third statement tests if the participants are cognizant of that dyslexia can be managed by diet and/or exercise. 62, 9% of teachers decided on “probably true” and 8.6% on “know it’s true”, while, 14, 3% of the participants decided on “know it’s false” and (14, 3%) for “probably false”. The result show that 71, 5 of EFL teachers believe that dyslexia can be managed by diet and/or exercise.

Through the fourth statement, the respondents were asked about if they think individuals with dyslexia have trouble understanding the structure of language, especially phonics. 51, 4% of teachers chose “probably false”. Meanwhile, 25, 7% of the participants chose “probably true” and 22, 9% for “know it’s true”. The findings reveal that 51, 4% of primary EFL teachers are not knowledgeable that dyslexics have trouble understanding the structure of language, especially phonics.

In statement 5 of the DBI, the teachers were asked about whether they believe an individual can be dyslexic and gifted. 40% of the teachers settled on “probably true” and

31, 4% on “know it’s true”, while 5, 7% of them settled on “know it’s false” and (22, 9%) on “probably true”. These data clarify that most of the EFL teachers (71, 4%) are aware that an individual can be dyslexic and gifted.

With regard to statement 6, the participants were questioned about the possibility of prescribing medication by physicians to help dyslexics. 62, 9% of the participants preferred “probably true” and 8, 6% preferred “know it’s true”. In contrast, 17, 1% of teachers preferred “know it’s false” and 11, 4% preferred “probably false”. These results mean that 71, 5% of EFL primary teachers consider dyslexia a disease which can be treated via medication, which is totally false.

Concerning the statement 7 of the DBI which is about if dyslexia often affects writing and/or speaking abilities, 28, 6% of teachers selected “probably true” and 51, 4% selected “know it’s true”. On the other hand, 2, 9% of them selected “know it’s false” and 17, 1% selected “probably false”. These data show that 80% of EFL primary teachers know that dyslexia often affects writing and/or speaking abilities.

In statement 8 of the DBI, 57, 1% of teachers opted for “probably true” that multisensory instruction is absolutely necessary for student with dyslexia to learn and 42, 9% for “know it’s true”. However, none of the participants opted for “know it’s false” and for “probably false”. The results entail that all EFL primary teachers believe that multisensory instruction is absolutely necessary for dyslexics to learn.

As for statement 9 of the DBI, the participants were invited to agree or disagree on if in school, dyslexia only affects the student’s performance in reading (not in math, social studies, etc.). 42, 9% of the participants went for “probably true” and 25, 7% for “know it’s true”. However, 17, 1% of teachers selected “know it’s false” and 14, 3% “probably false”. According to these findings, 68, 6% of EFL primary teachers think that dyslexia only

affects the students' performance in reading .This means that they have limited understanding about the effects of dyslexia.

In statement 10 it is said that people with dyslexia often excel in science, music, art, and/or technical fields. 8, 6% of teachers answered “know it's false” and 42, 9% said it is “probably false” whereas 34, 3% of the participants answered “probably true” and 14, 3% said “know it's true”. These data elucidate that 51, 5% of EFL teachers have inappropriate knowledge that people with dyslexia excel in science, music, art, and/or technical fields.

Regarding the statement 11 of the DBI, 8, 6 % of the participants chose “know it's false” and 54, 3% chose “probably false” that dyslexia causes social, emotional, and/or family problems. Meanwhile, 14, 3% of them chose “probably true” and 22, 9% chose “know it's true”. These results reveal that 62, 9% of EFL primary teachers consider that dyslexia do not causes social, emotional, and/or family problems. This implies that, they are ignorant of the bad impact of dyslexia.

In the statement 12 of the DBI, the teachers had to agree or disagree on that most special education teachers receive intensive training to work with students with dyslexia. 17, 1% of teachers selected “know it's false” and 34, 3% selected “probably false”; whereas, 28, 6% of them selected “probably true” and 20% selected “Know it's true”. These data display that 51, 4% of primary EFL teachers believe that most special education teachers receive intensive training to work with students with dyslexia.

Through statement 13 of the DBI, the participants were asked about whether they find that most regular education teachers receive intensive training to work with students with dyslexia. 48, 6% of the participants opted for “know it's false” and 20% for “probably false”. On the other hand, 22, 9% of teachers opted for “probably true” and 8, 6% for “know it's true”. The results above explain that 68, 6% of primary EFL teachers have a

misconception that most regular education teachers receive intensive training to work with dyslexics.

Concerning the statement 14 of the DBI, 65, 7% of teachers said it is false and 20% probably false that dyslexia is hereditary. In contrast, 2, 9% of them selected “probably true” and 11, 4% selected “know it’s true”. These findings demonstrate that 85, 7% of primary EFL teachers consider that dyslexia is not hereditary and this signifies that they are unaware about the origin of dyslexia.

In statement 15 of the DBI, the respondents’ knowledge was tested on whether or not dyslexia is caused by a poor home environment and/or poor reading instruction. 51, 4% of the participants went for “probably true” and 20% for “know it’s true”. However, 14, 3% of teachers went for “know it’s false” and similarly 14, 3% for “probably false”. The data indicate that 71, 4% of EFL primary teachers mistakenly consider that dyslexia is caused by poor home environment and/or poor reading and they are not knowledgeable about the causes of dyslexia.

As for the statement 16 of the DBI, 51, 4% of teachers chose “probably true” and 20% chose “know it’s true” that giving students with dyslexia accommodations such as extra time on tests, shorter spelling lists, special seating, etc. is unfair to other students. However, 20% of the participants selected “know it’s false” and 8, 6% for “probably false”. These results clarify that 61, 5% of primary EFL teachers think that giving dyslexic students accommodations such as extra time on tests, shorter spelling lists, special seating is unfair to other students. This means that, they lack awareness of the requirement provided to dyslexics in schools.

With respect to statement 17, the teachers were requested to decide on whether college students with dyslexia seldom do well in graduate school. 14, 3% of the participants opted for “know it’s false” and 40% for “probably false” while, 45, 7% of teachers opted for

probably true and none of them for “know it’s true”. The data collected illustrate that 54, 3% of EFL primary teachers do not have the necessary knowledge that college students with dyslexia seldom do well in graduate school.

Statement 18 was about if most poor readers are deemed dyslexic. 54, 3% of teachers settled on “know it’s false” and (31, 4%) on “probably false”. Yet, (11.4%) settled on “probably true” and (2.9%) on “know it’s true”. The results indicate that a great percentage (85, 7%) of the participants most of EFL teachers know that poor reading does not necessarily indicate that the person is definitely dyslexic.

