

Planning Mathematics Teaching in Preschool

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This presentation takes its departure in the new curriculum for Swedish preschool where preschool teacher's responsibility for teaching subject matters such as mathematics, has been strengthened. The teaching is recommended to have a thematic approach, to be play-based, and intertwine care, development, and learning. Also, the curriculum states that teaching can be both planned and spontaneous. The task given by the government is complex and calls for a problematization of teaching planning and what role planning can have in preschool especially for mathematics teaching. The ongoing study aims to investigate teaching planning and how preschool teacher and child minders prepare and change their mathematics teaching during the time of planning.

Reforms, revisions, and teaching planning

A reform in Swedish society in the 1990's affected the Swedish education system and thereby the meaning of teaching planning. The reform prompted evaluation and reflection which was also noticed in the preschool's first curriculum from 1998. Planning was mentioned briefly. Thereafter the writings showed an urgent need to elaborate models for evaluation that supported development of pedagogical work, i.e., pedagogical documentation. By that planning was no longer a concept of interest. Twenty years after the implementation of the curriculum, the mission for teaching have been strengthened (Swedish National Agency for Education, 2018). Teaching is explained as a process that aims to stimulate and challenge children's development and learning based on the task and the objectives formulated in the curriculum. The preschool teacher is now responsible for creating both planned and spontaneously orchestrated encounters between children and basic understanding of space, time, and form as well as properties of sets, patterns, quantities, order, numbers, measurement, and change. The clarified responsibility entails new considerations which challenge the preschool teachers' competence to orchestrate teaching of mathematics that develops and stimulates children's knowledge. According to Björklund and Barendregt (2016) teaching in preschool call for extensive skills in planning.

Planning in preschool is described in an elderly report (Rosenqvist, 1995). The report is from a time before pedagogical documentation was commonly known. It shows that preschool teachers have created their own planning models in which the activity and the calendar become central. In these own-created models, learning was overlooked and taken for granted. The model created a discourse which stated that the children always learn something no matter what they do. The discourse of *doings* is not sufficient due to the revised message in the curriculum and to every child's right to participate in

a high qualitative education with equal rights to learn mathematics. Further, the idea of ‘development through evaluation’ and pedagogical documentation has, according to Björklund, Pramling Samuelsson and Reis (2018), led to an unfamiliarity to create teaching that challenge and widen children’s learning. The critic, as I understand it, is not so much about the use of different didactical models. Instead, the critic focuses upon the lack of pedagogical awareness and the unfamiliarity of making didactical decision that challenge children’s learning within the *doing* culture.

Aim and research questions

We know little about what happens during ordinary scheduled planning time in preschool, when planning occurs, and how planning supports mathematical development. Planning is described as a conceptual and didactical instrument for teacher to prepare and make decisions concerning their teaching within a subject matter (Uljens, 1997). Such decisions has, according to Grundén (2020), consequences for what happens in the classroom.

The aim with my ongoing PhD project is to contribute with knowledge about teaching planning and how preschool teachers and child minders prepare and change mathematics teaching during the time of planning. There are three research questions that I will answer in the thesis (which will be written as a monography). The first question concerns the meaning of teaching planning. The second concerns how pedagogues in preschools plan their mathematics teaching. The third concerns progression in mathematics teaching.

Method

To process both purpose and research questions, I use a qualitative and explorative method inspired by the work of the ethnographer and a recurrent time mode (Jeffrey & Troman, 2004). The fieldwork is scheduled to the pandemic year 2021. Three preschool settings from three different municipalities in Sweden participate in the research project.

References

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