Krummheuer, Götz

The relationship between diagrammatic argumentation and narrative argumentation in the context of the development of mathematical thinking in the early years.


Summary: This paper deals with one aspect of the endeavor to generate a theory of the development of mathematical thinking of children in the early years ages 3 to 10. By comparing two scenes, one from preschool and one from a first grade mathematics class, the relationship between diagrammatic and narrative argumentations among children and teachers is reconstructed and related to possible developmental trajectories of mathematical thinking. Theoretically, the author attempts to implement these developmental paths in a concept of an “interactional niche in the development of mathematical thinking.”

Classification: E51 C31 E52 C32

Keywords: interactional niche in the development of mathematical thinking; socio-constructivism; interaction; diagrammatic argumentation; narrative argumentation