

## Moroccan Primary Teachers' Awareness and Perceptions of Learning Disorders: An Exploratory Study

Khadija Ouyazi

Faculty of Letters and Human Sciences Saïs,  
Sidi Mohamed Ben Abdellah University, Fez, Morocco

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### Abstract

This study investigates Moroccan primary school teachers' awareness and perceptions of learning disorders among students in Fez. Using a mixed-methods approach, questionnaires and semi-structured interviews were administered to 60 Arabic teachers of third through sixth grades with 27-33 years of teaching experience across different primary schools. The findings revealed that 75% of teachers lacked scientific knowledge of learning disorders, while 84% were unable to identify affected students in their classrooms. Among the 25% who claimed awareness, their knowledge was superficial and unscientifically grounded, primarily acquired through personal readings rather than professional training. The study confirms a significant gap in both scientific and educational awareness of learning disorders among experienced Moroccan primary school teachers, highlighting the urgent need for systematic professional development and institutional support to improve identification and management of students with learning disorders.

### Keywords

Learning disabilities, learning difficulties, primary school, Moroccan context.

## Introduction

The issue of learning disorders and difficulties has been a subject of great interest among educators, psychologists, and neurologists. This is due to the significance of the issue and the potential negative effects that these difficulties and disorders might have on learners. In this regard, psycho-educational awareness played a fundamental and decisive role in raising interest in these disorders, especially that the problem is not easily discerned when the child joins classes and teachers notice a clear deficiency in a certain aspect of learning. Accordingly, several researchers have started investigating the issue of learning disorders. The first results revealed the types of these learning disorders or those forms of learning difficulties that learners suffer from throughout their learning process and that are currently referred to as 'academic learning disorders' such as Dyslexia, Dysthography, and Dyscalculia which are directly related to the teaching and learning processes. This is in addition to a number of other forms that are somehow related to the process of learning and that are known as "Les Dix-Dys" (The ten Dys) such as Dysphasia, Dyspraxia, and Hyperactivity and/or Attention Deficit. It is also worth mentioning that there are scientists who assume that the number of these disorders is more than a thousand and that every child does have at least one of these learning difficulties or disorders.

## Research Objectives

This study seeks to bring the issue of learning disorders to the fore and raise teachers' awareness of the importance of this issue and of the existence of learners who suffer from different types of disorders and difficulties. Specifically, the objective of this study is to sensitize and raise awareness of this phenomenon among primary school teachers in order to change their views regarding students who suffer from learning disorders and difficulties and to entice them to deal with this group of students with the necessary educational maturity.

## Significance of the Study

The importance of this study is three-fold. First, it is important for students who suffer from learning difficulties and disorders. Given our interest in this issue and our interaction with children who suffer from one or more of these disorders, we realized that this category of children suffered psychologically, socially, and educationally due to ignorance of the phenomenon and lack of scientific understanding. Specifically, children who suffer from such disorders were prone to all kinds of intimidation and mockery which made them subject to exclusion, marginalization and inferiority and thus led to their educational failure and to missing opportunities for social and professional integration. Therefore, the importance of this study lies in raising awareness of this phenomenon and correcting any misconceptions that might exist regarding it in order to find appropriate educational and scientific strategies for dealing with this category of children and

preserving their dignity, their right to education, as well as their right to social inclusion and advancement.

Second, the study is important for teachers as it will contribute to the spread of the necessary educational awareness of learning disorders and difficulties by sensitizing teachers about this phenomenon and familiarizing them with the types of disorders and difficulties that their students might have. This would enable teachers to make the necessary changes in their teaching practices to offer these students better opportunities of learning and help preserve their dignity and rights.

Third, the study is important for our country's educational awareness. Through what this exploratory study will offer, we aspire to raise more awareness and sensitization of this educational problem, especially as we have experienced in our educational system a stage that did not admit the mental identity of students with learning disorders, so that they were often regarded as low achievers or mentally retarded.