As for statement 19, a percentage of 48, 6% of teachers opted for “probably true” and 28, 6% for “know it’s true” that in school, classroom placement (e.g., special or general education) should be decided on an individual basis. However, 22.9% opted for “probably false”. According to the data gathered, 77.2% of the participants are aware that classroom placement in school should be decided on an individual basis.

The majority of teachers’ responses concerning statement 20 hold that dyslexic students need structured, sequential, direct instruction in basic skills and learning strategies were for “probably true” with a percentage of 68.6% and for “know it’s true ” with a percentage of 31.4% .Thus, one may deduce that the majority of teachers are aware of this fact.

In the subsequent statement (statement 21), 45.7% of the participants went for “know it’s false” and 31.4% for “probably false” in thinking that the brains of individuals with dyslexia are different from those of people without dyslexia. However, only 17.1% of them went for “probably true” and 5.7% for “know it’s true”. As supported by the data, the majority of EFL teachers lack awareness about dyslexics’ brains structures since 77.1% of teachers do not know that dyslexics’ brains are different from those without the condition.

As for statement 22, the participants were requested about whether they think that some students with mild dyslexia may not experience problems due to dyslexia until middle school or later. 42, 9% of teachers selected “probably false” and 11, 4% selected “know it’s false” whereas, 40% chose “probably true” and 5, 7% chose “know it’s true”. In accordance with the collected data, 54.3% of the teachers knew that some students with mild dyslexia may not experience problems due to dyslexia until middle school or later.

In the following statement (statement 23 of the DBI), 45.7% of teachers chose “probably true” and 11.4% chose “know it’s true”, believing that children with dyslexia are more consistently impaired in phonemic awareness (i.e., ability to hear and manipulate sounds in language) than any other ability. Conversely, 34.3% of them picked “probably false” and 8.6% chose “know it’s false”. In light of the data obtained, 57.1% of teachers are aware of the fact that children with dyslexia are more consistently impaired in phonemic awareness than any other ability.

In reference to statement 24, a percentage of 45, 7% of teachers selected “probably true” and 11, 4% selected “know it’s true” that schools usually diagnose dyslexia through the administration of a nationally recognized standardized test. In contrast, 22, 9% went for “probably false” and 20% for “know it’s false”. As per the overall gathered data, 57, 1% said that schools usually diagnose dyslexia through the administration of a nationally standardized test and this entails that they lack awareness of dyslexics’ diagnoses in schools.

In statement 25 in the DBI investigated if teachers are aware that dyslexics are usually extremely poor spellers. According to the data collected, 60% of the answers settled on “probably false” and 5.7% on “know it’s false”. However, 11.4% of the answers settled on “know it’s true” and 22.9% on “probably true”. This implies that 71.4% of teachers are unaware that dyslexics have the characteristic of being poor spellers.

As for statement 26 of the DBI which is about whether the respondents think that after three to five hours of instruction, most educators can work competently with students with dyslexia. 48.6% of the participants selected “probably true” and 2.9% selected “know it’s true”. Whereas, 34.3% chose “probably false” and 14.3% chose “know it’s false”. In line with the data gathered, nearly half of the teachers with (51.5%) are not aware that educators cannot work with dyslexics competently after five hours of instruction.

With respect to the statement 27 of the DBI, which was about the ability of individuals with dyslexia to comprehend a passage very well even without being able to pronounce words, 34.3% of the participants opted for “know it’s false” and 22.9% for “probably false”. In contrast, 25.7% opted for “probably true” and 17.7% for “know it’s true”. As per the gathered data, the majority of teachers (57.2%) do not have knowledge or understanding about this specific feature associated with dyslexia.

Statement 28 is about whether or not individuals with dyslexia usually exhibit the same characteristics with similar degrees of severity. A big percentage of the answers with 51.4% were “probably true” and 17.1% were “know it’s true” .Yet, only 11.4% went for “know it’s false” and 20% for “probably false”. Hence, it can be inferred that less than half of the research sample were aware that dyslexics do not exhibit the same characteristics with the same severity. The results demonstrate that the majority of EFL teachers with a percentage of (68.5%) lack knowledge about the characteristics of dyslexics.

As it pertains to statement 29 of the BDI, 60% of the participants decided on “probably true” and (14.3%) for “know it’s true” while 11.4% of them chose “know it’s false” and 14.3% chose “probably false”. The findings show that a big percentage (74.3%) of teachers believe that word reversal is the major criterion of the identification of dyslexics, which is not accurate.

Finally yet importantly, statement 30 of the DBI is about whether the teachers think that individuals with dyslexia may pronounce words in a passage very well but be unable to comprehend it. 51.4% of the participants selected “probably true” and 11.4 % selected “know it’s true”. However, 22.9% chose “probably false” and 14.3% chose “know it’s false”. The results demonstrate that 62.8% of teachers are aware of the fact that dyslexics are able to pronounce words well without understanding them.

Table 6.

A Summary of the Teachers’ Answers in the DBI Test

DBI Answers	Number	Percentage (%)
Right Answers	13	43, 33%
Wrong Answers	17	56, 66%
Total	30	100%

Table 6 demonstrates the number of right and wrong answers provided by the 35 EFL teachers in primary schools after completing the DBI test. 56, 66% of the answers were wrong in contrast with 43, 33% of answers that were right.

Section 3: Teachers’ Readiness to Teach Dyslexic Pupils

Question 1: Have you ever taught a dyslexic pupil?

Table 7

Teachers’ Experience in Teaching Dyslexic Pupils

Option	Number of Respondents	Percentage (%)
Yes	5	14, 29%
No	30	85, 71%
Total	35	100%

This question was designed to know whether EFL teachers in primary schools have ever taught a dyslexic pupil. As shown in Table 7 thirty teachers (85, 71%) said that they have never taught a dyslexic pupil. However, only five teachers (14, 29%) indicated that they have taught a dyslexic pupil. The results show that the majority of EFL primary teachers are not familiar with dyslexia.

Question2: If yes, how could you know that the pupil is dyslexic?

This question was related to the previous one and was intended to examine teachers' ability to recognize dyslexic pupils. According to the data collected, 14, 28% of teachers are able to recognize a dyslexic pupil through:

- Speed processing such as slow speaking and writing.
- Reading problems especially reading aloud.
- Spelling mistakes.
- Difficulty in recalling letters and words.

Question3: Has your former education prepared you for working with a dyslexic pupil?

Table 8

EFL Primary Teachers' Former Educational Preparation for Working with Dyslexic Pupils.

Option	Number of Respondents	Percentage (%)
Yes	2	5, 71 %
No	33	94, 29 %
Total	35	100%

The current question investigates whether teachers' former education prepared them to work with dyslexic pupils or not. As presented in the Table 8, 94, 29 % of teachers claimed that their former education did not prepare them to work with dyslexic pupils. Meanwhile, 5, 71% maintained that their former education prepared them to work with dyslexic pupils.

