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Kindergarten teachers' use of semiotic resources in providing early learning experiences in geometry with a picture book as a didactical tool.

Lindmeier, Anke M. (ed.) et al., Proceedings of the 37th conference of the International Group for the Psychology of Mathematics Education "Mathematics learning across the life span", PME 37, Kiel, Germany, July 28–August 2, 2013. Vol. 2. Kiel: IPN–Leibniz Institute for Science and Mathematics Education at the University of Kiel (ISBN 978-3-89088-288-8). 257-264 (2013).

Summary: This study investigates the semiotic resources utilized by kindergarten teachers and their mediating role in young children's geometrical reasoning in different teaching-learning processes based on the use of a picture book as a didactical tool. Data were collected and analysed from two kindergarten classes. The teachers were found to use multiple semiotic resources in different ways. The mediating role of the teachers' use of semiotic resources on children's making sense of geometric shapes was manifested in various ways, but was stronger in one of the two classes.

Classification: G21 E51 C31 U61

Keywords: kindergarten teachers; early education; geometrical reasoning; teaching-learning processes; picture books; geometrical shapes; sense making