Chapter 4
Educational Challenges and Perspectives in Developmental Dyslexia

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ABSTRACT

The worldwide prevalence of students diagnosed with specific learning difficulties (SLD) has increased over the past few decades. Education systems strive to include students with SLD in general classrooms through the implementation of various educational methods and adjustments to the teaching process, although often with limited learning outcomes. This chapter focuses on developmental dyslexia (DD) and explores its primary characteristics while delving into the attitudes, misconceptions, and lack of training among teachers, as their approach significantly impacts the education of students with DD. By describing the key attributes of DD and identifying the resulting learning challenges for students, the chapter puts forth suggested teaching methods and practices based on the current literature. These approaches encompass differentiated instruction, implicit learning, the use of Information and Communication Technologies, multisensory teaching, and student-centered group work.

INTRODUCTION

General classrooms worldwide include a significant number of students with specific learning difficulties (SLD), with Developmental Dyslexia (DD) being a common diagnosis among them. The education systems, educators, and specialists in the field of SLD face challenges in integrating these students into the educational process and assisting them to overcome their learning difficulties and achieve their learn-

ing goals. Recent research on teaching students with DD has proposed various approaches, methods, practices, and teaching strategies, including Differentiated Instruction (D.I.), implicit learning, the use of Information and Communication Technologies (ICT), multisensory learning, and student-centered group and pair-work practices, aiming to establish a flexible, creative, and supportive educational environment. Despite these efforts, the number of students diagnosed with SLD is steadily increasing globally, while outdated educational policies continue to exist. This highlights the urgency of implementing more inclusive, updated, and student-friendly educational approaches in classrooms (Hallahan et al., 2020; Pham & Riviere, 2015). Furthermore, the attitudes, misconceptions, and inadequate training of teachers can impede the establishment of such classrooms, despite their dedication and significant efforts. Nevertheless, research has indicated that the integration of all the mentioned approaches, methods, and techniques in general schools can effectively support students with DD, provided there are updated educational policies, curricula, facilities, and efficient teacher training programs.

1. DEVELOPMENTAL DYSLEXIA: THE MOST COMMON LEARNING DIFFICULTY

The present chapter will primarily focus on DD since it stands as the most common SLD worldwide, irrespective of the students' social, cultural, economic, and educational background. Approximately 70-80% of students diagnosed with SLD exhibit dyslexia representing 5–10% of the global population and 5% - 15% of the school population (Forteza et al., 2018). Estimates suggest that there could be between one and five dyslexic students in every classroom (Knight, 2018).

Dyslexia is fundamentally characterized as a literacy difficulty (Elliott & Grigorenko, 2014). It arises from the intricate interplay between biological, cognitive, and behavioral factors, along with environmental and cultural factors, which significantly influence a dyslexic person's progress and academic achievements (Knight, 2018). Students with dyslexia are considered to have special educational needs and disabilities (SEND) (Knight, 2018). Different types of dyslexia have been reported, with the most common and intriguing one being Developmental Dyslexia (DD). DD is typically of genetic origin, present since birth, and is more frequently observed in boys (Stein, 2018). It can manifest as either "primary", indicating a genetically inherited condition, or "secondary" resulting from brain development issues during the early stages of a mother's pregnancy. Another subtype of dyslexia is acquired dyslexia which is less common and caused by traumatic brain injuries or diseases affecting the brain's language processing centers. Phonological dyslexia refers to difficulties in dividing words into syllables and sounds known as phonemes. Surface dyslexia, another subcategory, involves reading difficulties wherein students cannot recognize words by sight or read quickly and accurately (Newcombe & Marshall, 2017). Finally, deep dyslexia pertains to an acquired reading disorder caused most frequently by brain injuries and characterized by semantic errors and difficulty in reading functional words.

Furthermore, dyslexia can be classified into three primary types: the "P" (perceptual) type, which consists of learners who read relatively slowly and demonstrate fragmented reading, but are rather accurate in their reading; the "L" (linguistic) type, comprising learners who read quickly but produce a considerable number of errors, such as omissions and additions; and the "M" (mixed) type of learners, who read slowly and continue to make a significant number of errors (Pokrivčáková et al., 2015). Dyslexia has been frequently reported to co-occur with other developmental disorders, such as attention deficit hyperactivity disorder (ADHD), dyscalculia, dysgraphia, or dyspraxia (De Clercq-Quaegebeur et al., 2018).

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