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Developmental Dyslexia as a Phenomenon Among EFL Learners

Case Study: Pupils at Bougerra Muhammed Middle School Khenchela

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Requirements for the Degree of Master in Language and Culture*

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Dedication

This study is wholeheartedly dedicated to my beloved parents, my mother who has been my source of inspiration and strength when I thought of giving up.

To my brothers, Mehdi and Souhil who shared their words of advice and encouragement to finish this study.

To my little brother Hassen, and my elder sister Imen.

To my friend Amina who continually provided me with moral, spiritual, emotional support.

And finally, To all the kids who participated in this research work.

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Abstract

The present study aims at exploring developmental dyslexia as a phenomenon among EFL learners in general and dyslexic pupils at Bougerra Muhammed middle school Khenchela in particular. Adopting a descriptive method, the dissertation aims at describing the two variables, dyslexia as an independent variable and EFL learners as the dependent variable. Data are collected through a mixed methodology based on qualitative method (Classroom Observation) and quantitative method (pupils' questionnaire). The results of this study showed that the nature and the structure of the English language poses more difficulties to those dyslexic pupils. On the basis of these results, the hypothesis is confirmed, that is dyslexic pupils should learn English but not in the same way their non-dyslexic peers do. Thus, to avoid the phenomenon of leaving schools at a young age by dyslexic children, we have to be aware of developmental dyslexia, its effects on learners, and how to reduce, or eliminate it.

Key words: Dyslexia, EFL (English as a Foreign Language), Learning Disabilities, Reading Disability.

List of Abbreviations

EFL: English as a Foreign Language.

TPR: Total Physical Response.

NINDS: National Institute of Neurological Disorders and Stroke.

PET: Positron Emission Tomography.

List of Tables

Table 01:Participants' Gender.....	36
Table 02: Pupils' Text-reading Times in Native Language.....	38
Table 03: Pupils' Text-reading Times in English Language.....	39
Table 04: Participants' Feeling when Reading Loudly in their Native Language.....	40
Table 05: Participants' Feeling when Reading Loudly an English Text.....	41
Table 06: Spelling Mistakes in Native Language Writing.....	43
Table 07: Spelling Mistakes in English Writing.....	44
Table 08: Modifications in Reading or Writing in Native Language.....	45
Table 09: Modifications in Reading or Writing in English.....	46
Table 10: Neurobiological Origins.....	48

List of Figures

Figure 01:	37
Figure 02:	38
Figure 03:	39
Figure 04:	41
Figure 05:	42
Figure 06:	43
Figure 07:	44
Figure 08:	46
Figure 09:	47
Figure 10:	48

Table of Contents

Dedication.....	I
Acknowledgements.....	II
Abstract.....	III
List of Abbreviation.....	IV
List of Tables.....	V
List of Figures.....	VI
Table of Contents.....	VII

General Introduction

1. Background of the Study.....	1
2. Statement of the Problem.....	1
3. Aim of the Study.....	2
4. Research Questions.....	2
5. Hypothesis.....	2
6. Structure of the Study.....	3
7. Definition of terms.....	4

Chapter One: Literature Review.

Introduction

I.1. A Brief History of Dyslexia.....	8
I.2. Definition of Dyslexia.....	10

VII

I.3. Etiology of Dyslexia.....	11
I.3.1. The Behavioral Level.....	11
I.3.2. The Cognitive Level.....	12
I.3.3. The Biological Level.....	12
I.3.4. The Environmental Level.....	13
I.4. Developmental Dyslexia VS Acquired Dyslexia.....	14
I.5. Developmental Dyslexia.....	14
I.5.1. Why it is Difficult to Find a Comprehensive Definition of Developmental Dyslexia	14
I.6. The Major Theories in Developmental Dyslexia.....	17
I.6.1. The Phonological Theory.....	17
I.6.2. The Rapid Auditory Processing Theory.....	21
I.6.3. The Visual Theory.....	23
I.6.4. The Magnocellular Theory.....	25
I.6.4.1. The Magnocellular Systems and its Disruption in Dyslexia.....	26
I.6.4.2. Reading Deficits as a Consequence of Magnocellular.....	27
I.7. Summary.....	28
Conclusion	

VIII

Chapter Two: Data Analysis and Interpretation

Section One

Research design, Data Collection Procedures

Introduction

II.1. Research Design.....	32
II.2. Research Variables.....	32
II.3. Research Instruments and Data Collection Procedures.....	32
II.4. Population and Sample.....	33
II.4.1. Classroom Observation.....	33
II.4.1.1. Aim of the Classroom Observation.....	33
II.4.1.2. Description of the Classroom Observation.....	33
II.4.2. Pupils' Questionnaire.....	33
II.4.2.1. Aim of the Pupils' Questionnaire.....	33
II.4.2.2. Administration of the Questionnaire.....	34
II.4.2.3. Description of the Questionnaire.....	34

Section Two

Data Interpretation and Analysis

Introduction

II.5. Interpretation and analysis of pupils’ questionnaire.....	36
II.5.1. Personal Information.....	36
II.5.1.1. Pupils’ Gender.....	36
II.5.2. Reading Difficulties.....	37
II.5.2.1. Reading Comprehension Skills.....	37
II.5.2.2. Pupils’ Self-Esteem During Reading.....	40
II.5.3. Spelling Difficulties.....	42
II.5.3.1. Spelling Mistakes.....	42
II.5.3.2. Pupils’ Unconscious Modifications.....	45
II.5.4. Genetic Origin.....	47
II.6. Presentation and analysis of observation checklist.....	49
II.7. Summary.....	51

Section Three

Limitations, Implications, and Suggestions for further research

Introduction	
II.8. Discussion.....	54
II.9. Pedagogical Implications.....	54
II.10. Limitations of the Study.....	54
II.11. Suggestions for Further Research.....	55

Conclusion	
General Conclusion.....	57
References.....	58
Appendix (A): Questionnaire.....	63
Appendix (B): Observation Checklist.....	65
Arabic Summary.....	66

General Introduction

1. Background of the Study

Learning a new language has its own difficulties, just like any other learning process, and experts through millennia were looking for the best techniques to successfully convey the basic rules of a language to the learners. However, some cases of learners are different, and one of these cases is dyslexic learners. Dealing with dyslexia among learners was and still a puzzling matter, scientists after years of research found that dyslexia is in brief, difficulties in reading and spelling; yet, it has been confirmed that dyslexic people have no lack of reading or writing experience. Developmental dyslexia can affect learners' activities, time and time again reading disorder can sometimes be confused with laziness, and dyslexic children are often blamed for their difficulties. Consequently, their self-esteem and motivation can be negatively affected, thus, causing various problems from both scholastic and an emotional point of view. Besides they can be disadvantaged relative to their non-dyslexic peers because their reading issues may influence their abilities and performance in writing, speaking, listening, and comprehending, and that may transform the experience of learning foreign language into a traumatic event, especially within the classroom context.

2. Statement of the Problem

Dyslexia can have potential effects on wide areas of academic performance and regular daily life, and this is not simply because of the basic cognitive causes. Dyslexia is one of the manifestations of what is called specific learning differences, as a starting point here we ought to clarify that dyslexia should not be viewed as an inability that hinders individuals in their

everyday life, but as a difference in gaining new knowledge, skills, and the same goes with learning a new language, (English language by no means is our case).

It is crucial to be aware of the fact that dyslexic learners very quickly notice themselves that they are unlike their peers have obstacles slow down their progress. Imagine how you would feel and what you would do in this situation. Your first feelings would be of frustration, anger, and you would rapidly lose your confidence. Your first reaction is escape, and about picking another path where you do not need to feel that way.

3. Aim of the Study

The overall purpose of this study is to examine and observe dyslexic learners at Bougerra Muhammed middle school Khenchela and to investigate the way they learn English language, the difficulties they face, and whether the nature of the language itself is the reason of more difficulty. And also, to dispel the myth that only experts in dyslexia can teach those dyslexics.

4. Research Questions

To achieve the aim of our study, we intend at finding answers to the following research questions:

- How may dyslexia affect EFL learners' academic achievement?
- Are poor foreign language learners, poor in their native language in the first place?
- How can dyslexia be reduced so that EFL learners may achieve much better?

5. Hypothesis

Similar to the research questions mentioned above, our hypothesis is as following:

“Dyslexic pupils of middle school at Bougerra Muhammed find it hard to learn their native language, but harder to learn English as a foreign language.”

6. Structure of the Study

This dissertation is divided into two main chapters. The first chapter is about the theoretical part which is mainly concerned with the related literature review. The second chapter is for practical, it covers research design and the analysis of the data obtained from observation and participants' questionnaire responses.

The first chapter includes a brief history of dyslexia, definition of dyslexia, etiology of dyslexia, the difference between acquired and development dyslexia and, the major theories of dyslexia. Whereas, the practical chapter is divided into three sections. The first section is about research design and data collection procedures, it is concerned with describing the population and sample, and a detailed description of all the research tools used (observation and questionnaire) as well. The second section is the interpretation and analysis of the results, it deals with examining and interpreting results in reference to theoretical stances. This discussion allows to examine the degree to which our results validate the theoretical background on which we have built our research work. The third and last section is about, findings, limitations, implications and suggestions for further research.

Finally, the research work ends up with a general conclusion, aspiring to set the systematic entities of the focal points matching up the conducted study of interest.

