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Math and reading skills improvement in inclusive education

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Abstract

In recent years, there has been a significant decline in the results of diagnostic mathematics and the Latvian language, in Latvia. Nowadays, the increasingly immobile lifestyle harms physical, psychological, and cognitive health. Therefore, this paper aims to investigate whether the involvement of movement coordination and balance in the inclusive learning process contributes to reading and math skills.

Method: The methodology used to measure skills: the multiplication test, Wechsler's attention subtest – Encryption, and reading skill test. To create a pedagogical intervention: the balance board with integrated multiplication tasks and letters, movement coordination exercises.

Results:

The first results of a study in Latvia and South Africa confirm the authors' hypothesis that students aged 9-10 years, after pedagogical intervention with the Smart Balance Board, show higher levels of concentration and multiplication on repeated tests. Nine children showed reading skills increasing.

Conclusions: The literature indicates a positive effect of motor coordination exercises on the development of pre-reading and math skills. The case studies show a positive effect of motor coordination exercises on reading and math skills. The author of the article notices the importance of focusing on the impact of motor coordination and balance on the learning process through the development of attention and information processing speed.

Keywords: motor coordination; information processing speed; attention; balance; cognitive skills.