Methods for reconstructing processes of argumentation and participation in primary mathematics classroom interaction.


Summary: This paper presents two methods of analysis of interaction processes in mathematics classes – the analysis of argumentation and the analysis of participation –, and it furthermore explores the relationship between these methods and their resulting impact on the development of elements of an interaction theory of mathematics learning. The main theoretical assumption of this article is that learning mathematics depends on the student’s participation in processes of collective argumentation. On the empirical level such processes will be analyzed with methods that are based on S. E. Toulmin’s theory of argumentation [The uses of argument. Cambridge, UK: Cambridge University Press (1969)] and E. Goffman’s idea of decomposition of the speaker’s role [Forms of talk. Philadelphia, PA: University of Philadelphia Press (1981)]. Different statuses of participation in processes of argumentation will be considered, which allow a theoretical description of different stages in the process of learning mathematics from the perspective of an interaction theory of mathematics learning.

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