7. Definition of Terms

- **Grapheme:** _A minimal unit of a writing system.
_A unit of a writing system consisting of all the written symbols or sequences of written symbols that are used to represent a single phoneme. “Dictionary.com”.
- **Magnocellular:** magnocellulars’ or M.cells carry visual neural information along the upper, dorsal stream of the brain to help us understand motion. This magnocellular visual pathway tells us all about the WHERE of things: Where objects exist in relation to ourselves and HOW we guide our movement in relation to those objects, but not what they look like. The magnocellular visual stream signals us to an awareness of the time properties of objects. For instance, detection of the movement, distance, and speed of an object moving towards us. www.brightstar-learning.com
- **Neurological Disorder:** are diseases of the central and peripheral nervous system. In other words, the brain, spinal cord, cranial nerves, peripheral nerves, nerve roots, autonomic nervous system, neuromuscular junction, and muscles.“World Health Organization”.
- **Parvocellular:** Referring to the component of the primary visual pathway specialized for the detection of detail and color; so named because of the relatively small cells involved.
<https://www.ncbi.nlm.nih.gov/books/NBK10981/def-item/A2735/>
- **Phoneme:** Any of the abstract units of the phonetic system of a language that correspond to a set of similar speech sounds, such as the velar /k/ of “cool” and the palatal /k/ of “keel”, which are perceived to be a single distinctive sound in the language.
www.meriam.webster.com

- **Phonology:** is the study of the patterns of sounds in a language and across languages. Put more formally, phonology is the study of the categorical organization of speech sounds in languages, how speech sounds are organized in the mind and used to convey meaning. “All-about-linguistics.group.shef.ac.uk”.
- **Suprasegmental:** also called **prosodic feature**, in phonetics, a speech feature such as stress, tone, or word juncture that accompanies or is added over consonants and vowels, these features are not limited to single sounds but often extend over syllables, words, or phrases. www.britannica.com

Chapter One:

Literature Review

Introduction

I.1.A Brief History of Dyslexia.....	8
I.2.Definition of Dyslexia.....	10
I.3. Etiology of Dyslexia.....	11
I.3.1. The Behavioral Level.....	11
I.3.2. The Cognitive Level.....	12
I.3.3. The Biological Level.....	12
I.3.4. The Environmental Level.....	13
I.4. Developmental Dyslexia VS Acquired Dyslexia.....	14
I.5. Developmental Dyslexia.....	14
I.6. The Major Theories in Developmental Dyslexia.....	17
I.6.1. The Phonological Theory.....	17
I.6.2.The Rapid Auditory Processing Theory.....	21
I.6.3.The Visual Theory.....	23
I.6.4.The Magnocellular Theory.....	25
I.6.4.1.TheMagnocellular Systems and its Disruption in Dyslexia.....	26
I.6.4.2.Reading Deficits as a Consequence of Magnocellular.....	27
I.7. Summary.....	28

Conclusion

Introduction

Dyslexia in general is difficulties in reading and spelling, especially when it comes to learning a foreign language. Our research work have two main variables; developmental dyslexia and EFL learners. Hence, it is crucial to understand these two variables, and this theoretical chapter intends at exploring the literature review of these variables.

1. A Brief History of Dyslexia

The idea of dyslexia did not generally exist. Obviously, the primary individual to perceive learning issues, for example, dyslexia was not a doctor, instructor, or clinician. It was the writer Jane Austen, who, in 1798, in her amusing novel *Northanger Abbey* depicted a kid who seems to have dyslexia (Siegel, 2016). In the novel, Austen illustrated a young lady who had an assortment of learning challenges, and she causes us comprehend the endowments, just as the issues, of children who battle with learning. Learning inabilities would not exist for an additional 150 years, nonetheless, Austen watched human conduct and expounded on what she saw with astounding bits of knowledge that are much the same as those of contemporary instructive therapists.. Obviously, she did not utilize "Dyslexia", it did not exist around then and did not enter the language usage until numerous years after the fact. Jane Austen was not by any means the only writer to perceive dyslexia. Afterward, the writer George Eliot (in all actuality a lady named Maryanne Evans who trusted that she needed to take the name of a man to get her work distributed), portrayed a dyslexic kid, in 1860, in "*THE MILL ON THE FLOSS*". Like Austen, George Eliot utilized her sharp powers of perception to build up a focal character who was dyslexic. Her representation of a dyslexic was composed just about forty years before any instances of dyslexia were depicted in the restorative writing and a hundred years before "Dyslexia" was normally utilized in the English language. Her portrayal of dyslexic Tom is as

exact as though she had perused records of dyslexia in therapeutic and instructive diaries. After the journalists, a few doctors distinguished what we have come to call dyslexia. A doctor, Pringle Morgan (1896) of Sussex, Britain, announced the instance of Percy, a fourteen-year-old kid who was smart however could not figure out how to read or spell regardless of seven years of exertion by his instructors, this has all the earmarks of being the primary case of dyslexia in a child to be depicted in the logical writing. Pringle Morgan named Percy's condition "congenital word blindness". Pringle Morgan trusted that the base of dyslexia was the powerlessness to recollect what words resemble, a pool of visual memory for words. Individuals who had this condition appeared to be unfit to read words. As though they were visually impaired.

Word "blindness" was a perceived condition over a century back. Yet, it was not until the 1970s that it started to be acknowledged by the therapeutic foundation. Societal interest in people with reading troubles most likely started in 1878 with Adolph Kussmaul, a German nervous system specialist. He had an uncommon interest for grown-ups with reading issues who likewise had neurological hindrance. He saw that few of his patients could not read properly and regularly used words in the wrong order. He presented the expression "blindness" to portray their challenges. In 1887 a German Ophthalmologist Rudolph Berlin, was the first to utilize "Dyslexia" instead of "blindness". The condition was portrayed as "Dyslexia" from the Greek signifying "dys" terrible, irregular, or troublesome and "lexia" word (taking as reading) troublesome with words. The main instance of formative dyslexia was accounted for by Pringle Morgan in the English Medicinal Diary on 7 November 1896.

In 1925, an American nervous system specialist, Dr. Samuel Torton proposed the principal hypothesis of how explicit reading trouble emerged. He put an incredible accentuation on the strength of one side of the brain. Training procedures he created amid his examination are still being used today.

2. Definition of Dyslexia

Dyslexia is a neurological-based disorder which interferes with the acquisition and processing of languages, and is the most common prevalent of all learning disabilities (National Institute of Neurological Disorders and Stroke "NINDS" 2005). Dyslexia is a particular learning disability that originates from neurobiology. It is distinguished by problems with precise and/or fluent recognition of words and bad ability to spell and decode. These problems typically lead from a deficit in the language's phonological element, which is often unexpected in comparison to other cognitive skills and providing efficient training in the classroom. Secondary effects may include comprehension reading issues and decreased reading experience that may impede vocabulary and background knowledge development. Children with dyslexia find precise and familiar reading really troublesome while disability of reading cognizance is very particular from dyslexia. An outcome of industrious trouble in skilful acknowledgment of printed words, not explicit to dyslexia but instead establishing its outcomes, offers ascend to specific challenges. As often as possible, inconvenience in understanding composed messages and arranging contemplations on paper may end up evident, which, in the long run, can escalate, unavoidably prompting relentless issues in the general procedure of picking up learning. Significantly, despite some reading issues realized by impeded interpreting of composed content, individual with dyslexia would be all around improbable to exhibit any confinements in understanding complex spoken content and ideas.

To wrap things up, dyslexia is a deep rooted condition, whose trademark highlights change with age and improvement, side effects are dynamic in nature, they will in general be apparent and afterward lessen at given focuses in advancements. Certain shortfalls are redressed, for instance, accomplishment of standard precise reading is inside reach, in any case, even in adulthood,

spelling remains an excruciating assignment and reading speed appears to be less helpless to remediation (Snowling, 2001b).

3. Etiology of Dyslexia

Uta Frith (1999) has given a helpful structure to considering the idea of developmental difficulties. Frith recommends that there are three fundamental points of view on some random developmental condition: a behavioral, cognitive and biological one, notwithstanding this there are environmental factors that can have a job in the records offered from these perspectives.

Dyslexia has turned out to be a standout amongst the most thoroughly explored disorders. Teachers experience issues in finding the best methodologies to receive with these students, because of the way that dyslexia can show at different degrees. It ought to be characterized by four explicit dimensions: Behavioral, cognitive, biological and, environmental (Kormos and Smith, 2012:12; Doyle, 2002:47-76).

3.1.The Behavioral Level

At the behavioral level, it is by all accounts clear that dyslexia is associated with reading issues, despite the fact that there are various different side effects of this learning issue. Hence a reading test cannot be the selective measure to decide an instance of dyslexia, additionally in light of the fact that reading abilities can improve though, spelling issues suffer after some time (Frith, 1999). A further improvement in reading could be assumed in light of the fact that students train their reading abilities while concentrating various subjects, in addition, both visual and written tasks offer consistent contributions to improve. Sometimes children can overcome a few troubles, then again, dyslexia speaks to a "life-long burden" (Frith, 1996:209) which cannot vanish with maturity.

3.2.The Cognitive Level

At the cognitive level, dyslexic children show deficient phonological processing abilities. As an outcome they experience various challenges in reading and spelling for the most part new words. Because of this poor capacity, students may have comprehension troubles, accordingly causing educational disappointment in all subjects given that comprehension is referred to, as the capacity to read, process and grasp a content. The main inconvenience concern the mother-tongue and subsequently the more issues they need to confront, the more genuine it will be to study foreign languages, particularly those characterized as non-transparent languages like English.

3.3.The Biological Level

To the extent the biological level is concerned it is assumed that dyslexia may have a neurological basis. The Scottish ophthalmologist James Hinshelwood and the English doctor Pringle Morgan, saw a connection between dyslexia and a particular disease of the visual system (Hinshelwood, 1895: P.1566-70; Morgan, 1896: P.1378). The French nervous system specialist Jules Dejerine (1891: P.197-201) was the first to assume that in the instances of debilitation in reading and writing, the fundamental driver was a damage to the left occipital locale, which has a focal job in the processing of "optic images of letters". A comparative line of neurological suspicion followed and assumed that dyslexic students uncovered deficient cerebrum lateralization, particularly for language. The American nervous system specialist Samuel (Orton, 1925; Thompson, 1967) recommended that language disabilities in dyslexic students appeared to be identified with a decreased predominance of the left hemisphere in phonological language capacities. Consequently, students having this issue could not build up their reading capacity similarly as different pupils.

