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Developmental trajectories of calculation and word problem solving from third to fifth grade.

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Summary: The current study focuses on the developmental trajectories of calculation and word problem solving skills using person-oriented approach. The sample included 882 Estonian children from 29 schools. Calculation, word problem solving, verbal skills, and planning were assessed in Grades 3, 4 and 5. Latent class analysis and latent transition analysis were used. The number of latent classes was explored each year and the developmental trajectories were found with latent transition analysis. In each year, there were groups of children with overall high or overall low skill levels, as well as groups with similar math scores but diverse results in verbal and planning skill levels. The results indicate that to better support math skill development, children could benefit from working on tasks that enhance specifically planning and verbal skills; e.g., learning the steps of planning, solving the tasks of word guessing.

Classification: F32 F92 C32 C42 F33 F93 C33 C43

Keywords: calculation; word problems; problem solving; cognitive development; person-oriented methods; developmental trajectories

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