### **Limitations of the study**

This study is limited to the exploratory level, because what matters at this stage is not so much analytical or intrusive research, as much as we need to publicize the phenomenon and sensitize the mainstream of the existence and prevalence of learning disorders and difficulties in our various primary educational institutions. In other words, we aim to move from ignorance and non-recognition of the phenomenon to a better understanding of it and to treating learners with such disorders as scientifically and educationally defined intellectual identities.

### **Research Question and Hypothesis**

In light of the research objectives explained above, it is hypothesized in this study that there is a clear lack of awareness of the issue of learning disorders among Moroccan primary school teachers. And the question that arises with forming such hypothesis is:

To what extent are Moroccan primary school teachers aware of the existence of a large number of students who suffer from learning disorders and disabilities?

## **Theoretical Framework**

### **1. Defining Learning Disorders**

The term "learning disorders" refers to learning difficulties that a category of individuals suffers from. Specifically, it is a disorder that is related to the cognitive function that causes a defect at the level of learning such as aural or visual understanding, attention, a defect in the short and long term memory, language, reading, movement, information processing, or physical activity, and it is considered as a hidden disability (Pelletier, et. al. , 2004, p.3). Learning disorders also refer to

functional disorders, directly affecting the acquisition, organization, retrieval, understanding and processing of verbal and non-verbal information, and this disruption or imbalance affects an individual's learning permanently (Bisson, et. al., 2006, p.15)

The term learning disorder also indicates one or a set of disorders, characterized by an individual's inadequate growth of certain academic cognitive functions, such as language, reading, numeracy and writing skills (Wadsworth, 2008, p.387). According to World Health Organization (WHO), learning disorder is a medical term mainly related to a permanent neurological disorder associated with an imbalance, which affects the function or group of neuro-psychological functions, causing a real impairment in acquisition, understanding and use, as well as the processing of verbal and non-verbal information, without recording any mental, sensory or auditory dysfunction, or any lack of academic framing, nor the result of socio-economic and cultural conditions. And it is estimated that around 10% to 15% of the world's population suffer from these disorders. According to the Quebec Ministry of Education (1992), the term learning disorder indicates a range of persistent and heterogeneous difficulties, which are special and qualitative in the form of a single difficulty or different difficulties at the level of the processes necessary for growth, such as the use and understanding of language. These manifestations and symptoms are observable and are as follows:

- Difficulties in reading acquisition
- Difficulties in writing acquisition
- Difficulties in acquiring oral communication
- Difficulties in understanding or thinking

From the above definitions of the term learning disorders, one can conclude that these disorders are permanent disruptions, defects or dysfunctions in the process of skills and knowledge acquisition for a group of individuals. Such disorders lead to real impairments in the course of their basic learning, as they find it difficult to perform some of the normal tasks deemed necessary for their educational course in particular and their daily and personal lives in general.

These disorders result in a persistent and continuous school failure that is associated only with the troubled function of these groups, despite their record of normal or above normal IQ. This is in addition to the fact that these groups do not show any mental, sensory or auditory dysfunction, and belong to a very natural socio-conscious and cultural environment. This makes it very clear that these categories have an exceptional intellectual identity or an exceptional brain so that despite having all these advantages and characteristics that are necessary to engage in the appropriate learning act, which often constitute disabilities for that group with learning

disabilities, they show real defects and disorders at multiple levels, such as reading activity or writing, arithmetic, speech, motor harmony or distraction, etc. These disorders remain a direct result of brain-level dysfunction, affecting the function or set of neuro-psychological functions, resulting in a real impairment in acquisition, understanding, use and processing of information.

