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Empowering visuo-spatial abilities among Italian primary school children: from theory to practice.

Khine, Myint Swe (ed.), Visual-spatial ability in STEM education. Transforming research into practice. Cham: Springer (ISBN 978-3-319-44384-3/hbk; 978-3-319-44385-0/ebook). 125-141 (2017).

Summary: The development of visuo-spatial abilities plays a crucial role in many scholastic achievements, such as the comprehension of a text containing topographic information, the solution of a geometrical problem. Nonetheless, despite its relevance, for many decades non-verbal abilities have been considered secondary to those implicated in further academic attainments, such as writing and reading. First, a definition of visuo-spatial abilities will be presented, then an overview of the main findings concerning the contribution of visuo-spatial working memory and related non-verbal abilities in early childhood and in primary school will be illustrated. Moreover, the impact of the atypical development of visuo-spatial abilities at school, that is, a definition of the so called Non Verbal Syndrome will be presented. Finally, embracing an applied perspective, a psychoeducational training that I developed to empower non-verbal abilities in typical developing Italian children attending primary school will be discussed.

Classification: C40 C90

Keywords: visuo-spatial abilities; non-verbal abilities; working memory; spatial cognition

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