DO CURRICULUM MATERIALS AND TEACHERS MATTER IN ELEMENTARY MATHEMATICS?

INTRODUCTION

As literature points out, there is little evidence for a differential effect of curriculum materials on students' mathematics performance results (Slavin & Lake, 2008). Besides, research stresses that it is necessary to take into account factors which play an intermediate role between a written curriculum and students' performance results (Stein & Smith, 2007). Verschaffel, Greer, & de Corte (2007) for instance, underline the crucial role of teachers within the context of mathematics education.

This research is set up in primary education and focuses on both curriculum materials and on teachers. It analyses wether a commercially available learning package (CALP: manuals and exercise books used in the classroom) could play an intermediate role with regard to teachers' professional knowledge and with regard to students' mathematics performance results.

METHODOLOGY, RESULTS AND CONCLUSION

The research sample consisted of 918 teachers and 1805 students. Since the data in the present study have an inherent hierarchical structure, multilevel modelling techniques are used, using MLwiN 2.16 (Rasbash et al. 2009).

According to our results, a CALP plays a role with regard to teachers' professional knowledge but not with regard to pupils' mathematics performance results. This could indicate that curriculum materials do matter, but that in the specific setting of a classroom, teachers compensate for them.

References

Rasbash, J., Charlton, C., Browne, W.J., Healy, M., & Cameron, B. (2009) *MLwiN Version 2.1*. Centre for Multilevel Modelling, University of Bristol.

Slavin, R.E., & Lake, C. (2008). Effective programs in elementary mathematics: a best-evidence syntheses. *Review of Educational Research, 78,* 427-515.

Stein, M.K.R., J., & Smith, M.S. (2007). How curriculum influences student learning. In F.K. Lester (Ed.), *Second handbook of research on mathematics teaching and learning* (pp. 319-370). Greenwich, CT: Information Age Publishing.

Verschaffel, L., Greer, B., & de Corte E. (2007). Whole number concepts and operations. In F.K. Lester (Ed.), *Second handbook of research on mathematics teaching and learning* (pp. 557-628). Greenwich, CT: Information Age Publishing.

2010. In xxxx (Eds.). *Proceedings of the 34th Conference of the International Group for the Psychology of Mathematics Education*, Vol. 1, pp. XXX-YYY. Belo Horizonte, Brazil: PME.