3.4.The Environmental Level

At last, the extent that the environmental level is concerned, numerous students may encounter school disappointment and therefore "serious emotional and social issues" (Kormos and Smith, 2012:22), which can worsen their school condition. Hence a compelling and centered help is of crucial significance to give each dyslexic child the correct tools to beat his or her challenges. Now and again it is convoluted to locate the best solution at a youthful age in light of the fact that, from one perspective every student speaks to a blend of specific issue. As an outcome, it is essential to follow a particular and individual technique relying upon the student's need. Subsequently, satisfactory educating and a full of feeling support at home should be inspected and assessed inside and out, so as to stay away from a negative methodology towards examining and to offer a plausibility to succeed both at school and life.

Students with dyslexia have very poor verbal (auditory) working memory and have trouble remembering the sequence of loudly presented data, such as instructions, fresh vocabulary phrases, and even names. Their bad verbal working memory implies they find it difficult to repeat fresh or unfamiliar verbal data. This can make them embarrassed before others to repeat data. It requires significant work memory space to bear in mind the appropriate speech sounds and ideas needed to identify phrases and understand text that can exceed the student's dyslexia ability. Thus, the combination of processing and remembering verbal data is very hard for the person with dyslexia, rather than merely remembering data. When writing, learners need verbal working memory and phonological awareness abilities to mix a word's phonemes, combine words to create a significant phrase, and lastly remember what they want to say to write it down. (Tracy Packiam Alloway PhD, 2016).

4. Developmental Dyslexia VS Acquired Dyslexia

Acquired reading and spelling deficiencies results from brain damage or malady and cannot either aggregate or incomplete loss of the officially had capacity to read and spell. The power of side effects to a great extent relies upon the size and area of the lesion just as the age of the individual. Developmental dyslexia has its place in the global groupings of illnesses, mental disarranges and related medical issues.

“It seems straightforward to define developmental dyslexia as a disorder in which reading skills have never been gained, and acquired dyslexia as a disorder in which reading skills have been lost” (Uta Frith 1985).

5. Developmental Dyslexia

5.1. Why it is Difficult to Find a Comprehensive Definition of Developmental Dyslexia?

One of the significant worries of scientists concentrating formative dyslexia is the need to discover commonly legitimate, acknowledged and comprehensive definition. Regardless of many years of top to bottom investigations, there is, truth be told, no all around concurred meaning of dyslexia, probably, in light of the fact that the number of inhabitants in poor readers is not homogenous. Think about the accompanying endeavors, explained as the years progressed, to characterize dyslexia:

“Developmental 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 abilities” (World Federation of Neurology, 1968).

“Developmental dyslexia is a specific impairment affecting the acquisition of reading and spelling skills, despite adequate intelligence, opportunity and social background, which occurs in absence of physical, neurological, emotional and, socio-economical problems” (Vellutino, 1979).

“Developmental dyslexia, or specific reading ability, is defined as an unexpected, specific and persistent failure to acquire efficient reading skills, despite conventional instruction, adequate intelligence and socio-cultural opportunity” (American Psychiatric Association, 1994).

“Dyslexia is evident when accurate and fluent word reading and/or spelling develops very incompletely or with great difficulty, despite appropriate learning opportunities, that is, learning opportunities which are effective for the great majority of children” (British Psychological Society, 1999).

Clearly, these much-cited meanings of developmental dyslexia are a long way from being adequately explicit to catch the wide scope of shortfalls experienced by dyslexic individuals.

At any rate two issues can be perceived in these definitions; first, they appear to regard reading (and spelling) disappointment as the main portraying highlight of dyslexia, and also, they are structured by avoidance, that is, barring from the dyslexic example those people who show extra issues or conditions. In fact, reading incapacities can be viewed as neither the important nor the adequate side effects of dyslexia. On the one side, indeed, there can be people who neglect to be analyzed as dyslexic despite the fact that they show poor reading, while, on the opposite side, it is not uncommon to meet individuals who ought to be analyzed as dyslexics, in light of the fact that they show the wide scope of impedances average of dyslexia, yet who are not considered dyslexics since their reading and spelling capacities are moderately. This is the situation, for example, of kids whose primary language has a straightforward orthography and whose reading

challenges may in this way go unnoticed. As referenced above, additionally, these definitions endeavor to recognize dyslexia by rejection, that is, barring from the number of inhabitants in dyslexics every one of those people whose reading issues can be caused freely by physical or neurological issues, or by a subnormal knowledge, or again by an absence of socio-cultural chances and regular guidance. The exclusionary foundation embraced in this definitions has been object of discussion. From one perspective, it is defended since it has the reason for distinguish a progressively legitimate and unadulterated research test; reading challenges, indeed, can likewise result from poor guidance of physical impedances other than dyslexia, and in this way, a conclusion of dyslexia would be increasingly dependable, if reading inabilities happen without other negative variables. Then again, however, the utilization of this paradigm can be precarious; since, as these days by and large acknowledged, dyslexia is a hereditarily acquired confusion, it is in actuality clear that it can happen at any dimension of insight, introduction to guidance and socio-economical conditions. As a result, it would not be right to bar from the dyslexic example people who show indistinguishable challenges from dyslexics however have a lower knowledge or, most importantly, have gotten a more regrettable guidance or live in poor socio-economical conditions. This thought drove a few specialists to concede that dyslexia is essentially simpler to be analyzed in those subjects who are "mentally, socially and, instructively advantaged than in the individuals who are not" (Seymour, 1986). These uncertain contentions give us a similar starting proof that specialist on dyslexia is as yet experiencing a period of fast development, particularly since the definite locus of the disability causing the troubles that portray this issue has not been distinguished yet. Various hypotheses have been created to clarify the etiology and the appearances of dyslexia, despite the fact that none of this by and large acknowledged. Be that as it may, it is important to stress that significant and intriguing advances have been made, it has

been shown that dyslexia is hereditarily inheritable, that it has a neurological premise and that the phonological ability is undermined in the totality of the population influenced by dyslexia.

Developmental dyslexia is generally characterized as a disparity between reading capacity and insight in kids accepting satisfactory reading educational cost. Since the definition is totally social, it leaves open the reasons for reading disappointment. It is presently entrenched that dyslexia is a neurological issue with a hereditary source, which is right now being examined. The confusion has long lasting steadiness, reading impediment being simply one of its signs. Past this accord, and notwithstanding many years of escalated look into, the basic natural and intellectual reasons for the reading retardation are still fervently discussed. For sure, there are no under four major theories of dyslexia.

6. The Major Theories in Developmental Dyslexia

6.1. The Phonological theory

The phonological theory postulates that dyslexics have a particular disability in the portrayal, stockpiling or potentially recovery of discourse sounds. It clarifies dyslexics' reading impedance by speaking to the way that figuring out how to read an alphabetic framework requires learning the grapheme-phoneme correspondence, i.e. the correspondence among letters and constituent hints of discourse. On the off chance that these sounds are ineffectively spoken to, put away or recovered, the learning of grapheme-phoneme correspondences, the establishment of reading for alphabetic frameworks, will be influenced as needs be (Bradley, 1981; Bryant, 1978; Vellutino, 1979; Snowling, 1981; Brady and Shankweiler, 1991), while scholars have various perspectives about the idea of phonological issues, they concede to the focal and causal job of phonology in dyslexia. The phonological theory in this manner hypothesizes a direct connection between a subjective deficiency and the social issue to be clarified. At the neurological dimension, it is generally accepted that the birthplace of the turmoil is an intrinsic brokenness of left-side of

the equator perisylvian cerebrum territories fundamental phonological portrayals. Backing for the phonological hypothesis originates from proof that dyslexic people perform especially inadequately on undertakings requiring phonological awareness, i.e. cognizant division and control of discourse sound. Notwithstanding, for poor verbal momentary memory and moderate programmed naming in dyslexics likewise indicates an increasingly essential phonological shortage, maybe having to do with the nature of phonological portrayals, or their entrance and recovery (Snowling, 2000). It is notable that phonological shortages are extremely far reaching in dyslexia, lighting up in this regard is the examination performed by Ramus et al (2003) uncovering that 100% of dyslexics experience the ill effects of phonological deficits. The most unmistakable phonological component shown by dyslexics is the poor phonological awareness. Phonological awareness can be characterized as the metalinguistic ability concerning the person's conscious, learning of the phonological structure of words, that is, of the exact arrangement of sounds making up words. As talked about above, phonological awareness abilities are important to achieve reading, the translating of words, truth be told, requests the information of their unceasing structure since it includes connecting graphemes to phonemes. Average undertakings testing phonological awareness require the subject to recognize the underlying, last or center hints of words, to distinguish and deliver words that rhyme, to fragment words into syllables or sounds in words. A convincing collection of proof, To be sure, affirms that dyslexics perform all around ineffectively in phonological errands and that their phonological awareness is fundamentally low, proposing that their troubles in examining the sound structure of words are in charge of their insufficiency to gain the precise correspondences among orthography and phonology.