The results displayed show that Algerian educational programs do not prioritize or value dyslexic learners.

Question 4: Have your life experiences prepared you for working with a dyslexic pupil?

Table 9

Teachers' Life Experiences Preparation for Working with Dyslexic Pupils

Option	Number of Respondents (N)	Percentage (%)
Yes	5	14, 29%
No	30	85, 71%
Total	35	100%

This question seeks to know whether teachers' life experiences prepared them to work with dyslexic pupils. As Table 9 indicates, a percentage of 85.71% represents those who opted for "yes" and 14.29% for those who opted for "no". To put it in another way, the majority of EFL primary teachers did not have any life experiences that could prepare them to work with dyslexic pupils.

Question 5: Have you ever searched for how to teach dyslexic pupils?

Table 10

EFL Primary Teachers that have searched for How to Teach Dyslexic Pupils

Option	Number of Respondents (N)	Percentage (%)
Yes	7	20 %
No	28	80 %
Total	35	100%

The objective of asking this question was to check whether EFL teachers have ever searched for how to teach dyslexic pupils. The findings obtained clearly demonstrate in Table 10 that 80% of them have not searched for how to teach dyslexics. In contrast, 20% of them have attempted to search for how to teach dyslexic pupils. These results indicate that the most of EFL teachers do not give much importance to dyslexics.

Question6: If yes, I searched for the information:

- On the Internet
- In books
- I asked a colleague
- Other,s pecify

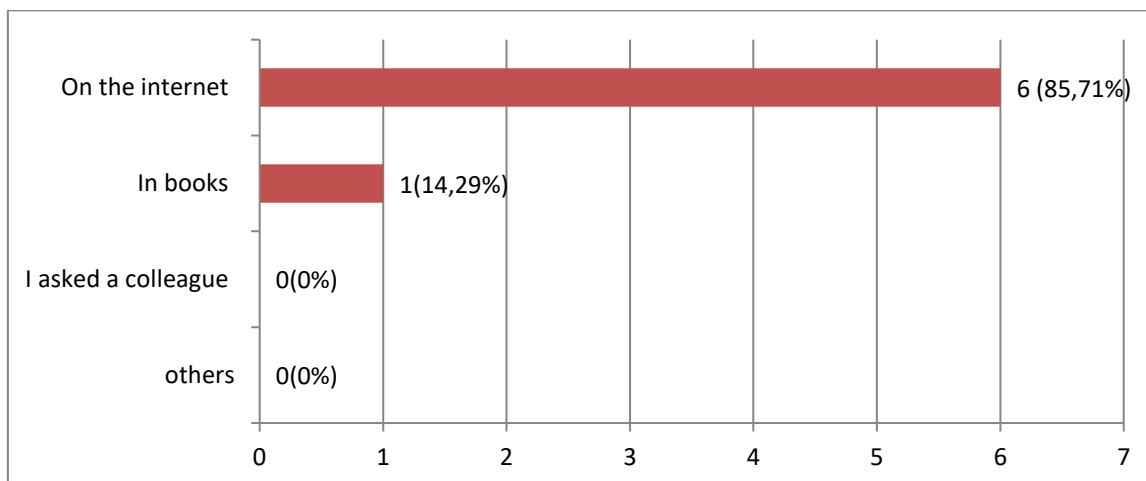


Figure 1. Sources from Where Teachers Searched about How to Teach Dyslexics

Teachers in this question were requested to identify the sources from where they have searched for information about how to teach dyslexic pupils. As shown in figure 1, six teachers (85, 71%) said that they have searched for the information on the internet and only one teacher (14, 29%) stated that he/she used books to search for the information.

Question 7: Do you believe dyslexics’ reading and writing challenges can be overcome?

Table 11

Overcoming Reading and Writing Challenges by Dyslexics

Option	Number of Respondents (N)	Percentage (%)
Yes	29	82, 86%
No	6	17, 14%
Total	35	100%

The present question seeks to investigate whether teachers do believe that dyslexics’ reading and writing challenges can be overcome. As can be seen in Table 11, twenty nine teachers (82, 86%) believe that dyslexics’ reading and writing challenges can be overcome.

However, six of them do not (17, 14%). The results show that the majority of teachers believe that dyslexics' reading and writing challenges can be overcome.

Question 8: If yes, how they can be overcome?

This question is related to the previous one and was set to examine teachers' knowledge of how the reading and writing challenges faced by learners with dyslexia can be overcome. According to the data collected, despite 29 teachers opted for "yes" in the initial portion of the question, 12 of them did not provide any information regarding how to overcome the reading and writing challenges faced by individuals with dyslexia. This indicates that they lack the necessary knowledge about how these challenges can be overcome. In addition, 11 teachers provided some answers that are to be considered incomplete and not specific. Their answers are as follows:

- Training, practice and practice of listening, speaking and writing.
- Reinforcement activities.
- Special classes.
- Early identification can help.
- Collaboration between teachers and parents.
- Specific educational methods.
- The use of assistive technologies.
- Giving extra time for spelling.

These answers indicate that those teachers have limited knowledge about how to overcome dyslexics' reading and writing problems.

Furthermore, one teacher provided a wrong answer which is "Medication and proper treatment". This shows that he/she lacks the required knowledge about how the dyslexics' reading and writing problems can be overcome. In contrast, 5 teachers provided some adequate answers. Their responses are as follows:

- Drilling activities.
- Reading aloud.
- Giving them instructions in decoding skills.
- Provide sound charts and visual support and use a structured synthetic phonic program.
- The use of collaborative activities with their peers to write and read short stories.
- Specialists can help the child to exercise pronouncing letters and words.

The gathered data show that teachers lack the necessary knowledge regarding what should be done to help dyslexic learners overcome their reading and writing challenges.

Question 9: What would you do to make sure that dyslexic learners achieve similar, if not the same learning outcomes as their non-dyslexic peers in your class?

The main purpose of this question was to prompt teachers to explain how they would ensure that dyslexic students achieve similar or identical learning outcomes to their non-dyslexic peers in their class. Based on the data gathered, 19 participants answered the question; however, 16 of them failed to answer it.

Despite the fact that 19 teachers have answered the question, 10 of them failed to provide appropriate answers. Their answers can be summarized as follows:

- Dyslexics must be separated from non-dyslexics. They should be taught in a special classroom with a trained specialist because teaching them with non-dyslexics is unfair for the other learners.
- Do not help them, leave them read alone.
- Use the same tasks and receive the same results.
- Give them homework.
- Specific treatments.
- Reading books daily.
- Involve them in everything.

- Dyslexic can learn to read through proper help.