This will be elaborated upon when we explain the various types of disorders, as well as the conclusions drawn from the approaches that have studied this phenomenon from a strict scientific perspective away from the general views outlined on spontaneous observations, in an attempt to explore the true hidden and observable manifestations of these disorders. In this case, special diagnostic tools are used depending on the type of disorder, which in turn determine the type of treatment and intervention appropriate to each case, which can be exceeded or mitigated by appropriate interventions, without exceeding the role of parents and teachers who must be involved in this process, by assisting them to carry out various cognitive and sensory activities.

As regards treatment and intervention, it remains dependent on diagnostic data that vary according to the types and manifestations of these disorders, as well as different diagnostic tools, as each disorder imposes a "specific diagnostic" pattern. For example, there are cases which require the diagnosis of observed motor activity such as hypermobility disorder, and others which require the diagnosis of mental competencies that can be directly observed such as reading disorders.

## **2. The difference between Learning Disorders and Learning Difficulties**

It should be noted here that there is a deep confusion regarding the terms Learning Disorders and Learning Difficulties, as well as a confusion regarding their symptoms. This makes it difficult to understand and distinguish between those with learning disabilities and those with learning disorders. The following table explains the main differences between Learning Disorders and Learning Difficulties in order to clarify them more.

**Table 1.** The main differences between Learning Disorders and Learning Difficulties (Dubois, et. al. ,2010, p.3)

Learning Disorders	Learning Difficulties
<ul style="list-style-type: none"> <li>-Continuous</li> <li>-They appear at various stages of learning -</li> <li>-Neurological Causes</li> <li>-Difficulty in integrating basic processes that empower understanding</li> <li>-Inability to automate the relationship between the written and the spoken, (automatically linking the written to the spoken)</li> <li>- They could be diagnosed by a speech therapist using general tests that assess reading time as well as the number and type of mistake.</li> </ul>	<ul style="list-style-type: none"> <li>-They are temporary and can often be - corrected</li> <li>-They could appear at different stages of - learning</li> <li>-The reasons are multiple but they are not - Neurological</li> <li>-Disabilities in reading and writing</li> <li>-Lack of concentration or attention</li> <li>-Problems in the methods of work               <ul style="list-style-type: none"> <li>-Emotional and psychological deficiency</li> </ul> </li> <li>-Lack of motivation and interest               <ul style="list-style-type: none"> <li>-Difficult socio-economic status</li> </ul> </li> </ul>

The table above contains the major differences between learning disorders and learning difficulties. Learning disorders constitute real and persistent impairments as a result of a persistent neurological dysfunction in a child's course of study. There is no actual treatment that solves such problems and eliminates these disorders unlike learning difficulties which are mild and temporary learning disabilities with varied sources.

Leading research and studies in this area, especially those carried out by (Dubois et al, 2006, p14) attribute the reasons for these difficulties to difficulties in the use of cognitive strategies, metacognitive strategies, the good use of certain accidental transversal competencies, or as a result of psychological dysfunction, or lack of motivation and self-confidence. Such difficulties are often temporary and could be overcome.

### 3. Types of Learning Disorders

Learning disorders are clearly complex disorders that take multiple forms and types, requiring different types of diagnosis to precisely determine the type and level (acute or mild) of the disorder, which inevitably leads to the appropriate type of treatment or intervention for these groups. Accordingly, there are a range of questions that are necessary to detect these disorders, the most important of which can be highlighted as follows: What are the types of disorders? What are the most important external manifestations of these disorders? How can these disorders be diagnosed? If so, can the rehabilitation process be used? And more importantly, what is the role of

parents? Is there a possibility to help their children in order to alleviate and cope with these disorders?

