

Institutionen för pedagogik, kommunikation och lärande

Med kroppen som illustration
Hur förskolebarn prat-skapar naturvetenskap med hjälp
av multimodala och kroppsförankrade förklaringar

av

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AKADEMISK AVHANDLING

som med tillstånd av utbildningsvetenskapliga fakulteten vid
Göteborgs universitet för vinnande av doktorexamen i
pedagogiskt arbete framläggs till offentlig granskning

Fredagen den 15 februari 2019, kl.13:00,
Högskolan i Borås, C203

Fakultetsopponent: Professor Ann-Katrin Svensson, Åbo Akademi



GÖTEBORGS UNIVERSITET
ACTA UNIVERSITATIS GOTHOBURGENSIS

Abstract

Title: With the body as illustration. Preschool children talking science when using multimodal and embodied illustrations.

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Language: Swedish with an English summary

ISBN: 978-91-7346-997-5 (print)

ISBN: 978-91-7346-998-2 (pdf)

ISSN: 0436-1121

Keywords: preschool science education; multimodality; the concepts of stability, evaporation and water-cycle of the world ; talking science; embodied illustrations

The aim of this thesis is to combine three research areas, namely preschool, science and illustrations, in order to examine (a) how modes are combined when references to the body are made or the body as such are used to explain scientific concepts and phenomena in preschool science education, and (b) how do the children handle, explore, discuss and talk science when approaching multimodally illustrated scientific contents in the studied activities. Four studies were conducted, all of which were built on empirically generated questions and were theoretically grounded in cultural-historical and multimodal perspectives. Participants were preschool students, aged 4-6 years, from three preschool groups, as well as their teachers and two science centre guides. Specific focus was directed toward activities where adults and children use their bodies or refer to their bodies to illustrate scientific concepts, for example, “the water circle” in a board-and-dice-game (study I); “water has the power to lift,” in experiments relating to a life-jacket (study II); stability in a drama-play and related experiments (study III); and evaporation in embodied illustrations and hands-on activities (study IV). The empirical material consisted mainly of video recordings. A multimodal approach was adopted for the analyses.

The results indicate that multimodal illustrations may be complicated for this target group. Difficulties were found to intensify, rather than decrease, by the fact that different modes and elements were often intricately combined in the same illustration, presumably with the intention of providing instruction as well as entertainment. From the four studies, it became evident that, even if the current natural science offered in preschool education often is conducted as “discovery learning”, the assumption that children can learn complex content without support cannot be left unquestioned. This thesis illustrates the crucial role played by a guiding teacher when it comes to concretizing abstract scientific phenomena for young children. A conscious introduction of bodily-based elements in multimodal illustrations may be useful on such occasions. However, even with such seemingly transparent components included, we cannot take adequate meaning-making for granted.