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**Early mathematics in play situations: continuity of learning.**

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Summary: In recent years, many concepts for early mathematics education have been developed. Taking a closer look at these concepts, it can be seen that they differ considerably in pedagogical background and in quality. During the transition from kindergarten to school, it is extremely important to guarantee consistency and continuity in mathematical learning processes. All early mathematics education should be mathematically correct, 'intellectually honest' and ensure that children acquire the essential prerequisites for further mathematical learning. Additionally, mathematical learning should be designed according to children's specific age. Based on scientific findings, this chapter specifies why early mathematics education in natural learning situations, like play activities, meets these requirements of subject- and child-orientation. Play situations can foster the development of mathematical learning in kindergarten and in school sustainably. Results of an intervention study about learning mathematics while playing traditional board games ( $n = 95$ , average age: 4.8 years, control and intervention group) confirm this claim. The intervention shows significant effects. Video analyses of the play situations illustrate the findings and allow investigating in detail the role of the teachers and the mathematical learning processes which occurred during the play activities.

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*Keywords:* early education; learning; play activities

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