

## **The hidden aspects of dysgraphia - from theory to practice**

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Despite technological development handwriting is still required for self-expression, communication and academic performance. In childhood, writing is a major occupation that is needed for participation in various environments, including the classroom, home, and society at large. Children usually acquire skillful handwriting during their first three years of school in a manner that enables them to write a legible product within reasonable time. However, a considerable percentage of school-aged children do not develop automatic handwriting and struggle with handwriting difficulties or dysgraphia. Dysgraphia as a specific learning disability has implications on the child's academic achievements and physical and emotional well-being. Yet, research on that topic is scarce in comparison to existing research about dyslexia.

In the current presentation, the importance of handwriting acquisition despite technological advance will be elaborated as well as the underline mechanism behind handwriting production. Several definitions for dysgraphia will be presented as well as theoretical models explaining the writing process. Consequently, benefits will be elaborated concerning a computerized system supplying hidden information about writing creation - ComPET (Computerized Penmanship Evaluation Tool) developed by Rosenblum. Following, results of studies conducted with the ComPET among children and adults with Dysgraphia, Developmental Coordination Disorders (DCD) and Attention Deficit Hyperactive Disorders (ADHD) will be presented.

At the second phase, several non-language dependent standardized tools for early detection of grapho-motor difficulties and dysgraphia will be presented.

The meaning of theoretical models, research findings and clinical developments for improved insight and clinical handling of dysgraphia will be discussed as well as future directions.