RECENT DISSERTATIONS

ANNA M. VIKSTRÖM, 2005:

Ett frö för lärande. En variationsteoretisk studie av undervisning och lärande i grundskolans biologi (A seed for learning. A variation theory study of teaching and learning in biology.)

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Abstract

The background of the study is an action research study described in a licentiate thesis (Vikström, 2002). In that licentiate study six teachers extended their reflective focus in science teaching from a limited focus upon activities where learning of the content was taken for granted to a focus upon both the content and their students' understanding of that content. This extension of reflective focus was seen as a premise for further professional development.

The research focus in this doctoral thesis, carried out together with the same six teachers, is the relationship between teaching and learning of a specific object of learning, the life cycle of angiosperms, concerning matters such as sexual reproduction, photosynthesis and cellular respiration. Within the framework of variation theory, experienced critical aspects of the object of learning are compared with the patterns of variation in the enacted object of learning. Video-recorded lessons and interviews with teachers and pupils provided the researcher with data about how the teachers handled, and related to the object of learning and how the pupils' understanding developed. The result shows that it is possible for even very young pupils to develop their understanding of abstract biological phenomena, if that possibility is offered to them in school. The opportunity to learn is in turn provided by the created patterns of variation, which make discernment of critical aspects possible. The teachers' professional competence, meaning their competence for promoting pupils' learning by forming patterns of variation, also developed. An overall conclusion is that collaboration between researchers and teachers in such a process of curriculum improvement is a way to increase and accumulate teachers' professional knowledge.

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