We will try to answer these questions by exposing the most important types of these disorders, especially those that are the most widespread in the educational environment and that really hamper the teaching and learning process, and affect the process of developing the basic and necessary for effective learning. These disorders constitute a constellation of dysfunctions and are classified by the French Federation of Dyslexia as follows:

- **Developmental Dyslexia** which refers to a disorder in reading and which is associated with a special disorder in the written language, and it appears in the form of difficulties in acquiring the skill of reading. This disorder affects, severely, the learning process, as well as the degree of social and professional integration of dyslexic children, although there is a normal level of intelligence for this group. The number of children suffering from this disorder is estimated at about 3% to 5% of the total population of school children (Bréchet, et. al. , 2007, p. 155). This disorder is defined as a special, permanent, and persistent difficulty in learning to read, which cannot be traced back to a low social status, or to any psychiatric or mental disorder (Simonet, 2009, p. 7).
- **Dyscalculia.** The American University of Psychology (1994) defines Dyscalculia in the following words: *“Developmental dyscalculia is a disproportionate disorder of arithmetic in children that cannot be explained by a poor learning environment or by a low intellectual level”*. It is, in other words, a special disorder in acquiring arithmetic or a real difficulty in mastering mathematical operations. This disorder is widespread in a group that is not low or deficient at the level of intelligence but has a normal or above normal IQ, and which lives in a normal family and social environment. Differently put, Dyscalculia is a profound difficulty in learning these processes as children with this disorder cannot do even a simple mathematical calculation and it is also classified as a developmental disorder, often appearing from the beginning of learning initial arithmetic.
- **Dysorthography** is a functional disorder at the level of writing, caused by a special and permanent disorder in the learning of writing skills, and it is also referred to as the “disorder of acquiring writing” (Guelfi, 1993, p. 63) This disorder is manifested in ordinary individuals who do not suffer from any intellectual or sensory deficiency and who have a normal school life, but show disorders that hinder the phonographic structure (fragmentation of sentence components), in varying proportions in addition to a disturbance in the application of written rules, as well as disturbances at the grammatical level. In short, the writing disorder or Dysorthography is caused by genetic and hereditary

factors that lead to a dysfunction at the level of the growth of certain neural regions associated with the assimilation of the writing function.

- **Dysgraphie** is a difficulty in performing appropriate writing movements or a dysfunction in the acquisition of writing, mainly manifesting in obvious difficulties in learning the writing skill. It is classified as a handicap related to orthography, spelling as well as finger movements when writing. According to the Diagnostic and Statistical Manual for Mental Disorders (Guelfi, 1993, p.244), Dysgraphie is one of the learning disorders of the type of writing expression disorder, which affects an individual's ability to hand write, so that the written ability of the disabled person in writing is lower than that expected with the level of their mental abilities. In the same vein, Aujuriagurra, the French neurologist, states that a Dysgraphic child is *"a child in whom the quality of the writing is impaired while no neurological or intellectual deficit explains, this impairment"* (Aujuriagurra, et. al. 1964, p. 224).

This disorder inevitably extends at subsequent ages, affecting the child's ability to write, which will lead to real difficulties both in their personal and professional lives. However, the difficulty of writing remains as an unrecognized learning disorder by school authorities and institutions, and therefore without educational actions or programmes to face or mitigate the phenomenon. It is worth mentioning also that Dysgraphie is related to Dyslexia, which in turn results from a lack of or poor visual analysis, leading to poor calligraphy. Dysgraphie is also related to Dyspraxia (motor dysmorphia), and to Dysorthographie in rare cases. Obviously, this disorder has strong negative impacts on learning in general as learning is based on writing and good calligraphy in addition to reading, especially that most primary school examinations are written examinations that rely in the most part on the calligraphy and readability of handwriting, which is difficult to achieve for those with handwriting dysphoria.

- **Dyspraxie** Is related to problems in acquiring motor consistency (Hommet, et. al., 2005, p. 301) which means the presence of Neurodynamic disorders in a child affecting his or her ability to plan, organize and control automated motor signals when trying to accomplish a task or activity. It should be noted here that the majority of professionals from Neurologists, psychologists, therapists and doctors who have worked on this category of children argue that Dyspraxie is more of a physiological disorder rather than knowledge deficiency (Kaiser, 2001). This is because Dyspraxie is a relative deficit in motor capacities rather than mental abilities, and thus hampers motor performance and not the cognitive basis that controls an individual's movements. This simplifies, in a way, the treatment process because the global transition in the label from Despraxie to a disorder in the acquisition of consistency is a diagnostic introduction. However, there are scientists who

say that the causes of Dyspraxia are not clear, which adds further ambiguity to this phenomenon both in terms of diagnosis and methods of treatment and intervention.