Reliably, studies have shown that children with poor phonological awareness are commonly poor at reading, though, kids with a higher phonological awareness are increasingly capable readers,

alternately, poor readers are essentially weakened in phonological awareness assignments (Snowling, 1995; Blachman, B.A, 1994, 1997, 2000; Rispens, 2004). An ongoing report led by Ramus and partners (2003) affirms that phonological shortfalls are extremely across the board in dyslexia and especially clear in assignments surveying phonological awareness, for example, spoonerisms and rhymes location. Fascinating bits of knowledge come additionally from studies led on preschool kids at well-known hazard for dyslexia, in a longitudinal research Rispens (2004) announced that in danger children performed more inadequately than their companions on assignments tapping phonological awareness and letter learning. Following one year of reading guidance the outcomes were reevaluated and it created the impression that the children who did not show ordinary reading progress were the ones who had appeared most noticeably awful execution. A strong correlation between phonological awareness and letter learning has been accounted for additionally by different scientists (Bowey, 1994; Johnston et al, 1996; De Jong and Van Der Leij, 1999). Besides, remediation thinks about have demonstrated that encouraging phonological awareness and orthographic-phonological change through direct guidance upgrades execution in reading and spelling (Torgesen et al, 1999, 2001). Specifically, Bus and Ijzendoorn (1999) led a meta-investigation of test preparing considers and revealed that improvement was higher when phonological awareness was prepared in parallel with letter-sound correspondences. Such discoveries have driven scientists to contend that the impeded phonological fitness appeared by dyslexic children is the most persuasive reason for their reading and spelling deficits (Rack et al, 1992). Notice that poor phonological awareness can likewise represent the non-word reading shortage regularly identified in dyslexic people, the capacity to read nonsense pronounceable words, truth be told, depends firmly on phonological procedures and subsequently on phonological awareness. This is bolstered by discoveries demonstrating that non-word reading is exceptionally prescient of reading capability. Specifically, dyslexic children perform more

ineffectively than more youthful kids coordinated for reading age, Rack et al (1992) surveyed ten distinct examinations including a sum of 428 dyslexics going from 8-5 years of age to 13-12 years of age and testing non-words reading precision. Altogether, results demonstrate that dyslexics performed astoundingly more awful than reading level coordinated ordinary readers, who went from 1-3 years to 5 years more youthful than them. Moreover, various scientists examined the phonological coding in dyslexic kids controlling discourse recognition and generation errands. Results demonstrated that dyslexics saw phonetic limits less strongly than ordinary readers (Manis et al, 1988; Adlard and Hazan, 1997), and that they were more awful than controls in the verbal redundancy of both high and low recurrence words and, particularly, non-words (Bardy et al, 1983; Elbro, 1997). As the reader may have watched, in the examinations looked into here phonological deficiencies have been regularly surveyed utilizing metalinguistic assignments, depending fundamentally on phonological awareness aptitudes.

An alternate point of view has been embraced by Desroches and partners (2006), which sought after a novel methodology, estimating phonological capability utilizing eye following. In their trial, subjects were told to take a gander at named things that were exhibited in a visual showcase, which contained the objective thing (for example candle), a partner contender that mutual the underlying syllable of the objective things (for example candy) as well as a rhyme contender (for example sandal). Results exhibited that both dyslexics and age-coordinated, control children indicated lower acknowledgment rates when an accomplice contender was available, recommending that they were delicate to this phonological cover. Essentially, in any case, just control children indicated slower obsession rates in nearness of the rhyme distractor, though, dyslexics did not, executing as quick as in the standard condition, where no distractors were presented, and along these lines exhibiting that they were not delicate to the nearness of rhyme contenders. This finding shows that dyslexics are less delicate than controls in distinguishing

rhyming connections among words and, therefore, that they are less touchy to phonological suprasegmental data. In addition, Paulesu et al, (2001), played out a fascinating examination to test both reading and phonological fitness in English, French, and Italian adult dyslexics. True to form, they found that Italian subjects were less impeded than French and English subjects on reading tests, because of the more noteworthy straightforwardness of their orthographic framework. Be that as it may, Italians performed more terrible than controls and as inadequately as English and French dyslexics in every single phonological measure (for example word and non-word reading speed, digit naming, momentary memory and spoonerisms), loaning further help to the possibility that dyslexia is related with a phonological deficiencies, which seems to persevere crosswise over dialects and orthographic frameworks. In addition, contrasts between the three gatherings of dyslexics and the separate gatherings of controls have been affirmed with the PET system, demonstrating an essentially more prominent actuation for controls in the left half of the globe, with the greatest top in the center temporal gyrus. No zones of altogether more noteworthy actuation, rather, have been found in contrast with controls. To outline, dyslexic kids show incredible and broad troubles in the area of phonology, influencing their phonological awareness, which are tenacious crosswise over ages and dialects, as reflected by various neural circuit enactment.

6.2. The Rapid Auditory Processing Theory

The most obvious approach to challenge the explicitness of the phonological deficit is to propose that is the secondary to a progressively fundamental auditory deficit. This is the case of the rapid auditory processing theory, which indicates that the deficit lies in the impression of short and quickly varying sounds (Tallal, 1980; Tallal et al, 1993). Backing for this hypothesis emerges from proof that dyslexics show poor performance on various auditory tasks, including recurrence separation (McAnnally and Stein, 1996; Ahissar et al, 2000), and fleeting request

judgment (Tallal, 1980; Nagarajan et al, 1999). Anomalous neurophysiological reactions to different auditory stimuli have likewise been illustrated (McAnally and Stein, 1996; Nagarajan et al, 1999; Kujala et al, 2000; Temple et al, 2000; Ruff et al, 2002). The inability to accurately speak to short sounds and quick advances would create additional challenges specifically when such acoustic occasions are the signs to phonemic differences, as in/ba/versus/da/. There is to be sure additionally proof that dyslexics may have less fortunate straight out impression of specific complexities (Mody et al, 1997; Adlard and Hazan, 1998; Serniclaes et al, 2001). In this view, the auditory deficit is accordingly the immediate reason, over the span of improvement of the phonological shortfall, and thus of the trouble in figuring out how to read.

The father of the auditory deficit theory of dyslexia is Alfred Tomatis. Toward the finish of the 1960s, he recommended that dyslexia was brought about by an auditory deficit, meddling with the kid's phonological ability. In particular, Tomatis and different supporters of the auditory deficit theory recommended that auditory recognition shortages were the center issue portraying dyslexia, a hindered impression of the unmistakable discourse sound could, actually, decide phonological deficiencies and, as an outcome, reading and spelling issues. Supporters of the auditory deficit theory, hence, do not prevent the presence from claiming phonological shortages in dyslexics, but instead case that these deficiencies are optional to a progressively broad auditory impairment in sound recognition. Various examinations have inspected auditory perception in dyslexics, regardless of whether just a small amount of them indicated poor performance in auditory tasks. Tallal (1980,1984), for example, found that dyslexic children show deficiencies influencing the rate at which they can process approaching sound-related data, since dyslexics' auditory processing was basically impeded on short sounds and quick changes. Thus, the disorder displayed by dyslexics was named as "rapid" or "temporal" auditory processing deficit, offering ascend to the auditory temporal processing deficit speculation or rapid auditory processing theory

of dyslexia (Tallal, 1980). In any case, this hypothesis presents issues too, just a piece of dyslexic children, a fact, have been discovered weakened in auditory tests in further examinations. Additionally, Snowling (2001) and Ramus and partners (2003) have appeared there is no reliable connection between dyslexics' presentation on quick auditory preparing undertakings and discourse classification and segregation demonstrating that there cannot be a causal association between the auditory deficit and the phonological debilitation. In actuality, they saw that some dyslexics do protect auditory capacities in spite of phonological challenges. This reality shows unequivocally that phonologically deficits can emerge without auditory impairments and that accordingly the poor phonological fitness cannot be auxiliary to auditory deficits, as the auditory deficit theory claims. Be that as it may, auditory deficits have been all the more as of late reexamined in the system of the magnocellular deficiency speculation.

6.3. The Visual Theory

The visual theory (Lovegrove et al, 1980; Livingstone et al, 1991; Stein and Walsh, 1997) mirrors another long-standing tradition in the investigation of dyslexia, that of considering it as a visual debilitation offering ascend to challenges with the preparing of letters and words on a page of content. This may appear as unstable binocular obsession, poor vergence (Comelissen et al, 1993; Stein and Fowler, 1993; Eden et al, 1994), or expanded visual swarming (Spinelli et al, 2002). The visual hypothesis does not reject a phonological shortfall, however underscores a visual commitment to reading issues, in any event in some dyslexic people. At the natural dimension, the proposed etiology of the visual brokenness depends on the division of the visual framework into two unmistakable pathways that have diverse job and properties, the magnocellular and parvocellular pathways. The theory hypothesizes that the magnocellular pathway is selectively disrupted in certain dyslexic individuals, prompting inadequacies in visual processing, and, by means of the back parietal cortex, to sabnormal binocular control and

visuospatial attention (Stein and Walsh, 1997; Hari et al, 2001). Proof for magnocellular brokenness originates from anatomical investigations appearing of the magnocellular layers of the sidelong geniculate core (Livingstone et al, 1991), psychophysical ponders indicating diminished affectability in the magnocellular run, for example low spatial frequencies and high fleeting frequencies, in dyslexics (Lovegrove et al, 1980; Cornelissen et al, 1995), and brain imaging studies (Eden et al, 1996). In the system of the visual shortfall theory, visuo-perceptual debilitations are considered in charge of the troubles experienced by dyslexics in figuring out how to read. In particular, dyslexia is considered principally as a shortfall influencing visuo-spatial processing and causing a flawed visual observation, which thusly decides the troubles in acquiring reading abilities. The visual deficiency theory essentially comprises the first approach proposed to clarify developmental dyslexia, beginning from researchers as Himshelwood, who noticed that dyslexic kids appeared to show an unusual "blindness" for words, and Orton, who recommended that dyslexics see letters and words as switched frames. Different scientists have contended that dyslexics experience the ill effects of visual preparing deficiencies influencing visual sequences and visual memory, as erratic eye movement and eye convergence deficits, and that these issues cause their reading challenges. The visual hypothesis of dyslexia was broadly acknowledged until the 1960s-1970s, when it was seriously scrutinized by Vellutino's seminal work (1979), in which he demonstrated that visuo-perceptual disorders do not generally play a significant role in dyslexia. Imitating a portion of the investigations directed by the supporters of the visual shortage speculation, Vellutino found that there were not many huge contrasts among dyslexics and controls when the impact of verbal coding was controlled. For example, he noticed that dyslexics failed to meet expectations when they were solicited to review orally a succession from outwardly displayed comparable letters (for example "b" and "d"), though, they executed just as controls when a written response was required. This distinction appears to propose that the

challenges found in dyslexics are because of phonological more than to carefully visual reasons. In addition, it has been shown that visual aptitudes are poor indicators of reading capacities, demonstrating that reading challenges cannot be dictated by visual variables, yet are almost certain because of an etymological weakness. However, low-level visual shortages, for example, oculomotor lacks and visual-following issues have been as of late found in dyslexic people. The nearness of these disarranges has offered contribution to an advanced proposition about the reasons for dyslexia. To outline, the visual deficit hypothesis cannot be considered as a valid record for formative dyslexia, since it cannot clarify its center manifestations.

