RECENT DISSERTATIONS

PERNILLA NILSSON, 2008:

Learning to Teach and Teaching to Learn – Primary science student teachers' complex journey from learners to teachers.

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Abstract

The journey of primary science teachers from learners to teachers is often quite complex. On the way they absorb scientific pedagogical content knowledge (PCK). If student teachers are encouraged to identify and reflect on critical incidents in their own teaching practice, either in primary schools or science learning centres, then they are more likely to conceptualise aspects of their practice that may be of concern. This thesis reports on and discusses four studies that have looked at the experience of primary science student teachers as they deal with critical incidents in the course of learning to be teachers. The overall purpose of the thesis is to study the process through which primary student teachers learn to teach primary science during their teacher education. The thesis is based on four studies involving primary science student teachers and their mentors during their teacher education program. The overall question that the thesis intends to investigate is in which ways student teachers' learning about teaching can be illustrated and understood in terms of the critical aspects that are experienced within their teaching and learning practices. The four papers in the thesis purposefully explore student teachers' complex journey from learners to teachers and illustrate the processes of learning to teach by highlighting important aspects within that process. Further to this, the thesis brings into focus the importance of teacher educators' professional knowledge and how that knowledge must impact teacher education practice. The first paper explores four student teachers' learning to teach in a primary school context. In connection to their teaching they were interviewed as they reflected on the video in order to portray their knowledge needs and how they impacted their abilities to handle classroom situations. The second paper investigates a group of primary science student teachers' experiences from planning, teaching and reflecting on a science lesson with pupils aged between six and eleven in a science learning centre at the university. These student teachers identified critical incidents within their teaching which led them to further portray their own concerns for teaching and their teaching needs. The third paper investigates the joint learning between two primary science student teachers and their mentors during a four week school based practice. Finally the fourth paper investigates primary science student teachers' development of subject matter of, and a positive attitude towards, physics in a specific physics course at the university, and further discusses the importance of subject matter knowledge and self-confidence in teaching primary science. In making explicit student teachers' experiences and concerns for teaching and learning science, the practices and processes highlighted in this thesis help to inform how to involve student teachers in developing a knowledge base for primary science teaching.

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