

# **Mathematics Textbooks in Primary School**

## **– A Multimodal Perspective**

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In this on-going research project, which also represents part of a thesis project on students meaning making of mathematics textbook in primary school, a multimodal textbook analysis will be made. The aim is to gain knowledge about the mathematical textbook that most students meet in their mathematics education, and in extension to gain knowledge about students meaning making of textbooks.

The theoretical approach is grounded in a multimodal design theoretical perspective (Selander, 2008; Selander & Kress, 2010), which refers to the social semiotic field (see for example Kress, 2010; Jewitt, 2011) where meaning making is essential. From this perspective, meaning making is always multimodal, made through various sign systems, or modes, such as speech, gestures, written text, image, and sound.

The study is based on typical tasks from four different textbooks for grade 1, from textbook publishers available on the Swedish market, where “typical tasks” means common types of tasks. The research question is: Which modes do students meet in printed textbooks as well as digital textbooks and how do the modes interact? These are analysed with Danielsson and Selanders (2014) Model for working with multimodal texts in education. This analysis method focuses on the text’s general structure as well as the interaction between textual parts in a text, for instance a textbook. The analysis method catches both: in which way the text invites the reader, and how the different modes interact.

The expected outcome is that the understanding of what to do with the mathematical task can overshadow the actual mathematical content that is to be trained or found out in the task since different modes in mathematics textbooks sometimes gives partly contradictory information. So my claim is that this mode issue may deny the students access to good learning situations, unless we find a way to make teachers more aware of that different modes gives different contributions to the students’ mathematical achievement. Therefore this kind of studies is of importance in order to ultimately contribute to the development of good learning situations in mathematics education.