6.4. The Magnocellular Theory

A speculation of the visual theory, the magnocellular theory (Stein and Walsh, 1997), hypothesizes that the magnocellular dysfunction is not confined to the visual pathways however is summed up to all modalities (visual and auditory just as tactile). Besides, as the cerebellum gets gigantic contribution from different magnocellular frameworks in the brain, it is additionally anticipated to be influenced by the general magnocellular defect (Stein et al, 2001). Through a single biological reason, this hypothesis subsequently figures out how to represent every known appearance of dyslexia, visual, auditory, tactile, motor and, thusly, phonological. Past the proof relating to the theories depicted already, proof explicitly important to the magnocellular abnormality in the average just as the parallel geniculate core of dyslexics' brains (Livingstone et al, 1991; Galaburada et al, 1994). Poor execution of dyslexics in the material area (Allow et al, 1999; Stoodley et al, 2000), and the co-event of visual and auditory issues in certain dyslexics (Witton et al, 1998; Cestinick, 2001; Van Ingelghem et al, 2001). Despite the fact that the auditory and visual hypotheses have been displayed here independently for chronicled and coherent reasons, their supporters currently concur that visual and auditory disarranges in dyslexia are a piece of an increasingly broad magnocellular dysfunction. Low-level visual

preparing shortfall have been as of late announced in dyslexic individuals, driving analysts to the detailing of a Powerful speculation, which creates and overhauls a few parts of the visual shortages theory and, incompletely, of the auditory deficit speculation too. A large number of the visual and auditory deficits recognized in dyslexic individuals, indeed, have been translated as side effects of a disability influencing the magnocellular framework (see Nicolson and Fawcett, 2008 and Beaton, 2004 for a survey).

6.4.1. The Magnocellular Systems and its Disruption in Dyslexia

In neurological terms, the visual framework and the auditory framework are served by two particular pathways, the magnocellular and the parvocellular frameworks. The magnocellular framework is described by huge neurons with high conduction speed and extraordinary affectability to low spatial frequencies, as quick changes and developments in the visual field. As it were, they can transmit visual data all around rapidly, yet they pass on less detailed signals. On the other hand, the parvocellular framework comprises of smaller neurons that react better to high spatial frequencies and are more sensitive to color and fine spatial details. Various examinations have uncovered that dyslexic individuals appear to experience the ill effects of a disability influencing the magnocellular framework, which is in charge of the low-level visual processing deficit referenced above (Stein and Walsh, 1997; Stein, 2001). Dyslexics, in fact, have been found to indicate decreased affectability to low spatial frequencies, particularly at moderate dimension of luminance, proposing that there is an impedance influencing the magnocellular framework. Lovegrove and colleagues (1986) detailed that dyslexics are less sensitive to the difference between a series of narrow black and white gratings in comparison with controls and that their sensitivity is additionally decreased when these gratings flickered. Essentially, Evans and partners (1994) found that dyslexics show minor sensitivity to low and medium spatial frequencies; additionally, they are worse than controls at distinguishing flicker and slower when

requested to recognize a digit from a variety of digits. Since recognizing quickly changing visual stimuli relies upon the movement of the magnocells, it has been recommended that the magnocellular framework is weakened in dyslexics. A comparative proposition has been created to represent the deficiency influencing the handling of rapid auditory stimuli revealed by Tallal and colleagues (1980-1984), who found that dyslexic kids are slower than controls at recognizing rapidly changing auditory stimuli. Consequently, they defined the rapid auditory processing theory, contending that the phonological troubles shown by dyslexics might be brought about by a failure to recognize and distinguish discourse sounds, because of their inadequate rapid auditory preparing. In any case, this proposition has been repudiated by the finding that only a part of dyslexics suffer from auditory disorders. To catch both visual and auditory aspects it has been recommended that a "pansensory" magnocellular abnormality is in charge of the difficulties experienced by dyslexics in rapid processing of the two sorts of stimuli (cf. Nicolson and Fawcett, 2008).

6.4.2. Reading Deficits as a Consequence of magnocellular

The magnocellular deficit theory claims that dyslexic individuals suffer from an impairment influencing their magnocellular framework and making a decreased sensitivity to rapidly changing stimuli. As indicated by the defenders of the hypothesis, this deficit is additionally in charge of the reading challenges experienced by the dyslexics. The magnocellular framework, actually, is highly operative during reading, being engaged with the saccadic movement of the eyes, while, the parvocellular framework is operative during fixation and creates a visual follow that perseveres for around 250 milliseconds. One of the undertakings performed by the magnocells during reading is to hinder the action of the parvocells when the eyes are in motion, so as to stifle this follow and to keep away from the visual perplexity that it could make. Defenders of the magnocellular deficit theory, consequently, contended that unequivocally this mechanisms

is defective in dyslexia; it has been recommended, actually, that a particular disability anticipates the magnocellular framework from stifling the visual follow left by the parvocellular framework, making a masking impact that makes reading a significantly more troublesome undertaking (cf. Vellutino, 2004). Apparently, this would dramatically affect the obtaining of reading aptitudes. Nonetheless, this proposition has been seriously reprimanded, specifically by Hulme (1988), who saw that it would not anticipate reading challenges when words are displayed each one in turn, since dyslexics submit mistakes likewise in single words and non-words understanding, it can't be contended that their troubles are because of the covering impact made by a failing of the magnocellular system. It could rather be, as Vellutino and colleagues contend, that the steadiness of the visual follow is a connected, instead of a reason, of reading incapacities. In spite of the fact that, it is a standout amongst the most examined models of dyslexia, the magnocellular deficit theory has been passed judgment on insufficient to clarify the turmoil for the accompanying reasons. To start with, it is not the situation that all dyslexics suffer from magnocellular deficits and that magnocellular issues influence just individuals with dyslexia. Second, it is unlikely that the deficit causing dyslexia is connected only to the magnocellular framework, as appeared by Skottun (2000).

Summary

Hidden issues related with dyslexia can cause a significant number of frustration and emotional issues that restrain dyslexic students. Factors, like, poor phonological processing aptitudes, weak short-term and working memory, word-discovering troubles, slower speed of processing, challenges with auditory perception and recognition and/or auditory sequencing issues, automaticity issues, challenges with linguistic structure and language structure bring about additional issues. These are every now and again exacerbated by low confidence and motivation.

Conclusion

Through this theoretical chapter, we have mentioned what is really developmental dyslexia, how can we differentiate between a dyslexia individual and a non-dyslexic one, how a dyslexic individual's brain works, and what are the real difficulties EFL dyslexic learners suffer from.

Chapter Two:

Data Analysis and Interpretation

Section One

Research design, Data Collection Procedures

Introduction

II.1. Research Design.....	32
II.2. Research Variables.....	32
II.3. Research Instruments and Data Collection Procedures.....	32
II.4. Population and Sample.....	33
II.4.1. Classroom Observation.....	33
II.4.1.1. Aim of the Classroom Observation.....	33
II.4.1.2. Description of the Classroom Observation.....	33
II.4.2. Pupils' Questionnaire.....	33
II.4.2.1. Aim of the Pupils' Questionnaire.....	33
II.4.2.2. Administration of the Questionnaire.....	34
II.4.2.3. Description of the Questionnaire.....	34

Introduction

The section at hand is concerned with describing in details our research methodology, the instruments used for gathering data as well as the population. This description includes the content, data collection procedural instruments and aims. In addition, this section is aspiring to provide the methodological framework of our research work.

1.1. Research Design

This study is broadly conducted in using descriptive methodology, since the objective is to describe how the dyslexic pupils get managed to learn English as a foreign language. Accordingly, we have applied an observation in order to survey pupils' performance during English sessions. Besides, we accompanied a questionnaire in parallel as a helpful tool to strengthen our investigation.

1.2. Research Variables

This study consists of two variables, Independent variable which is, Developmental Dyslexia, and Dependent variable which is, EFL learners. Our aim is to investigate and describe the process of learning English as a foreign language among dyslexic pupils in general, and in Bougerra Muhammed –middle school- Khenchela in particular. Therefore, the research is trying out to prescribe the possible remedy as to alleviate the sharpness of such dyslexic phenomenon.

1.3. Research Instruments and Data Collection Procedures

In this study, we used a classroom observation as a qualitative method in order to describe how dyslexic pupils acquire new language and how dyslexia effect their achievements, in addition the questionnaire is as a quantitative method to check whether the nature of the English

language causes more difficulties for those dyslexics, or it takes the same characteristics just as the Arabic language which is their mother-tongue.

1.4. Population and Sample

The population of this study incorporates the four level middle school pupils. The sample consists eleven (11) dyslexic pupils, seven members (7) from the second grade, and four members (4) from the third grade. The reason behind selecting this population is that learners at this age are in their first stages facing learning difficulties, besides it is their first experience years in learning English as a foreign language.

1.4.1. Classroom Observation

1.4.1.1. Aims of the Classroom Observation

The researcher has adopted an observation in order to pursue and describe dyslexic pupils' performance, how they read texts out loud and how they spell. Observing dyslexic pupils in class when learning foreign language (English in this case) makes one part of the live situation that inspires to get new prospective ideas for new techniques in doing teaching process.

