## PARENTS' ATTITUDES TOWARDS MATHEMATICS, HOME MATH-RELATED ACTIVITIES AND THEIR EFFECTS ON PRESCHOOLERS' SKILLS IN EARLY NUMERACY

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Little is known about parents' beliefs regarding mathematics and how parents approach preschoolers' mathematics teaching (Cannon & Ginsburg, 2008). Research highlighted the importance of early home math-related activities to understand how numeracy develops later in primary school but little is said on the mechanisms through which young children develop these skills and knowledge (Missall, Hojnoski, Caskie & Repasky, 2015).

The aim of this study is 2-fold: 1) to describe parents' attitudes towards mathematics and parent-reported home math-related activities and 2) to understand the relation between these constructs and specific preschoolers' numeracy-related skills.

This study is part of a larger research project (designed and implemented in Luxembourg, Belgium, France and Switzerland), entitled *MathPlay*, which aims at developing early number competencies (counting, conservation ability and magnitude comparison, (de)composition numbers) both at school and at home. Our play-based approach is using selected and adapted traditional math games, well known by families, in order to especially target the competencies mentioned above. The research design includes one experimental group (EG) with two treatment conditions (X1 - games at school, X2 - games at school and at home) and one control group (CG). Before the intervention, a total of 275 parents (coding in progress) filled out a questionnaire to investigate their beliefs regarding 1) the preschool numeracy competencies and 2) parental involvement. Data is being analysed. Descriptive results will illustrate how deep parents are involved in home math-related activities. Furthermore, we will analyse if a statistically significant relation exists between this construct and parents' attitudes as with preschoolers' skills in early numeracy.

## References

Cannon, J. & Ginsburg, H. P. (2008). "Doing the Math": Maternal beliefs about early mathematics versus language learning. *Early education and development*, 19(2), 238–260.

Missall, K., Hojnoski, R. L., Caskie, G. I. L. & Repasky, P. (2015). Home numeracy environments of preschoolers: Examining relations among mathematical activities, parent mathematical beliefs, and early mathematical skills. *Early Education and Development*, *26*, 356–376.