

Dyslexia in Morocco: An overview of recent research

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I. Introduction

The disorders of learning taken at whole in general and that related to reading capacity in particular handicap numerous learners and affect by consequence their success in school curricula, their social and professional relations. Many factors can led to these disorders like environmental factors related mainly to socio-cultural precariousness. Other investigations find their origin in neurobiological causes characterizing a private individual brain. A part of this second category is recognized under the prefix "Dys". Dys being the word used nowadays to describe the family of developmental specific disabilities including dyslexia, dysphasia, dyscalculia... This prefix poisons the lives of many children's and particularly their families and at second level their teachers. Learning difficulties have a significant impact on academic performance notably when school problems are not suitably taken care of.

In this work we are interested in the learning aspect of the reading which constitutes a field of research involving many disciplines: neurosciences, neuropsychology, cognitive psychology, psychology of the development ... It is also one of the major objectives of primary school. The dyslexia, as being a specific disorder of this school learning affects children of good intellectual capacities, who did not display neurological deficiencies, sensory deficits, nor emotional or environmental deprivation. The explanatory hypotheses formulated by the researches dedicated to the study of dyslexia [1], have highlighted the susceptibility to cause reading disorders through the impairment of a certain number of cognitive abilities: visual-attentional [2], phonological hypotheses [3], cerebellar [4], magnocellular [5], and deficit in temporal auditory signal processing [6]. The persistence of the deficit of the phonological procedure and the confusion between the morphologically similar letters are the most common manifestations in the dyslexia [7-9]. Because of its frequency (one to two children per class), its consequences in terms of academic failure and emotional suffering, the dyslexia is considered a public health issue. This neurodevelopmental disorder can have considerable repercussions for children: school year resumption, change of educational institution and early interruption of schooling. In addition, the permanent comparison with "valid" peers, who are doing well at school, generates serious difficulties and psycho-emotional disturbances, such as decreased self-esteem and depression, during childhood and which its after-effects persist into adulthood. In dyslexic people, different neurological developmental models have been demonstrated by the advent of cerebral imaging techniques. These models are expressed by treatment deficiencies in some domains, but also, in several cases they are translated by impressive creative capacities [10,11,12].

Thanks to the importance of reading, not only in the acquisition of all other school learning but also in several activities of the daily life and especially its important role in the new modes of communication, generated by modern technology, (social networks, email...), the majority of dyslexics children are in permanent contact with a feeling of weakness and incompetence [13,14]. Such a situation can lead to delinquency, antisocial behavior and marginalization for which the state and society pay a heavy price in the long term. During last decades, several countries recognized the biological and pathological nature of the specific disorders of learning (SDL). Enormous progress was realized to face these educational problems. Appropriate measures have been taken to improve the educational and social integration of children affected by these disabling disorders.

In Morocco forming a healthy and productive individual who can integrate easily into the society is one of the major purposes of the educational system. Due to the indisputable role of the education in the development and the openness, the state placed the education as the second national concern after the territorial integrity [15]. Since the independence, the Ministry of National Education has resorted to several reforms; the latter's having not provided realistic answers in terms of the quality of the basic learning's. Indeed, with the objectives of "the education for all", the country's concern was focused on the generalization of education, especially at the primary level. In this respect, a large part of the budget is allocated to build new schools, leaving very few resources for other forms of investment such as in-service teacher training, curriculum

improvement and the care of learning disabilities. This has a natural impact on the quality of Moroccan educational offer, which seems to be the antipodes of what was realized in terms of schooling. At the beginning of the year two thousand, a new philosophy based on putting the learner in the center of any educational action has been adopted. In their big directives three successive reforms: The national charter of the education and the formation (2002), the Education Emergency Plan (2009) and the Strategic Vision (2015-2030) placed the learner at the heart of the educational system by putting the other pillars of the system at his service. The status of the learner in the center of the education policy requires understanding and controlling all the variables that could affect his mental and physical health as well as his creative and intellectual capacities. This choice also requires the adoption of the principle of the equality of opportunity between all the categories of learners.