1.4.1.2. Description of the Classroom Observation

The observation took place on Monday, May 6th 2019. We observed the behavior of the eleven (11) dyslexic participants, and what are exactly the tasks they find difficult to do. The observation checklist (Appendix B, p.67) includes six items mainly related to learners' performance during their hours of study.

1.4.2. Pupils' Questionnaire

1.4.2.1. Aim of the Pupils' Questionnaire

Broadly speaking, the questionnaire is probably the most common usable tool in gathering data, all around the world. According to Dornyei (2010, p. 1) “The popularity of questionnaires is due to the fact that they are easy to construct, extremely versatile, and uniquely capable of gathering a large amount of information quickly in a form that is readily process-able”.

The objective of the questionnaire in this study is to compare the process of learning English as a foreign language to the process of learning the native language, and figuring out if the difficulties that stand against dyslexic learners are the same in both processes.

1.4.2.2. Administration of the Questionnaire

The population of the study is middle school pupils. The questionnaire was handed to eleven (11) participants (males and females) which represent the whole sample, and the same exact number handed back the accomplished questionnaire, which means one hundred per cent (100%) answered the questionnaire.

1.4.2.3. Description of the Questionnaire

The questionnaire is composed of five (5) questions, each one is divided into two (2) sub-questions, except for the last one. The first four (4) questions, or the first eight (8) sub-questions are about comparing the participants’ attitudes toward learning both languages (Arabic and English). The last question is about the history of the participants’ family with dyslexia. (Appendix-A.p.65).

Section Two

Data Interpretation and Analysis

Introduction

II.5. Interpretation and analysis of pupils' questionnaire.....	36
II.5.1. Personal Information.....	36
II.5.1.1. Pupils' Gender.....	36
II.5.2. Reading Difficulties.....	37
II.5.2.1. Reading Comprehension Skills.....	37
II.5.2.2. Pupils' Self-Esteem During Reading.....	40
II.5.3. Spelling Difficulties.....	42
II.5.3.1. Spelling Mistakes.....	42
II.5.3.2. Pupils' Unconscious Modifications.....	45
II.5.4. Genetic Origin.....	47
II.6. Presentation and analysis of observation checklist.....	49
II.7. Summary.....	51

2.1. Interpretation and Analysis of Pupils' Questionnaire

In this segment, we interpret the result information gathered through the two research instruments (classroom observation and pupils' questionnaire). The outcomes are represented and interpreted in tables.

The questionnaire is analyzed by expressing the responses in a form of percentages and representing them under tables. The observation checklist is analyzed by interpreting and describing in details the pupils' behavior and attitude towards learning English as a foreign language.

2.1.1. Personal Information

2.1.1.1. Pupils' Gender

Item 1: what is your gender ?

Table 1: Participants' Gender

		Frequency	Percent	Valid Percent
Valid	male	8	72.7	72.7
	female	3	27.3	27.3
	Total	11	100.0	100.0

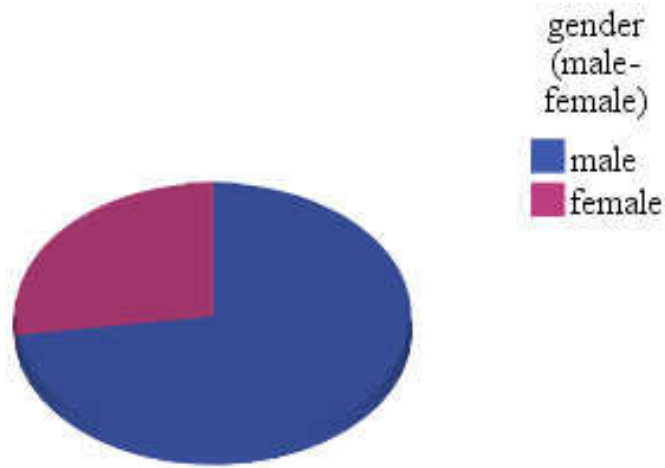


Figure 1: Participants' Gender

As we have mentioned in the theoretical chapter, dyslexia is two or three times more dominant in males compared with females. As the author, Tanya Evans, PhD, said; “There is sex-specific variance in brain anatomy and females tend to use both hemispheres for language tasks, while males use just the left”.

From the above table, indeed, shows that dyslexic boys outnumber dyslexic girls, (27.3%). This perhaps due to the biological nature of the brain.

2.1.2. Reading Difficulties

2.1.2.1. Reading Comprehension Skills

Item 2: Do you often have to Read a Text two or three Times Before it Makes Sense?

Table 2: Pupils' Text-reading Times in Native Language Before it Makes Sense.

		Frequency	Percent	Valid Percent
Valid	yes	9	81.8	81.8
	No	2	18.2	18.2
Total		11	100.0	100.0

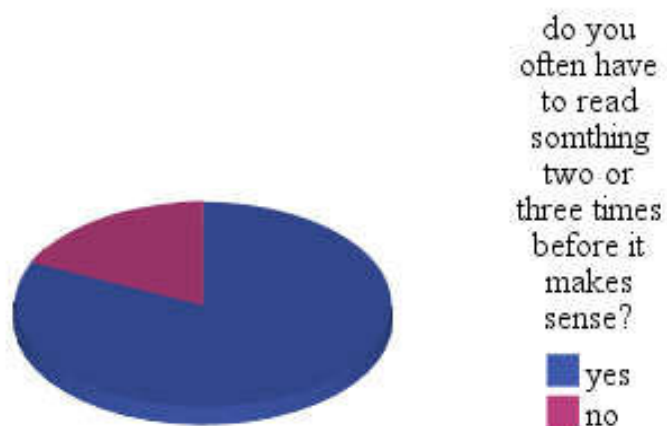


Figure 2: Pupils' Text-reading Times in Native Language Before it Makes Sense.

According to dyslexic learners, it seems that reading is the hardest task, regardless of the language they are using. The majority of the participants admit that they need to read more than once a piece of writing so it can make sense to them, and just 18.2% of the participants do not have to read twice to understand an utterance

Item 3: Do you Often have to Read a Text in English two or three Times Before it Makes Sense?

Table 3: Pupils’ text-reading Times in English Language Before it Makes Sense

		Frequency	Percent	Valid Percent
Valid	yes	7	63.6	63.6
	no	4	36.4	36.4
	Total	11	100.0	100.0

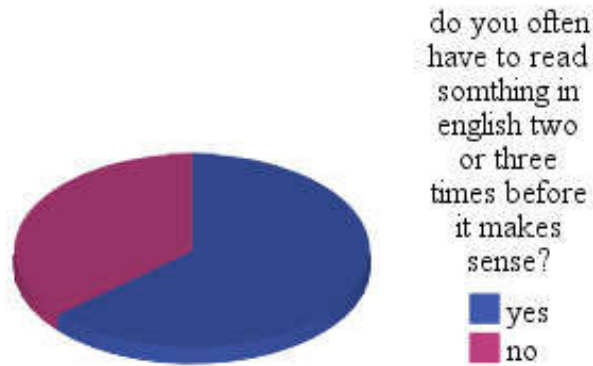


Figure 3: Pupils’ Text-reading Times in English Language Before it Makes Sense.

The same thing goes with reading in a different language, participants show that indeed they have real difficulties reading and understanding a text, unless they frequently read the passage time and time again. 63.6% of the participants claimed that they cannot understand from the first reading, while only 36.4% said that no need for a second reading.

Result 1:

After comparing the 2nd and the 3rd item and according to the tables, participant pupils confirm that difficulties in reading have nothing to do with the nature of the language. In other words, dyslexic pupils show that there is no difference between languages (in either native or foreign language) when it comes to the reading difficulties.

2.1.2.2. Pupils Self-esteem during Reading

Item 4: Do you Feel Uncomfortable when Reading Loudly.

Table 4: Participants’ Feeling when Reading Loudly.

		Frequency	Percent	Valid Percent
Valid	yes	5	45.5	45.5
	no	6	54.5	54.5
	Total	11	100.0	100.0

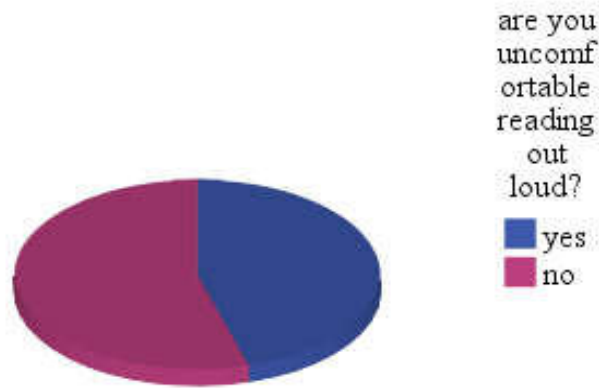


Figure 4: Participants' Feeling when Reading Loudly

According to the participants' answers, 54.5% of them have no embarrassment feeling in either reading loudly or reading silently, this rate represents the majority of them, while 45.5% said that they do feel uncomfortable when reading loudly in their native language.

Item 5: Do you Feel Uncomfortable when Reading an English Text Loudly?

Table 5: Participants' Feeling when Reading Loudly an English Text.

		Frequency	Percent	Valid Percent
Valid	yes	6	54.5	54.5
	No	5	45.5	45.5
	Total	11	100.0	100.0

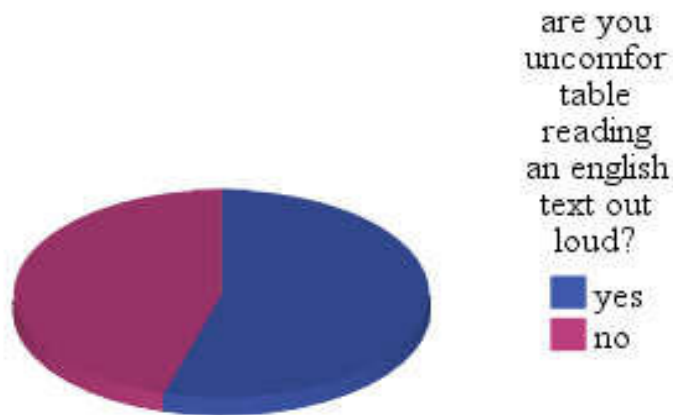


Figure 5:Participants' Feeling when Reading Loudly an English Text.

