RECENT DISSERTATIONS

LOTTA LAGER-NYQVIST, 2003:

To do the best with what you know. A longitudinal study of how seven student teachers develop their teaching and teacher role in science.

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Abstract

This thesis aims to deepen the understanding of how student teachers experience science education during their teacher training and during their first year of professional teaching. Seven student teachers participate in this study. Their intentions and epistemic attitudes in planning and carrying out their teaching in science for pupils aged 11-16 are studied, with a particular focus on the pupils' practical work.

Data were collected by interviews and by observations of science lessons during pre-service teaching. Later, when the teacher students worked as professional teachers, they were observed and interviewed at one occasion. Data were collected throughout a period of six and a half years. To analyse the data, an instrument based on Georg Henrik von Wright's 'logic of events' was used. The determinants of action (here: science teaching) are both internal and external. The internal determinants can be described in terms of 'want', and 'ability', the external in terms of 'duty' and 'opportunities'. The analyses of curriculum planning were made from an 'inner' and an 'outer perspective', where the 'inner perspective' refers to the informant's expressions of intentions and of epistemic attitude towards their teaching. In the 'outer perspective' the analyses refer to the student teachers' prior experiences from own schooling and the teacher training programme.

The results show that the teacher education programme had little effect on the student teachers' goals of teaching in the new direction of science education. The informants expressed the wish that their teaching would be fun and interesting for the pupils, but this goal was not reached in performing science lessons. During periods of practice the supervisor's norms were the most influential determinant for planning and performing science lessons, the students' own wishes were set aside.

When the informants worked as professional science teachers, the teaching climate and colleagues at the school itself were the most important determinants for curriculum planning. The teaching performances closely resembled known patterns from own schooling. The pupils' laboratory work had in most cases little resemblance with the demands from the 1994 National curriculum (Lpo 94) or the new ways of regarding science education and pupils' practical work.

The results show that the teacher education programme was not successful in giving the new science teachers the ability to interpret the 'new' goals for science education and to transfer these goals to concrete teaching/learning situations. The opportunities offered by the periods of practice to increase the student teachers' ability to use and become familiar with modern science education methods were not sufficiently utilised. On the other side these periods fulfilled the informants' personal desire to strengthen their leadership and teacher role.

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