According to these results, teachers failed to provide appropriate answers. This means that teachers lack the required understanding of how to deal with dyslexics and how to ensure that dyslexic learners in their class attain comparable, if not identical, learning outcomes to their non-dyslexic classmates.

There are 9 teachers whose answers to this question are to be considered somewhat appropriate. They claimed they would make the following:

- Make sure that the lessons are differentiated to suit the learner's needs.
- Provide a healthy environment.
- Encourage them to participate in different tasks.
- Use positive reinforcement, rewards and emotional support.
- Create a supportive and collaborative classroom.
- Use of appropriate teaching strategies, instructions and interventions.
- Repetition and extra sessions.

As illustrated in these findings, only 9 participants could offer answers that are suitable to a certain level. This implies that they do not have the sufficient proficiency to deal with dyslexics in their classroom and ensure that learners with the condition achieve similar if not the same learning outcomes of their non-dyslexic peers.

Question 10: Do you know any of the teaching strategies that are effective in supporting dyslexic learners?

Table 12

Teachers Knowledge of the Teaching Strategies that are Effective in Supporting Dyslexic Learners

Option	Number of Respondents (N)	Percentage (%)
Yes	5	14, 29%
No	30	85, 71%

Total	35	100%
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Teachers were requested, in this question, to state whether they are knowledgeable of any teaching strategies that are effective in supporting dyslexic learners. Table 12 demonstrates that 85, 71% of teachers are not cognizant of any teaching strategies that are useful for teaching dyslexics; whereas, 14, 29% of them claimed they know some of the strategies. Based on these results, most EFL teachers in primary schools are not knowledgeable of any effective teaching strategies for dyslexics.

Question 11: If yes, please briefly mention them:

Teachers in this question were asked to briefly mention some teaching strategies that are effective in supporting dyslexic learners. The responses of those who opted for “yes” in the previous question are as follows:

- Total physical response.
- Explicit instructions, illustrations, rewriting.
- Focusing on the smallest sounds.
- Cluster the words into syllables.
- Practicing reading regularly.
- “Slowing down a lesson, give a child with dyslexia more time to cover topics”.
- “Blending letter sounds and sounding the unfamiliar words”.

It is worth-noting that these responses are not deemed as appropriate teaching strategies that can be used to support dyslexic learners. This means that EFL teachers do not have the necessary knowledge of the different teaching strategies that should be used to help dyslexic learners.

2.3.3. Discussion of the Overall Results

In light of the data obtained from the teacher questionnaire, which was administered to primary school EFL teachers in Jijel to investigate their awareness regarding dyslexia. It is

apparent that the vast majority of the surveyed respondents are not aware of developmental dyslexia.

The analysis of the first section of the teacher questionnaire demonstrated that the majority of EFL primary teachers have required academic qualifications. That is, the majority of them hold a Licence degree and most of the teachers' sample have been teaching for no more than 5 years. All of these teachers are in their first year of teaching English in primary schools. The results also revealed that hardly any of them have undergone any form of educational training concerning special needs, either pre-service or in-service. This lack of training raises concerns regarding their readiness and competence in working with learners who have dyslexia or any other learning disability. As a result, it is possible to speculate that these teachers would be unable to identify and address any potential dyslexia risks that may arise.

The analysis of the second section of the teacher questionnaire, represented in the DBI test, clearly revealed that most teachers could identify dyslexia as a learning disability that affects language processing, reading and speaking abilities. In contrast, they failed to determine its different characteristics. The results of the test uncovered that the teachers do not know that dyslexia is not related to intelligence or overall cognitive abilities. This implies that the lack of knowledge about dyslexia's connection to intelligence can lead to misunderstandings and misconceptions about dyslexic individuals. The test results also demonstrated that the EFL primary school teachers are unaware that dyslexia is not a disease that can be treated and managed through medications. Moreover, most of the teachers sample is unaware that dyslexia is hereditary and that the brains of individuals with dyslexia are different from those without the condition. In addition, teachers are not knowledgeable of the fact that dyslexics have troubles in spelling, phonemic awareness and pronunciation of words.

The results obtained from the third section demonstrated that the vast majority of primary school EFL teachers claimed to have never taught a dyslexic pupil. However, most teachers' responses regarding the statements that focused on the various aspects and characteristics of dyslexic learners were infelicitous. This implies that English teachers may have encountered learners with dyslexia without having knowledge or awareness of it. In addition, the answers of teachers who have taught a dyslexic learner were very limited on how they could know that a learner is dyslexic. This indicates that despite having taught a dyslexic learner, these teachers still lack awareness about the condition. It is possible that these teachers do not prioritize dyslexic learners, which is why they have not made an effort to educate themselves about the condition.

According to the results obtained with respect to primary school EFL teachers' former education and life experience preparation to work with a dyslexic learner, the vast majority of teachers are not prepared to work with dyslexic learners. Furthermore, teachers' responses to question five and six revealed that most teachers have never searched for how to teach dyslexics, only 7 teachers attempted to do that. This signifies that dyslexia is not given significant importance and consideration by primary school EFL teachers.

Surprisingly, 80% of teachers believed that dyslexics reading and writing challenges could be overcome, but when they were asked to state how these problems could be overcome, only few of them provided an answer. Based on their answers, only a very limited number of teachers were able to give convincing answers to some extent. The results showed that the overwhelming majority of teachers are unaware of how to deal with the reading and writing challenges that dyslexics may encounter.

Furthermore, teachers' responses to question nine revealed that the majority of primary EFL teachers lack the necessary knowledge and proficiency of how to deal with dyslexics and how to ensure that dyslexic learners in their class attain similar, if not the

same learning outcomes as their non-dyslexic peers. That is because they believe that managing learners with dyslexia is the responsibility of special education teachers. Pertaining the last two questions, the findings demonstrated that EFL primary teachers were unaware of the different teaching strategies that are effective in supporting dyslexic learners.

The overall results collected from the teacher questionnaire answered the research questions. The findings obtained revealed that the overwhelming majority of EFL primary school teachers in Jijel possess poor information and understanding of dyslexia as they have limited to no experience in teaching students with dyslexia. Additionally, teachers demonstrated a lack of essential awareness and minimal understanding when it comes to challenges related to reading and writing difficulties and how they could manage dyslexia and guide dyslexic learners to overcome their reading and writing problems which might be ascribed to not having enough experience in teaching English in primary schools or dealing with dyslexics, as well as not receiving any former education or pre-service and/or in-service special education training regarding the condition. Furthermore, teachers did not portray any perceptions regarding the effectiveness of teaching strategies used to support dyslexic learners due to their lack of awareness regarding the disorder.

