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5-6-YEAR OLD CHILDREN'S MATHEMATICAL THINKING IN BUDAPEST AND IN NEW YORK – COMPARATIVE ANALYSIS

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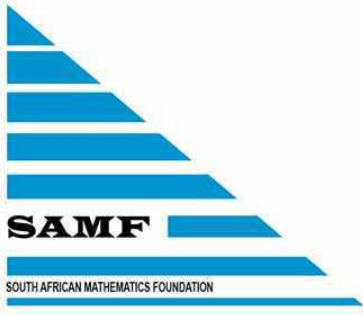
Starting school is an important period in the development of children's thinking (Duncan & Magnuson, 2011). In this comparative study, children from two different countries solved playful tasks embedded in their teacher-initiated daily activities. Starting school is organized in a different way in Hungary and in New York State. In Hungary the *363/2012 Decree sets the mathematical education in the active acquaintance with the world. This provides the kindergarten teacher the opportunity to decide about the method and the depth of the mathematical development of the children. In New York State the mathematical development is in pre-school groups, following the instructions of a detailed framework* (Clements et al., 2003). Departing from this situation it becomes interesting how the difference between the two systems affects children's thinking. We conducted a wide-scope, activity-based analysis in the area of the number concept and of logical competences. The study comprised 332 children in Hungary and 80 in New York State.

The focus of the questions is twofold: (1) What are the elements in the interpretation of natural numbers where the difference is considerable? (2) What problem-solving methods appear during the activities carried out by logical sets?

Our findings show that children's thinking seem to be very similar. This justifies that the testing instruments were not country-specific. We have found significant differences in the interpretation of numbers, if numbers were represented by fingers, in motivation, and in the way of solution of logical problems. By analysing these differences we can point out areas where more attention and improvement are needed.

References

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- 363/2012 Decree of the Government of 17 December 2012 [Kormányrendelet az óvodai nevelés országos alapprogramjáról]*



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