RECENT DISSERTATIONS

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Technology in the classroom – a study of technology education for younger children in compulsory school

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Abstract

The main purpose of this study is to find out how technology as a school subject is formed into pedagogical action. Issues addressed are:

- How does teaching in the school subject of technology differ in terms of content and process?
- How do frame factors influence teaching in technology?

As analytic tools, concepts from philosophical thought on technology and education as well as frame factor theory are used to throw light on the way technology education takes shape in the practices of two primary school teachers. The philosophical concepts employed and developed have been inspired by the thinking of Martin Heidegger and John Dewey. These concepts are “place” and “shaping of technology,” where the shaping of technology involves the following phases: formulation of the assignment, analysis, visualization/construction and evaluation/reflection.

The basic questions are investigated in two case studies over a period of one year. Data is collected based on ethnographic methods and consists of observations, video recordings, documentation in the form of teachers’ diaries as well as pupils’ work, taped interviews with pupils, and interviews with the two teachers both before and after the project was finished.

The overall results of the study show that the two teachers, to a different degree, use place, e.g. they try to use the children’s own experiences and the surrounding environment as a starting point in their teaching. They try to organize their teaching as a process of knowledge construction instead of as a process of transmission. In that process, different forms of representation are used, such as sketches, model constructions and written documentation, with the element of model construction providing a common denominator given the availability of tools and material. Another similarity between the practices is that the children are given opportunities to work at problem solving in cases where there are no given solutions. However, they enter problems due to their own embodiment in a pedagogy of transmission, which results in the fact that the shaping of technology becomes difficult to organize. Strict borders between subjects, the fragmented timetable of the school, and the organization of the classroom space and scarce equipment and materials all influence the possibilities of teaching in technology.

Keywords: technology education, classroom practice, primary school, educational content, ethnographic method, Martin Heidegger, John Dewey and frame factors.

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