This principle of equal opportunities did not include the learners having specific disorders of learning related to the cerebral dysfunction; the dyslexia (disorder of neurobiological origin) was not an exception. Although in Morocco, some information about the skills in reading is available, the data of this pathology is scarce. Before bringing the representations concerning the dyslexia, in the Moroccan context in various levels, we are going to present certain important data clarifying the level and the competences in reading at the Moroccan learners.

The results of some surveys and researches that have been devoted to the study of reading have shown that Moroccan children are in deficit in terms of this school learning. Thus, at the international level, the evaluation of skills acquired in reading, organized by the International Association of Evaluation of the school Achievement (IAE), conducted the PIRLS survey (Progress in International Reading Literacy Study) aimed to study a group of 50 countries including other Arab countries, provides essential elements of information. The Moroccan schoolchildren had relatively low scores of reading and which are widely situated below the international average in all three versions of test PIRLS (on 2005, 2011 and 2016). They were ranked last in the PIRLS; 2011 and on the 48th rank among 50 countries that participated in the survey in 2016, the Moroccan school children's are characterized generally by low scores. At the national level, according to a report developed by the Higher Council of Education for the year 2008, a considerable number of Moroccan pupils in the primary education, presents important difficulties of learning reading in Arabic as a mother tongue and French as a second language [16].

At the national level, the difficulties of learning reading, is interpreted by exogenous factors related to the child's environment. Indeed, the problems of reading are explained by an unfavorable socioeconomic context and also by differential characteristics existing between both forms of the Arabic language (standard Arabic and dialect Arabic). The implication of the endogenous factors associated to the "biological peculiarity", characterizing a particular brain for certain learners, is far from being put at stake in the reading acquisition difficulties. In this regard, the dyslexia as being a disorder of neurobiological origin hindering specifically the installation of mechanisms necessary for the learning of written language, is often denied by those who are in charge of the educational system. Moreover, the department of education does not recognize the existence of this cognitive disorder [16]. Circular 08/98 urges school directors to adapt exams to students with disabilities, but at no time does it mention dyslexics which are not considered as such. This neurocognitive disorder is never considered as a handicap, ignored by the teachers because it was not a part of their formation and badly appreciated by the doctors and paramedics. Yet, the dyslexia is known as one of the specific disorders of learning not only the most frequent but also the most devastating in terms of academic achievement. Thus, the teachers need to be better guided to help pupils who do not progress; they must also be formed in diagnostic tools, methods of remediation and accompaniment. According to the majority of the parents and teachers, the dyslexia is likened to the lack of motivation and laziness. These judgments are reasonable, since the parents and teachers are not sensitized to understand the pathological situation of these children. The Families have become desperate and want to end the suffering of having their children misunderstood and marginalized.

Therefore dyslexic children are not detected at school; they are in normal classes, with all students, without any adjustments or educational adaptations, which prevent them from releasing their potentials by depriving them of learning adapted to their own pace. At the highest level of the institutions responsible for the educational system, no one specifies the biological nature of dyslexia in Moroccan schools, which makes the situation alarming and worrying. Thus, the Higher Council for Education, Formation and Scientific Research (HCEFRS) in its new strategic vision of the reform (2015-2030), although it underlines that the State must fulfill its duties towards disabled people or in specific situations (in order to guarantee them the right to quality education) it does not approach clearly the notion of the dyslexia which remains an invisible handicap requiring a particular intervention and a care. Within an educational system that ignores totally the neurobiological and / or genetic identity of dyslexia, the prevalence concerning this developmental disorder in the school environment is poorly known. Epidemiological studies are very rare, in the absence of an official ministerial investigation on the subject, a study which was conducted with the primary school pupils indicates that a proportion (without specifying the incidence) of these pupils presents difficulties in reading the profile of which evokes a

developmental dyslexia [16]. Another study (unpublished results) conducted with a relatively small sample of secondary school learners, the prevalence of dyslexia was around 4%.

The ignorance of these dyslexics disorders, both by the educational system and by the families, has repercussions on the school career of students who are affected. Indeed, despite the fact that Morocco has undergone a long series of educational reforms, many Moroccan children still drop out of school for unknown reasons. The failure of the system in terms of care and remediation of academic difficulties in general and reading difficulties in particular seems to be one of the main causes of this phenomenon. Therefore, in order to have legal accommodations in the classroom and during exams, institutionalizing dyslexia remains a priority for this category of disabled children.

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