When it comes to reading an English text out loud, however, the majority of the participants feel uncomfortable reading it loudly, whereas, 45.5% do not feel different reading loudly or quietly.

Results 2:

The answers presented in the tables above, show that the number of dyslexic pupils who have issues with reading out loud when the text is in English, are more than those who have difficulties with reading in their native language , this means that during reading in their native language, pupils feel more confident than reading in English language.

2.1.3. Spelling Difficulties

2.1.3.1. Spelling Mistakes

Item 6: Do you have Spelling Mistakes in your Writing Even after Spell Check?

Table 6: Spelling Mistakes in Native Language Writing.

		Frequency	Percent	Valid Percent
Valid	yes	6	54.5	54.5
	no	5	45.5	45.5
Total		11	100.0	100.0

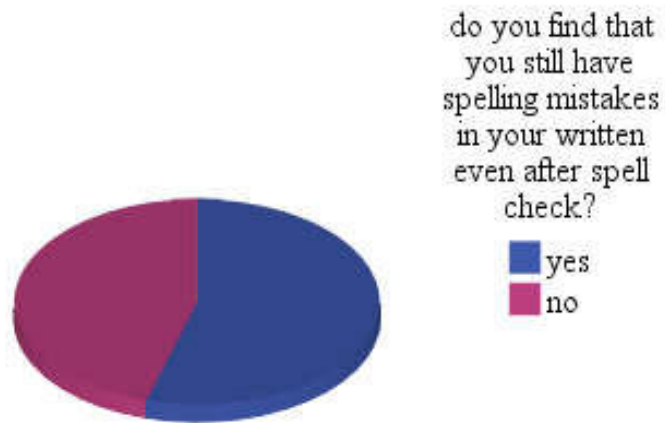


Figure 6: Spelling Mistakes in Native Language Writing.

There is a slight difference between those who have spelling mistakes in their native language, and those who have not, 54.5% of the participants admit that their writing includes spelling mistakes even after they checked it. Unlike the rest of the participants which represent 45.5%.

Item 7: Do you Have Spelling Mistakes in your English Writing Even after Spell Check?

Table 7:Spelling Mistakes in English Writing.

		Frequency	Percent	Valid Percent
Valid	Yes	8	72.7	72.7
	No	3	27.3	27.3
	Total	11	100.0	100.0

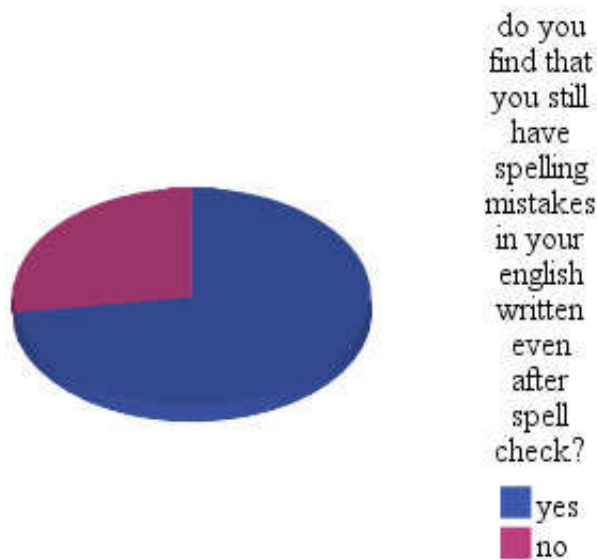


Figure 7: Spelling Mistakes in English Writing.

Apparently, spelling mistakes occur more in English writing than in a native language, the vast majority of the participants have spelling mistakes even after checking them. Only 27.3% of the participants are save from spelling mistakes.

Result 3:

Dyslexic pupils show that spelling mistakes exist in learning both languages (native & foreign), and it is not just when they learn English as a foreign language, as we notice there is a slight difference between making spelling mistakes in native language and in English language.

2.1.3.2. Pupils’ Unconscious Modifications

Item 8: Do you Transpose or Re-exchange Letters when you are Reading or Writing in your Native Language?

Table 8:Transposing or Re-exchanging Letters when Reading or Writing in Native Language.

		Frequency	Percent	Valid Percent
Valid	yes	1	9.1	9.1
	no	10	90.9	90.9
	Total	11	100.0	100.0

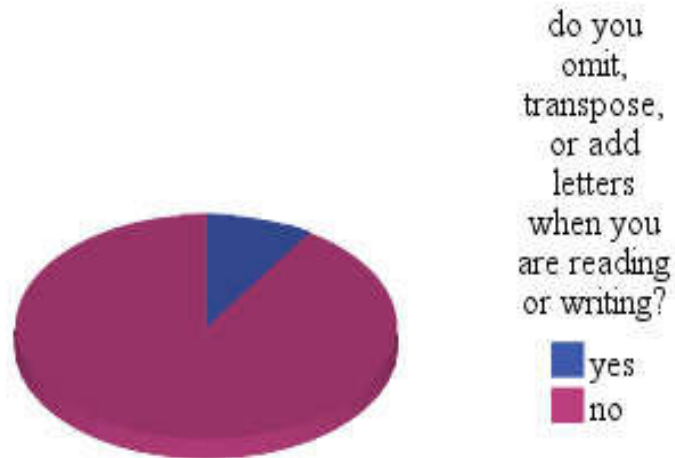


Figure 8: Transposing or Re-exchanging Letters When Reading or Writing in Native Language.

It turns out that dyslexic pupils do not make their own modifications during reading or writing in their native language. In fact 90.9% or almost all the sample answered negatively by saying that they do not modify words, while only 9.1% of the participants make some modifications and amendments.

Item 9: Do you Transpose or Re-exchange Letters when you are Reading or Writing in English Language?

Table 9: Transposing, Re-exchanging Letters when Reading or Writing in English Language.

		Frequency	Percent	Valid Percent
Valid	yes	6	54.5	54.5
	no	5	45.5	45.5
	Total	11	100.0	100.0



Figure 9: Transposing, Re-exchanging Letters when Reading or Writing in English Language.

More than a half of the participants declared that they make some unconscious modifications during their reading or writing process but only if the language they are using is English, 45.5% said that they do not fall in this mistake.

Result 4:

It seems that dyslexic pupils’ unconscious modifications of the letters during reading or writing occur more when they learn English.

2.1.4. Genetic Origin

Item 10: Is there any Dyslexic Member in your Family (one of your parents or siblings)?

Table 10:Neurobiological Origins.

Is there any dyslexic member in your family (one of your parents or siblings)?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	1	9.1	9.1	9.1
	no	10	90.9	90.9	100.0
	Total	11	100.0	100.0	

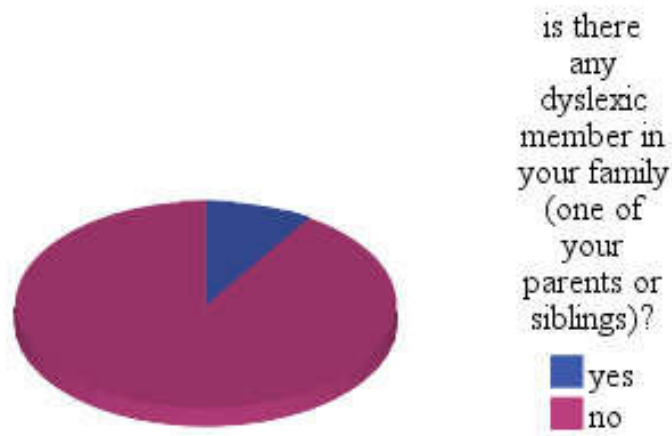


Figure 10: Neurobiological Origin.

The reason behind including this individual question is to know whether dyslexia here in this case is inherited trait or not, and as results show, almost all the participants did not inherit dyslexia from their family.

2.2. Presentation and Analysis of Observation checklist

a. Statement One

- Participants are avoiding tasks that require extensive reading.

Comment

During our class attendance management, and according to what we observed from the behavior of the participants, almost all of them were avoiding joining the reading group, which obviously would conduct consciously and unconsciously, to classify them in the lazy category of the indifferent learners.

b. Statement Two

- Participants when they were asked to read, they read slowly.

Comment

When it was a compulsory activity for the participants to read, they heavily start reading with hesitation and with a slow speed, and from theoretical part (the phonological theory p. 17), dyslexic learner's brain find it hard to differentiate between phonemes' sound which makes the reading process harder for them.

c. Statement Three

- Participants find it difficult to get all the sounds in the right order when it comes to pronouncing long words.

Comment

It is all about reading and how the dyslexics' brain can interpret and produce or reproduce the sounds matching the words, in this case our participants find it quite hard to pronounce long words and get all the sounds in the right order, due to poor short-term and working memory and comparing this to the theoretical chapter (theories of developmental dyslexia. P.17). While reading the working memory helps to come up with the correct pronunciation of long words. In case of dyslexic reader, as a result; he/she may either, read the text confidently and then have no idea what it was about, or follow the text, but miss out to get tripped by some of the words.

d. Statement Four

- Participants' handwriting is difficult to read.

Comment

Not all Participants have bad handwriting. In fact, the great majority of them possess a good handwriting.

e. Statement Five

- Participants get confused when they had to speak in public.

Comment

One hundred per cent (100%) of the participants feel so shy and therefore get blushed, this perturbing feeling colors their voices like to mention: murmuring, stammering shaking, got nervous and confused when they speak particularly in front of classmates and in public, all these

pointers indicate low self-esteem, which is the common concluding fact to any similar situations where individuals are not very familiar with the strange issues.

f. Statement Six

- When applying the TPR approach, participants were more active.