- **Attention Deficit/Hyperactivity (ADHD)** is a disorder affecting children, and it is mainly characterized by obvious difficulties in concentration. It is called attention deficit disorder, and may be accompanied by Hyper-activity. The rate of children suffering from this disorder is estimated to be between 5,2% and 5,6% (Broca, 2009, p.18).

## Methodology

### 1. Sample Population

The sample of the study consists of 60 teachers of Arabic at the third, fourth, fifth, and sixth grade at different primary schools in Fes. This sample is chosen based on methodological considerations. In other words, it is believed that students start to acquire and master the skills of reading at the third grade of primary education as confirmed by several previous studies which usually exclude the grades before the third especially that the actual diagnosis of these disorders starts between the age of 8 and 9 years (Dubois, 2010,61). The skill of reading, on the other hand, is not fully acquired until the third grade and after the student had acquired a written and verbal lexicon and had achieved the stage of forming sentences and paragraphs. In addition, from our initial meetings with Arabic teachers, preliminary information indicates that these levels are the actual stage where reading problems and difficulties manifest themselves.

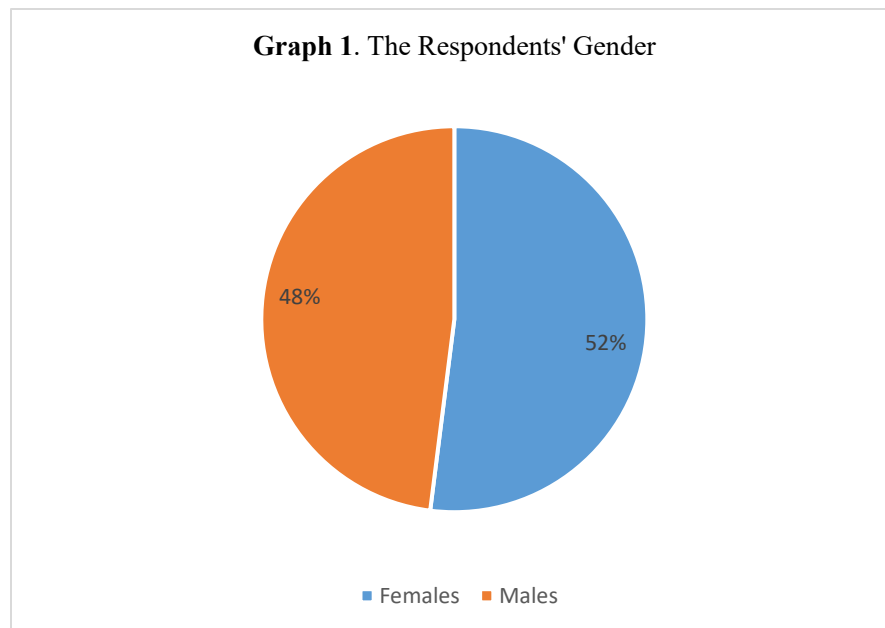
### 2. Data Collection Instruments

To answer the research question of whether there is a scientific and educational awareness of the existence of learning disorders among primary school pupils, the study employs questionnaires as a data collection instrument. The questionnaires are administered to teachers in the provincial directorate of Fes, and it is divided into three parts. The first part is devoted to demographic information about the respondents like their gender, years of experience in teaching, the previously taught levels, the current levels of teaching, and the subject taught. The second part investigates teachers familiarity with the concept and phenomenon of learning disorders, its definition, symptoms, types, and causes. The third part seeks to find out whether the respondents are aware of the existence of pupils who suffer from any learning disorders in their classes. Interviews are also used to get in-depth and direct answers from the respondents regarding their awareness of the issue under study.