2.4. Limitations of the Study

While carrying out this research, we encountered a number of challenges:

- It was challenging to get access to certain references.
- Distributing the questionnaire sheets was not as easy as one may think. Since each teacher may be assigned to teach in multiple schools, ranging from three to six, the researchers had to go extensively to different parts of the district in order to reach as many teachers as possible. They had to inquire about the other schools where the same teacher

worked, in order to avoid going to those schools. In addition, they had to explore about the different schools and their locations.

- Collecting the questionnaire sheets was also challenging and time-consuming due to several reasons. These include the need for administrators to read the questionnaire before handing it to the teacher, instances where administrators forgot to provide the questionnaire to the teacher and situations where the teacher forgot to complete and return it. Due to these reasons, the researchers had to visit certain schools up to five times in order to collect the questionnaire sheets.
- Time limitations were another challenge, and having more extensive time would prove beneficial for conducting this study on a larger sample of teachers. This would enable obtaining more reliable results by employing various research tools such as tests and classroom observation.

2.5. Pedagogical Recommendations

In the light of the findings of the present study, a number of pedagogical recommendations can be reported:

- Primarily, this research highly recommends teachers to enhance their understanding and awareness of learning disabilities in general, with a specific emphasis on the need for language teachers to be knowledgeable about dyslexia.
- This study highly recommends that EFL primary school teachers are in need to broaden their knowledge about reading and writing challenges of dyslexic learners and the appropriate teaching strategies that are effective to overcome these challenges.
- This research highlights the necessity for the relevant authorities to prioritize and address the needs of dyslexic learners, particularly in the context of foreign languages. One possible approach could involve the development of specialized educational training

programs for teachers, both as part of pre-service and in-service training, or the establishment of dedicated centers to support these learners.

- This research strongly recommends conducting statistical investigations to determine the specific number of dyslexic students among the Algerian population.
- It is recommended to explore this topic from the viewpoint of dyslexic students for more valuable insights, allowing for a deeper comprehension of their emotions and identifying the most appropriate means of support for their English language learning endeavors.
- It is recommended to investigate dyslexic pupils' opinions concerning teachers' attitude towards them.
- This research highly recommends that EFL teachers are in need to be aware about the teaching strategies that should be implemented to teach dyslexic students.

Conclusion

The present chapter is devoted to the practical part of the research work, which aims to investigate primary school EFL teachers' awareness of dyslexia in Jijel. It included the presentation of the sample and the research instruments, which is a questionnaire, which included a test, administered to primary school EFL teachers. The chapter provided an analysis, interpretation and discussion of the gathered data. The findings obtained revealed that the majority of EFL teachers have limited understanding regarding dyslexia as they lack the necessary knowledge about how to manage and guide dyslexic learners to overcome their reading and writing challenges. Moreover, the results mentioned stated that the vast majority of primary EFL teachers lack the required understanding of the effectiveness of teaching strategies used to support and assist dyslexic students. The practical chapter finally ended with a set of limitations and pedagogical recommendations of the study.

General Conclusion

The present study investigated primary school EFL teachers' awareness of dyslexia in Jijel, Algeria. The study was set out to gather information concerning their level of awareness of dyslexia as well as their readiness to teach dyslexic learners, their abilities to manage and assist learners with the condition to overcome their reading and writing challenges. The research, also, tried to explore teachers' perceptions of the effectiveness of teaching strategies used to support dyslexic students. To fulfil the aims of this study, the teacher questionnaire, which included the DBI test, was used and administered to thirty-five primary school EFL teachers in Jijel.

The research study consisted of two chapters. The first chapter was devoted for the literature review and it was divided into two sections. The first section covered dyslexia as a learning disability. It included the definitions of learning disabilities and dyslexia. Also, it comprised the different causes, symptoms and characteristics of dyslexia. In addition, the section, presented dyslexia reading and writing problems in foreign languages. The second section addressed teacher's awareness of dyslexia. It introduced some research studies on teachers' awareness of dyslexia along with the EFL teachers' perceptions of teaching strategies. Furthermore, this section encompassed teachers' training in the ELT classroom and captured teaching strategies and intervention for dyslexic students. Finally, the section discussed the role of EFL teachers' in the management of dyslexic learners and the reasons behind teachers' lack of awareness regarding the condition. On the other hand, the second chapter is empirical. It summarized the research instrument used to collect data represented in the teacher questionnaire, which included the Dyslexia Belief Index (DBI) test and was distributed in different primary schools in Jijel. Additionally, this chapter introduced the data analysis, interpretation and discussion of the results obtained. The limitations of the study are then mentioned with pedagogical recommendations.

The finding of the study showed that the vast majority of EFL primary school teachers in Jijel have insufficient knowledge and misconceptions about dyslexia as they have limited to no experience in teaching students with dyslexia. In addition, teachers showed a lack of essential awareness about how to manage and guide dyslexic learners and how to overcome their reading and writing difficulties. This can be a result of not having enough experience in teaching English in primary schools or dealing with individuals with dyslexia as well as not receiving any former education or pre-service and/or in-service special education training regarding the condition. Moreover, the results stated that the vast majority of primary school EFL teachers did not have any perceptions of the effectiveness of teaching strategies used to support and assist dyslexic learners. To summarize, primary EFL teachers in Jijel are unaware of dyslexia as they lack the necessary knowledge to teach students with dyslexia.

References

- Ahmad, S., Ali, M.M. and Salehuddin, K. (2018) ESL teachers' experience in teaching pupils with dyslexia in mainstream classrooms. *Creative Education*, 9 (14), 2171-2182.
- Arfe, B. A., Dockrell, J. D., & Berninger, V. (2014). *Writing development in children with hearing loss, Dyslexia, or oral language problems*. 198 Madison Avenue, New York, NY 10016: Oxford University Press.
- Berninger, V. W., Nielsen, K. H., Abbott, R. D., Wijsman, E., & Raskind, W. (2008). *Writing problems in developmental dyslexia: Under-recognized and under-treated*. *Journal of School Psychology*, 46(1), 1–21. doi:10.1016/j.jsp.2006.11.008.
- Berninger, V. W., Vaughan, K., Abbott, R. D., Begay, K., Coleman, K. B., Curtin, G., ... & Graham, S. (2002). Teaching spelling and composition alone and together: Implications for the simple view of writing. *Journal of educational psychology*, 94(2), 291.
- Brown, J. D. (2001). *Using surveys in language programs*. Cambridge: Cambridge University Press.
- Bruck, M. (1993). Component spelling skills of college students with childhood diagnoses of dyslexia. *Learning Disability Quarterly*, 16(3), 171-184.
- Cardillo, R., Garcia, R. B., Mammarella, I. C., & Cornoldi, C. (2018). Pragmatics of language and theory of mind in children with dyslexia with associated language difficulties or nonverbal learning disabilities. *Applied Neuropsychology: Child*, 7(3), 1-12.