Comment

Asking the teacher lastly to try the TPR approach to see whether those particular pupils will change their behavior or not. Surprisingly, they were enthusiastically starting to behave actively and taking part during reading task as well in writing, moreover, it is remarkably happened that they could improve their pronunciation even with the seemingly long words they were confusing.

Summary

The difficulties that dyslexic learners faced are many, but most importantly, they face different difficulty in recognizing and using language patterns.

Dyslexics find it hard to differentiate between some words-sounds, grammatical and syntactical structure of the sentences, and the meaning of the words, these problems and other possible unveiled factors make the process of learning a new and foreign language (English) quite difficult. Another reason why dyslexic learners find difficulties in acquiring new language is, the deficit of their poor short-term and working memory, problems in keeping new words in the short-term memory (from the theoretical chapter, etiology of dyslexia; p. 11-13) will definitely cause problems in FL learners' achievement, poor short-term and working memory means poor in retrieving from the storage of the vocabulary. Thus, dyslexic learner feels of lack confidence during the learning process, and of course less self-esteem conducts to low achievement. In other words, teaching a dyslexic learner is not an easy task, consequently teachers have to take the

responsibility by taking into consideration those dyslexics' surrounding circumstances and factors along the process of learning and teaching new and foreign language.

Section Three

Limitations, Implications, Suggestions for further research

Introduction

II.8. Research Findings.....54

II.9. Pedagogical Implications.....54

II.10. Limitations of the Study.....54

II.11. Suggestions for Further Research.....55

Conclusion

General Conclusion.....57

References.....58

Appendix (A): Questionnaire.....63

Appendix(B):ObservationChecklist.....65

Arabic Summary.....66

3.1. Research Findings

Throughout this study, we have achieved the following crucial findings:

- Dyslexia prevents pupils from learning a new language effectively.
- Poor foreign language dyslexic learners are poor in their native language at the first place, but in the case of English as a foreign language they face more difficulties, because of its non-transparency.
- Dyslexia should not be seen as a disability but as differences in learning and acquiring new knowledge and skills

3.2. Pedagogical Implications

During our research we figure out that dyslexia is not just a difficulty in reading, but it also has an effect on other aspects of producing and using the language. The results reveal that dyslexic pupils process verbal information differently from non-dyslexic pupils, another problem with dyslexics is called reduced phonemic awareness, where learners often have difficulties perceiving subtle differences between sounds, like long and short vowels. In other hand, teachers and those who are in charge should understand dyslexia very well so they can help he learners overcome their difficulties.

Finally, using new approaches, such as TPR (Total Physical Response) helps dyslexic learners remember a good number of vocabulary, explaining the words by gestures and body movements would create a link between that image and the word in the dyslexic's brain.

3.3. Limitations of the Study

During our investigation we come across some limitations, in short, first and most important limitation is lack of the participants' knowledge about dyslexia and what neurobiological origins means.

Second limitation is the very small number of the participants. With the help of the teacher we could barely reach those eleven (11) participants, and once again it is all because of the limit knowledge of dyslexia in general

The third and the last limitation is time. Limited time did not allow to apply more approaches to end up with more solutions for them. In fact it needs at least two (2) or three (3) years to observe the progress of a learner, which we did not have unfortunately.

3.4. Suggestions for Further Research

Based on our findings and the literature review gained from the present study, the researcher suggests the following recommendations for further research:

1. Applying TPR (Total Physical Response) on dyslexic students can improve their speaking skill.
2. Is dyslexia a reason of lack in the reading experience?
3. If developmental dyslexia is not always a reason of neurobiological origins than what cause it?
4. Does reading long novels help improving dyslexics reading skill?
5. Learning new language can be beneficial for dyslexic people.
6. Does low IQ score play a role in the diagnosis of dyslexia.

Conclusion

Throughout this chapter, we examined the findings of the present work and concluded that our assumption about the nature of the English language and how it causes more difficulties for dyslexic learners is confirmed, but that does not mean that dyslexic learners should stop learning English; indeed, they should focus on it so that they can get used to their difficulties, or may be

all their difficulties would vanish. Also , recognized the obstacles we encountered in our research process that could influence our findings. Finally, we offered our study to future researchers with some related topics.

General Conclusion

The present research work aims to explore the nature of dyslexia phenomenon among EFL young; therefore, the exploration took place among pupils at Bougerra Mohammed middle school at Khenchela. The research at hand goes under the hypothesis which claims that “Dyslexic pupils find it hard to learn their native language, but harder to learn English as a foreign language”. Within the same wavelength, the researcher assumes that understanding dyslexic difficulties is the guiding pointer towards helping those learners in acquiring new language.

Consequently, this study leads to conclusive significant results that embrace the problematic difficulties that faced dyslexic learners especially when learning a new language. In fact, the participants show that learning English as a foreign language is much harder than learning their native language. Furthermore, the participants find the “total physical response” approach very helpful as a great teaching technique to develop their speaking skill.

All in all, the obtained findings confirm our hypothesis, that indeed, it is hard for dyslexic learners to impart their native language but it is harder to learn English as a foreign language. Moreover, these difficulties can be reduced or eliminated and maybe learning English as a foreign language is a good thing for those dyslexics. For that reason, we have provided future researchers with implications and recommendations to put them in other related studies.

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Appendices

Appendix (A): Questionnaire

Dear learners,

I am a master two English student in Abbes Laghrour University. As part of my dissertation I am required to gather some information from you, and all responses given by you will be strictly kept confidential and used for academic purposes only.

Instructions

I would like to ask you to answer the following questions by simply put “YES” or “NO”, and bear in mind this is not a test and there is no “right” or “wrong” answers. Please give your answers sincerely as only this will guarantee the success of the investigation.

Gender: male female

Q1:

a. Do you often have to read a text two or three times before it makes sense?

YES NO

b. Do you often have to read an English text two or three times before it makes sense?

YES NO

Q2:

a. Do you feel uncomfortable reading loudly?

YES NO

b. Do you feel uncomfortable reading an English text loudly?

YES

NO

Q3:

a. Do you have spelling mistakes in your writing even after spell check?

YES

NO

b. Do you have spelling mistakes in your English writing even after spell check?

YES

NO

Q4:

a. Do you transpose or re-exchange letters when you are reading or writing in your native language?

YES

NO

b. Do you, transpose or re-exchange letters when you are reading or writing in English language?

YES

NO

Q5: Is there any dyslexic member in your family (one of your parents or siblings)?

YES

NO

Lastly, I want to thank you so much for your cooperation.

Appendix (B): Observation Checklist

- 1. Yes
- 2. No

Statements	Answers	1	2
1. Participants are avoiding tasks that require extensive reading.			
2. Participants when they were asked to read, they read slowly.			
3. Participants find it difficult to get all the sounds in the right order when it comes to pronouncing long words.			
4. Participants' handwriting is difficult to read.			
5. Participants get confused when they had to speak in public.			
6. When applying the TPR approach, participants were more active.			

ملخص

عسر القراءة او الدسلكسيا كلمة يونانية مكونة من مقطعين الأول (دس) وتعني صعوبة والثاني (لاكسيا) وتعني الكلمة المقروءة. هي اضطراب تعليمي يتضمن صعوبة القراءة بسبب مشاكل في تحديد أصوات الكلام وتعلم كيفية ارتباطها بالحروف والكلمات. وتؤثر عسر القراءة على المناطق في الدماغ التي تعالج اللغة. والأشخاص المصابين بعسر القراءة لديهم ذكاء طبيعي وعادة ما يكون لديهم رؤية طبيعية. ويمكن ان ينجح معظم الأطفال المصابين بعسر القراءة في المؤسسات التعليمية بواسطة الدروس الخصوصية او برنامج التعليم المتخصص. ويلعب الدعم العاطفي ايضا دورا هاما. وعلى الرغم من عدم وجود علاج لدسلكسيا الا ان التقييم والتدخل المبكر يؤدي الى افضل النتائج. وقد تبقى عسر القراءة في بعض الأحيان لمدة سنوات بدون تشخيصها ولا يتم ادراكها حتما مرحلة البلوغ ولكن لا يفت الأوان اطلاقا على طلب المساعدة.

هدف هذا البحث العلمي هو الفهم الصحيح لظاهرة عسر القراءة وماهي الصعوبات التي يواجهها المصابون بهذا الاضطراب و خصوصا متعلموا اللغة الأجنبية (اللغة الإنجليزية). من اهم المهارات التي يجب اتقانها خلال تعلم لغة اجنبية هي مهارة القراءة و هنا تظهر صعوبة التلميذ المثاب بهذا الاضطراب. ومن هاته النقطة بنية فرضية البحث التالية "مصاب عسر القراءة او الدسلكسيا يجد تعلم لغته الام صعبة لكن تعلم لغة اجنبية (اللغة الإنجليزية) اصعب. المشاركون في هذا البحث تلاميذ متوسطة الشهيد بوقرة محمد من جميع المستويات. عددهم احد عشر (11) مشارك. الأدوات المستعملة لجمع المعلومات هي استبيان بالإضافة الى ملاحظة دقيقة لطريقة الدراسة لدى المصابين وتصرفاتهم خلال ساعات دراسة اللغة الإنجليزية.

باستعمال منهجية وصفية تم استخلاص ما يلي عسر القراءة يمنع التلاميذ من تعلم لغة جديدة. أيضا بسبب طبيعة اللغة الإنجليزية المبهمة والغير شفافة المتعلم يواجه صعوبات في تعلمها اكثر من الصعوبات التي يواجهها في تعلم لغته الام. واهم نقطة هي تجنب معاملة التلاميذ المصابين بهذا الاضطراب على انهم لا يمتلكون مستوى ذكاء كالبقية او انهم كسالى بل يجب تدريسهم بطريقة مختلفة عن البقية.

“Dyslexia is not a pigeonhole to say you cannot do anything. It is an opportunity to learn differently. You have magical brains, they just process differently. Do not feel like you should be held back by it.”

‘Princess Beatrice Elizabeth Mary of York’