## Results and Discussion

### 1. The Profiles of the Respondents

Concerning the gender of the students, the result of the analysis shows that 52% of the participants are females and 48% are males as the graph below shows.



As for the respondents experience in teaching, the results show that 50% of the responds have been teaching for 33 years, 25% have 29 years of experience in the profession, and another 25% have spent 27 years in teaching. This is shown in the table below.

**Table 1.** The Respondents' Experience in Teaching

Years of teaching	Percentage	Year of enrolment in teaching
33 years	%50	1983
29 years	%25	1987
27 years	%25	1989

As tabulated above, the respondents have a large experience in the field of teaching primary school pupils; an experience that is between 27 to 33 years. This is believed to be one of the key elements that contributes to understanding and dealing with students with learning disorders scientifically and educationally, especially that half of the respondents have an experience which exceeds 30 years of primary education. In other words, the respondents have the necessary knowledge and experience to identify those students who have learning disorders and sort them out.

The next variable investigated is the respondents' previous and current levels of teaching. This variable helps give us a more realistic idea about pupils' reading achievement because it is our belief that the more varied the levels taught are, the more adequate pedagogical experience the teacher gets to easily explore and identify their pupil's learning difficulties and disorders.

Concerning the primary school levels that the respondents previously taught, they are summarized in the following table.

**Table 3.** The Respondents Previously Taught levels

6th grade	5th grade	4th grade	3rd grade	2 <sup>nd</sup> grade	1st grade	Level / Sample
1	1					14%
			1	1	1	13%
	1	1	1			13%
	1	1	1	1		60%

As shown in the table, it is clear that all the respondents have experience in teaching the school levels at which cases of reading disorders usually appear. This puts the teachers in a good position that enables them to judge appropriately the nature of each pupil's reading abilities and difficulties. Years of teaching coupled with day-to-day experience make such an observation self-evident for teachers.

Regarding the current levels taught, we excluded the first and second grade of primary education because, as previously mentioned, educators argue that actual reading starts at the third grade and that it is at this stage that the pupil's ability to read could be judged. Table 4 below shows the respondents current levels of teaching.

**Table 4.** The Respondents Currently Taught levels

6th grade	5th grade	4th grade	3rd grade	Level Sample
			1	45%
		1		20%
	1			15%
1				20%

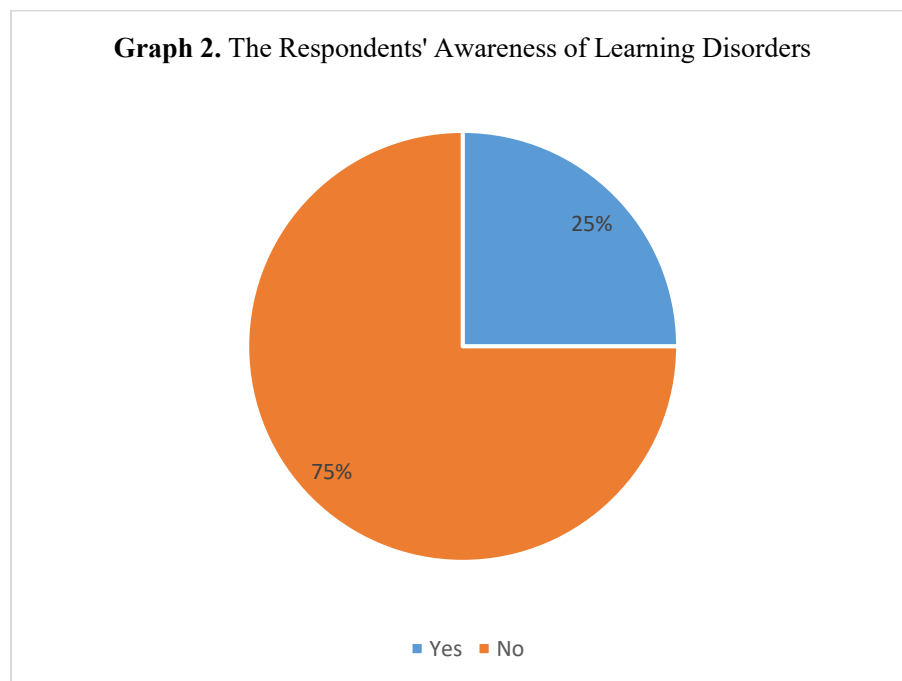
As tabulated above, all the respondents currently teach the levels required to identify pupils with learning disorders and difficulties, i.e. starting from the level of the third year. Each teacher is assigned to one level. Thus, 45% of the teachers teach the third grade, 20% of the teachers are assigned the fourth grade, 15% have fifth year classes, and 20% teach the sixth grade.