- Carroll, A., Forlin, C., & Jobling, A. (2003). The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. *Teacher education quarterly*, 30(3), 65-79.
- Casalis, S. (2004). The concept of dyslexia. In T. Nunes & P. Bryant (Eds.), *Handbook of Children's Literacy* (pp. 257-273). *Kluwer Academic Publishers*. DOI: 10.1007/978-94-017-1731-1_15
- Cimermanova, I. (2015). 3 Teaching English as a foreign language to dyslexic learners, *Teaching Foreign Languages to Learners with Special Educational Needs: e-textbook for foreign language teachers*. (pp, 39-62). Nitra: Constantine the Philosopher University.
- Cirino, P. T., Israelian, M. K., Morris, M. K., & Morris, R. D. (2005). Evaluation of the double-deficit hypothesis in college students referred for learning difficulties. *Journal of learning disabilities*, 38(1), 29-43.
- Crombie, M.A. (2000) Dyslexia and the learning of a foreign language in school: where are we going? *Dyslexia*, 6 (2), 112-123.
- Daloiso, M. (2017). *Supporting learners with dyslexia in the ELT classroom*. Oxford University Press.
- Denton, C. A., Montroy, J. J., Zucker, T. A., & Cannon, G. (2021). Designing an intervention in reading and self-regulation for students with significant reading difficulties, including dyslexia. *Learning Disability Quarterly*, 44(3), 170-182.

- Dornyei, Z. (2003). *Questionnaires in second language research: Construction, administration, and processing*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc., Publishers.
- Elias, R. (2014). Dyslexic learners: An investigation into the attitudes and knowledge of secondary school teachers in New Zealand. *Unpublished Master Dissertation, University of Auckland*.
- Fayol, M., Zorman, M., & Lété, B. (2009). Associations and dissociations in reading and spelling French: Unexpectedly poor and good spellers. *British Journal of Educational Psychology*, 6, 1-14.
- Fekih, M. (2019). EFL Teachers' Awareness of Dyslexia in Algerian Middle Schools. In *International Conference on Teaching, Learning & Education* (pp. 1-15).
- Fisher, S. E., & Francks, C. (2006). Genes, cognition and dyslexia: learning to read the genome. *Trends in cognitive sciences*, 10(6), 250-257.
- Griffiths, Y.M., & Snowling, M.J. (2002). Predictors of exception word and nonword reading in dyslexic children: The severity hypothesis. *Journal of Educational Psychology*, 94, 34-43.
- Hayes, J. (2000). *The effects of teacher awareness on the achievement of students with learning disabilities at secondary level*. South Carolina State University.
- Karande, S., Mahajan, V., & Kulkarni, M. (2009). Recollections of learning-disabled adolescents of their schooling experiences: A qualitative study. *Indian Journal of Medical Science*, 63(9), 382-391.

- Kataoka, M., Van Kraayenoord, C., & Elkins, J. (2004). Principals' and teachers' perceptions of learning disabilities: A study from Nara Prefecture, Japan. *Learning Disability Quarterly*, 27(3), 161-175.
- Kirk, S. A., & Kirk, W. D. (1983). On Defining Learning Disabilities. *Journal of Learning Disabilities*, 16(1), 20–21.
- Lama, A. (2019). Difficulties in English language learning for students with dyslexia. *SEEU Review*, 14(1), 196-206.
- Livingstone, M. S., Rosen, G. D., Drislane, F. W., & Galaburda, A. M. (1991). Physiological and anatomical evidence for a magnocellular defect in developmental dyslexia. *Proceedings of the National Academy of Sciences*, 88(18), 7943-7947.
- Lopez, J., & Campoverde, J. (2018). Development of reading comprehension with graphic organizers for students with dyslexia. *JOTSE: Journal of technology and science education*, 8(2), 105-114.
- Lyon, G. R., Shaywitz, S. E., & Shaywitz, B. A. (2003). A definition of dyslexia. *Annals of dyslexia*, 1-14.
- Madden, C. (2021). *ESL/EFL teachers' perceptions of the reading and writing challenges and teaching strategies for dyslexic students learning English* (pp.35-36). (Master's Degree in the Teaching of English to Speakers of Other Languages (TESOL), *Ulster University*).
- Maisog, J. M., Einbinder, E. R., Flowers, D. L., Turkeltaub, P. E., & Eden, G. F. (2008). A meta-analysis of functional neuroimaging studies of dyslexia. *Annals of the new York Academy of Sciences*, 1145(1), 237-259.

- Miles, T. R. (1995). Dyslexia: The current status of the term: II. *Child Language Teaching and Therapy*, 11(1) 23-33. doi: 10.1177/026565909501100104.
- Mortimore, T., Hansen, L., Hutchings, M., Northcote, A., Fernando, J., Horobin, L., Saunders, K. and Everatt, J. (2012) *Dyslexia and multilingualism: Identifying and supporting bilingual learners who might be at risk of developing SpLD/dyslexia*.
- Nicolson, R. I., & Fawcett, A. J. (1999). Developmental dyslexia: The role of the cerebellum. *Dyslexia*, 5(3), 155-177.
- Nicolson, R. I., & Fawcett, A. J. (2005). Developmental dyslexia, learning and the cerebellum. *Neurodevelopmental disorders*, 19-36.
- Nijakowska, J. (2010). *Dyslexia in the foreign language classroom*. Bristol: Multilingual Matters.
- Nijakowska, J. (2013). Multisensory structured learning approach in teaching foreign languages to dyslexic learners. *Investigations in Teaching and Learning Languages: Studies in Honour of Hanna Komorowska*, 201-215.
- Nijakowska, J. (2014). Dyslexia in the European EFL teacher training context. In M. Pawlak & L. Aronin (eds), *Essential topics in applied linguistics and multilingualism. Studies in honour of David Singleton*. Heidelberg: Springer, 129-154.
- Nijakowska, J. (2016) Grasping dyslexia: Bridging the gap between research and practice. *Selected Papers on Theoretical and Applied Linguistics*, 21, 43-58.

