

# The Multilingual Mind: lecture series on multilingualism across disciplines

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**What is wrong with rhythm in developmental dyslexia?**

### Abstract

Individuals with developmental dyslexia (DD) are a heterogeneous group and may exhibit co-occurring deficits that go beyond reading itself. Beside the well-recognized weak phonological skills, some children with DD show deficits in oral language skills (McArthur et al., 2000) and language processing (e.g., Cantiani et al., 2013). Moreover, individuals with DD show motor skill deficits (see Nicolson & Fawcett 2011) such as motor control difficulties in handwriting (Pagliarini et al., 2015). Impairments in rhythm perception and production are also evident in individuals with DD (see Ladányi et al., 2020). Importantly, converging evidence has identified a link between rhythmic abilities and language processing, handwriting and reading in typical and atypical populations (e.g., Corriveau & Goswami, 2009; Friederici et al., 2003; Gordon et al., 2015a; Pagliarini et al., 2015). In this talk, I discuss the idea that rhythm, as also proposed by other researchers, is key to understanding the reading, language and motor difficulties in individuals with DD. I will review the body of research on rhythmic deficits in individuals with DD across different cognitive domains. Then, I will discuss our view that a deficit in anticipation (a rhythmic component) impairs reading, some motor activity, as handwriting, rhythmic processing and language. This hypothesis will be referred to as the Inefficient Anticipation Hypothesis. New evidence on the role of rhythmic deficits in the identification of DD in L1 and L2 Italian-speaking children with DD will also be presented.