After presenting demographic information about the respondents, we notice that our sample possesses all the basic educational conditions that qualify them scientifically, psychologically and educationally, to observe and judge each pupil's reading achievement at all primary education levels. That is to say, the respondents have the required expertise and experience to identify cases of pupils who have difficulties and problems in acquiring and developing the reading skills in each level of primary education.

The next section will devoted to analyzing and discussing the questions posed to the respondents to answer the research question of whether Moroccan primary school teachers are aware of the term learning disorders and the existence of such disorders among their pupils.

## 2. Teachers' Awareness of Learning Disorders

The first question on the questionnaires asks the respondents whether they have a scientific knowledge of what is known as learning disorders in general. The results of the analysis are shown in the graph below.



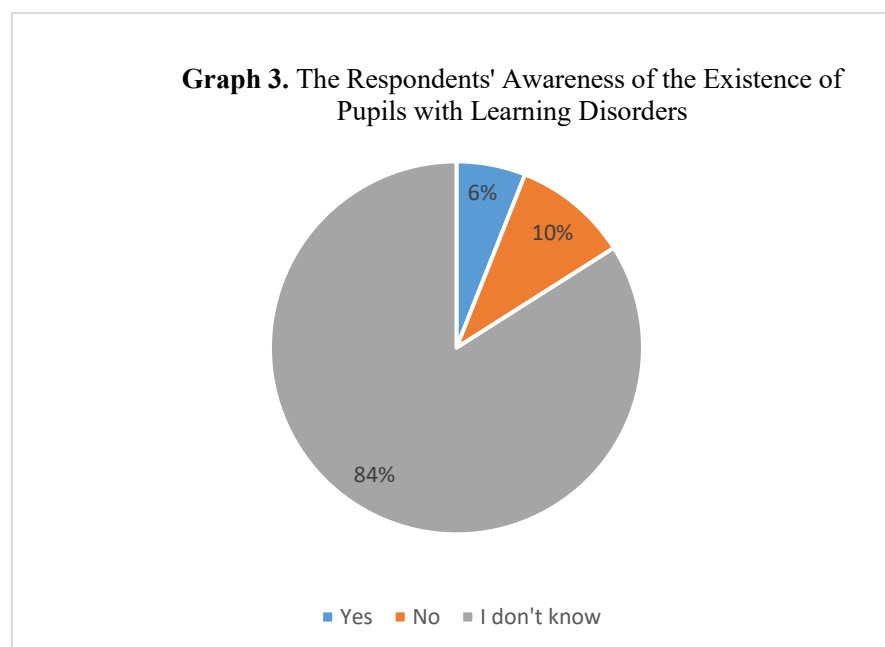
As demonstrated in the graph, only 25% of the respondents are aware of learning disorders while the vast majority (75%) answered with a “No”. This means that there is generally lack of adequate educational awareness of the phenomenon under study among teachers. Therefore, any disorder that the pupil might be suffering from, be it attention deficit, hyper-activity, lack of concentration, or poor reading, speaking, and arithmetic achievement would be considered as an educational misbehavior on the part of the pupil who is held responsible for it. This usually results in imposing punishment such as negligence, referring the pupil to disciplinary boards, assigning them poor grades, and in the worst cases expulsion from school. In other words, pupils who demonstrate some form of learning disorder are not given the chance to defend themselves nor are they dealt with on the basis of modern pedagogical science which insists on the need for positive treatment and appropriate educational care, in accordance with advanced international strategies and experiences.