- Olagboyega, K. W. (2008). The effects of dyslexia on language acquisition and development. *Scientific and technical reports of Faculty of Engineering and Resource Science, Akita University*, 29, 23-27.
- Olson, R., Wise, B., Conners, F., Rack, J., & Fulker, D. (1989). Specific deficits in component reading and language skills: Genetic and environmental influences. *Journal of learning disabilities*, 22(6), 339-348.
- Ott, P. (1997). *How to detect and manage dyslexia: A reference and resource manual*. Heinemann.
- Peer, L., & Reid, G. (Eds.). (2001). *Dyslexia: Successful inclusion in the secondary school*. Routledge.
- Rahmani, E.F. (2017). The effective teaching strategies to encourage young adolescent learners to speak English. *Jurnal Pendidikan Bahasa*, 6 (1), 66-77.
- Ramus, F. (2006). Genes, brain, and cognition: A roadmap for the cognitive scientist. *Cognition*, 101(2), 247-269.
- Ramus, F., Rosen, S., Dakin, S. C., Day, B. L., Castellote, J. M., White, S., & Frith, U. (2003). *Theories of developmental dyslexia: insights from a multiple case study of dyslexic adults*. *Brain*, 126(4), 841-865.
- Ranaldi, F. (2003). *Dyslexia and Design & Technology*. London: David Fulton Publishers.
- Rao, P.S. (2019). The importance of teaching language skills to the second or foreign Language learners of English: A comprehensive study. *ACADEMICIA: An*

- Reid, G. R. (2011). *Dyslexia: A complete guide for parents and those who help them*. (2nd.ed.). West Sussex, United Kingdom: John Wiley & Sons, Ltd.
- Rontou, M. (2012). Contradictions around differentiation for pupils with dyslexia learning English as a foreign language at secondary school. *Support for Learning*, 27 (4), 140- 149.
- Schneider, E., & Crombie, M. (2003). *Dyslexia and foreign language learning*. London: David Fulton Publishers.
- Snowling, M. J. (2013). Early identification and interventions for dyslexia: a contemporary view. *Journal of Research in Special Educational Needs*, 13 (1), 7-14.
- Snowling, M. J., Duff, F., Petrou, A., Schiffeldrin, J., & Bailey, A. M. (2011). Identification of children at risk of dyslexia: the validity of teacher judgements using 'Phonic Phases'. *Journal of Research in Reading*, 34(2), 157-170.
- Sónia, L. (2012). Dyslexia through the eyes of primary school teachers. *Procedia-Social and Behavioral Sciences*, 69, 41-46.
- Sparks, R. (1995). Examining the Linguistic Coding Differences Hypothesis to explain individual differences in foreign language learning. *Annals of Dyslexia*, 45(1), 187-214.
- Sparks, R. L., Ganschow, L., Artzer, M. E., Siebenhar, D., & Plageman, M. (2004). Foreign Language Teachers' Perceptions of Students' Academic Skills, Affective Characteristics, and Proficiency: Replication and Follow-up Studies. *Foreign Language Annals*, 37(2), 263-278.

- Sparks, R. L., & Ganschow, L. (1996). Teachers' perceptions of students' foreign language academic skills and affective characteristics. *The Journal of Educational Research*, 89(3), 172-185.
- Special Needs Education, Guidelines for full-service /inclusive schools (2010). Education White Paper 6. Building an Inclusive Education and Training System. Pretoria. Directorate Inclusive Education.
- Stanovich, K.E. and Siegel, L.S. (1994). The phenotypic performance profile of reading-disabled children: a regression based test of the phonological core Variable-difference model. *Journal of Educational Psychology*, 86, 24–53.
- Stein, J., & Walsh, V. (1997). To see but not to read; the magnocellular theory of dyslexia. *Trends in neurosciences*, 20(4), 147-152.
- Sterling, C., Farmer, M., Riddick, B., Morgan, S., & Matthews, C. (1998). *Adult dyslexic writing*. *Dyslexia*, 4(1), 1–15.
- Stoodley, C. J., & Stein, J. F. (2013). Cerebellar function in developmental dyslexia. *The Cerebellum*, 12, 267-276.
- Torgesen, J. K. (2004). Learning disabilities: An historical and conceptual overview. In B.K. Wong. (Ed.). *Learning about learning disabilities* (3rd ed.). San Diego, CA: Academic Press.
- Tsesmeli, S. N., & Seymour, P. H. K. (2006). Derivational morphology and spelling in dyslexia. *Reading and Writing*, 19, 587–625.
- Unni, S. (2014) Language teaching methods to dyslexics acquiring English as a second language. *Language. Text. Society*, 4 (1), 12-22.

- Vandermosten, M., Boets, B., Poelmans, H., Sunaert, S., Wouters, J., & Ghesquiere, P. (2012). A tractography study in dyslexia: neuroanatomic correlates of orthographic, phonological and speech processing. *Brain*, *135*(3), 935-948.
- Vellutino, F.R., Fletcher, J.M., Snowling, M.J. and Scanlon, D.M. (2004) Specific reading disability (dyslexia): What have we learned in the past four decades? *Journal of Child Psychology and Psychiatry*, *45*, (1), 2- 40.
- Vukovic, R. K., & Siegel, L. S. (2006). The double-deficit hypothesis: A comprehensive analysis of the evidence. *Journal of Learning disabilities*, *39*(1), 25-47.
- Wadlington, E. M., & Wadlington, P. L. (2005). What educators really believe about dyslexia. *Reading Improvement*, *42*(1), 16-33.
- Wadlington, E., Jacob, S., & Bailey, S. (1996). Teaching students with dyslexia in the regular classroom. *Childhood Education*, *73*(1), 2-5.
- Wolf, M., & Bowers, P. G. (1999). The double-deficit hypothesis for the developmental dyslexias. *Journal of educational psychology*, *91*(3), 415-438
- Wolf, M., & O'Brien, B. (2001). On issue of time, fluency, and intervention. In A.J. Fawcett (ed.) *Dyslexia. Theory and Good Practice* (pp. 124 -140). London: Whurr.
- Wormald, C. M. (2015). Intellectually gifted students often have learning disabilities. Faculty of Social Sciences - Papers [online]. pp. 1-3.

Appendix: Teacher Questionnaire

University of Mohammed Seddik Benyahia, Jijel



Faculty of Letters and Languages
Department of English

Teacher Questionnaire

This questionnaire is part of an MA research study that seeks to investigate the EFL teachers' awareness of the concept of dyslexia in primary schools in Jijel, Algeria. We would be immensely grateful if you could kindly give us some of your time to answer our questions. We would like to inform you that your answers will be used anonymously and for research purposes only. Profuse thanks, in advance, for your cooperation.

