# Memory Board: An Eidetic Neuro-Training Complex With Digital Integration for Cognitive Development

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Chronic stress, doomscrolling and digital addiction contribute to declining memory and attention in children. These factors negatively affect cognitive development, making it essential to explore effective interventions. This study evaluates the effectiveness of an eidetic neuro-complex, the "Memory Board," designed to enhance cognitive functions in children. The Memory Board consists of two components: a magnetic tactile board and an online platform with cognitive training classes that integrates tactile and digital exercises, offering a multisensory approach to cognitive development. This combination improves concentration, memory and stimulates two-handed coordination, interhemispheric interaction and neuroplasticity. A study was conducted with 46 primary school pupils. The experimental group (n=23) completed five 35-minute training sessions over two weeks using the Memory Board. Cognitive function was assessed with the "Memory for Numbers" test, measuring short-term memory and attention span. Both groups underwent pre- and post-testing, but only the experimental group participated in training. Statistical analysis showed a significant improvement in cognitive function in the experimental group ($p<0.05$, Cohen's $d = 2.246$), while no significant changes were found in the control group ($p>0.05$, Cohen's $d = -0.169$). Beyond school, the Memory Board was tested in a rehabilitation center. Observations from psychologists (n=8) showed that children with autism spectrum disorder (ASD) displayed enhanced concentration, engagement, and responsiveness, highlighting its potential for neurorehabilitation. These findings suggest that the Memory Board is an effective tool for both education and neurorehabilitation, significantly supporting cognitive development in children.

**Awards Won:**