Even the 25% of the respondents who reported that they are aware of the phenomenon of learning disorders, they showed through their answers of the interview questions that their knowledge of the phenomenon is very limited; a knowledge that is not based on scientific grounds. Besides, the interviews showed that the teachers’ knowledge of the phenomenon is limited to a knowledge of the term with a clear lack of knowledge of any type, symptom, or source of the problem. Interview 3, for instance, says *“I know about learning disorders but I don’t know exactly what the types of these disorders are”*. Similarly, interviewee 5 states, *“I hear a lot about this problem (learning disorders)”*

*but I'm not really sure what it is".* And when asked about how they come to know about the phenomenon, most of the interviewees said that they knew about the phenomenon only from personal readings or some Internet videos. So, although the phenomenon is widely present in our institutions of primary education, there is obvious lack of scientific awareness of it among teachers.

### 3. Teachers' Awareness of the Existence of Pupils with Learning Disorders in their Classes.

The next question asked on the questionnaires asks the respondents whether there are cases of pupils who suffer from learning disorders in their classes. The results are shown in the following graph.



The results shown in graph 3 consolidate the previously analyzed results in the sense that there is an obvious and striking lack of awareness of the phenomenon. 84% of the respondents answered with "I don't know" when asked about whether they have pupils who suffer from one or many of the learning disorders. The interviews also showed that most of the interviewees admitted that they are not in a position to judge whether there are pupils with learning disorders although they stated that there are many pupils with "misbehavior" problems or slow learning progress. For

example, interviewee 7 says in this regard, *“I notice many students who have problems with reading for example but I’m not sure if they are psychological or neurological problems or just a matter of lack of practice”*. This finding is similar to the results shown above in that teachers in our primary educational institutions have lack or even absence of awareness of the phenomenon of learning disorders. Teachers do face such disorders on a daily basis in their teaching practices, but are unable to identify and diagnose them using appropriate scientific and educational diagnosis tools and strategies. This makes of both teachers and pupils victims. The teacher is a victim of his/her lack of knowledge and adequate training in dealing with the phenomenon, and the pupil is also a victim of not knowing about his/her problem which leads them to marginalization, frustration, and failure.

This situation leads to failing many pupils without any real justification for their exclusion, which has serious repercussions on the educational, psychological and social future of the child concerned and the various institutions around them. This, in turn, indicates that the Moroccan educational system still lags behind in terms of contemporary educational processes and reforms. Lack of awareness of the phenomenon of learning disorders is mainly attributed to the absence of any institutional action adopted by the educational system using a central decision circulated through official notes and concrete field actions as teachers’ limited and modest knowledge of the phenomenon is a matter of personal efforts only.

## Conclusion and Recommendations

In summary, this study investigated the extent of awareness and perception of learning disorders among Moroccan primary school teachers. The findings confirmed a substantial lack of scientific and pedagogical knowledge regarding the phenomenon, affirming the initial hypothesis.

The research underscores the critical need to provide educators with formal training and tools to identify, understand, and support learners with special educational needs. Emphasizing the unique educational identity of students with learning disorders, the study calls for institutional reforms and awareness programs. Future research should expand to other regions and explore the effectiveness of intervention strategies, aiming to establish a systemic response to this under-recognized educational challenge.

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