➤ **Please tick (√) the most accurate response.**

I. Background Information

1. What is the highest degree you hold?

Licence Master's Magistère Doctorate

2. How long have you been teaching English?

1-5 years 6-10 years More than 10 years

3. Is it your first year teaching English in a primary school?

Yes No

4. Have you received any pre-service or in-service special education training?

Yes No

II. Teachers' Awareness of Dyslexia Test (DBI) by Wadlington & Wadlington (2005)

Please tick (√) the most accurate response using the following Linkert scale:

1= know it's false

2= probably false

3= probably true

4= know it's true

	Statement	1	2	3	4
1	Dyslexia is a learning disability that affects language processing.				
2	People with dyslexia have below average intelligence.				
3	Dyslexia can be managed by diet and/or exercise.				
4	Individuals with dyslexia have trouble understanding the structure of language, especially phonics				
5	An individual can be dyslexic and gifted.				
6	Physicians can prescribe medication to help dyslexia.				
7	Dyslexia often affects writing and/or speaking abilities.				
8	Multisensory instruction is absolutely necessary for student with dyslexia to learn.				
9	In school, dyslexia only affects the student's performance in reading (not in math, social studies, etc.).				
10	People with dyslexia often excel in science, music, art, and/or technical fields.				
11	Dyslexia causes social, emotional, and/or family problems.				
12	Most special education teachers receive intensive training to work with students with dyslexia.				
13	Most regular education teachers receive intensive training to work with students with dyslexia.				
14	Dyslexia is hereditary.				
15	Dyslexia is caused by a poor home environment and/or poor reading instruction.				
16	Giving students with dyslexia accommodations such as extra time on tests, shorter spelling lists, special seating, etc. is unfair to other students.				
17	College students with dyslexia seldom do well in graduate school.				
18	Most poor readers have dyslexia.				
19	In school, classroom placement (e.g., special or general education) should be decided on an individual basis.				
20	Students with dyslexia need structured, sequential, direct instruction in basic skills and learning strategies.				
21	The brains of individuals with dyslexia are different from those of people without dyslexia.				
22	Some students with mild dyslexia may not experience problems due to dyslexia until middle school or later.				
23	Children with dyslexia are more consistently impaired in phonemic awareness (i.e., ability to hear and manipulate sounds in language) than any other ability.				
24	Schools usually diagnose dyslexia through the administration of a nationally recognized standardized test.				
25	Individuals with dyslexia are usually extremely poor spellers.				
26	After three to five hours of instruction, most educators				

	can work competently with students with dyslexia.				
27	Individuals with dyslexia may comprehend a passage very well but be unable to pronounce words.				
28	Individuals with dyslexia usually exhibit the same characteristics with similar degrees of severity.				
29	Word reversal is the major criterion in the identification of dyslexia.				
30	Individuals with dyslexia may pronounce words in a passage very well but be unable to comprehend it				

III. Teachers' Readiness to Teach Dyslexic Pupils

1. Have you ever taught a dyslexic pupil?

Yes No

2. If yes, how could you know that the pupil is dyslexic?

.....

3. Has your former education prepared you for working with a dyslexic pupil?

Yes No

4. Have your life experiences prepared you for working with a dyslexic pupil?

Yes No

5. Have you ever searched for how to teach dyslexic pupils?

Yes No

6. If yes, I searched for the information :

- On the Internet
- In books
- I asked a colleague
- Other,

specify.....

7. Do you believe dyslexics' reading and writing challenges can be overcome?

Yes No

8. If yes, how can they be overcome?

.....

.....

9. What would you do to make sure that dyslexic learners achieve similar, if not the same learning outcomes as their non-dyslexic peers in your class?

.....
.....
.....

10. Do you know of any teaching strategies that are effective in supporting dyslexic learners?

Yes No

11. If yes, please briefly mention them:

.....
.....
.....
.....

Thank you!

Résumé

. Cette étude examine la sensibilisation des enseignants d'anglais comme langue étrangère de l'école primaire à la dyslexie à Jijel. L'étude a trois objectifs : pour déterminer le niveau de sensibilisation des enseignants à la dyslexie, pour examiner les capacités des enseignants à manipuler et guider les étudiants dyslexiques afin de réduire leurs difficultés en lecture et en écriture et pour fournir une meilleure compréhension des perceptions des enseignants sur l'efficacité des stratégies d'enseignement utilisées pour soutenir les apprenants dyslexiques . Pour l'atteinte des buts de l'étude, un questionnaire d'enseignant a été utilisé et administré à trente-cinq enseignants primaires EFL de quatre-vingt-treize de la population entière. Les conclusions ont révélé que la majorité écrasante des enseignants d'école primaire EFL à Jijel ont une connaissance insuffisante de la dyslexie, étant incapables de guider les apprenants dyslexiques dans leur lecture et de résoudre les problèmes d'écriture. Aussi, ils n'ont pas non plus exprimé de perceptions quant à l'efficacité des stratégies d'enseignement utilisées pour soutenir les apprenants dyslexiques en raison de leur manque de conscience de ce trouble. Par conséquent, il est recommandé que les enseignants suivent une formation obligatoire afin d'acquérir les compétences nécessaires pour répondre aux besoins des apprenants confrontés à de tels défis d'apprentissage.

Les mots clés : troubles d'apprentissage, la dyslexie, sensibilisation des enseignants

ملخص

تحاول هذه الدراسة التحقيق في وعي معلمي اللغة الانجليزية كلغة أجنبية بعسر القراءة في ولاية جيجل. وتهدف الدراسة إلى تحقيق ثلاثة أهداف: تحديد مستوى وعي معلمي الطور الابتدائي للغة الانجليزية كلغة أجنبية بعسر القراءة في ولاية جيجل، وفحص قدرتهم على التعامل مع التلاميذ الذين يعانون من هذا الاضطراب وتوجيههم لتقليل صعوبات القراءة والكتابة لديهم، وتوفير فهم أفضل لتصورات المعلم لفعالية استراتيجيات التدريس المستخدمة لدعم المتعلمين الذين يعانون من عسر القراءة. من أجل الوصول إلى أهداف الدراسة، تم توزيع استبيان لخمس وثلاثين معلما في الطور الابتدائي من أصل ثلاثة وتسعين من إجمالي المعلمين. كشفت النتائج أن الغالبية العظمى من معلمي المدارس الابتدائية في ولاية جيجل لديهم معرفة ضعيفة جدا بعسر القراءة. وأيضا لم تكن لديهم الكفاءة الكافية على إدارة مشاكل القراءة والكتابة لدى التلاميذ الذين يعانون من عسر القراءة، كما أنهم لم يكونوا قادرين على إعطاء أي تصورات فيما يتعلق بفعالية استراتيجيات التدريس المستخدمة لدعم المتعلمين الذين يعانون من عسر القراءة بسبب قلة وعيهم بهذا الاضطراب. وبالتالي يوصى بأن يخضع المعلمون لتدريب إلزامي من أجل اكتساب المهارات الأساسية لتلبية متطلبات المتعلمين الذين يواجهون تحديات التعلم هذه.....

الكلمات المفتاحية: اعاقه تعليمية، عسر القراءة، وعي المعلمين