

# Abstract

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A Survey Study  
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The aim of the present thesis is to analyse and describe the roles, meanings and interaction of a number of policy variables and aspects of the teaching process in mathematics. A survey study based on a simple, random sample of 724 maths teachers in the Swedish secondary school was carried out using a questionnaire based on a pilot study. The questionnaire included ratings on a Likert-scale, multiple-choice questions and had a response rate of 73%. Educational conditions were examined by factor and cluster analyses. Four constellations were found ranging from 'heavy' to 'very light'.

An empirical model was created of seven items and consisted of ten conceptually different teaching approaches. In the different teaching approaches, the means of the policy variables 'number of pupils taught', 'content knowledge', 'pedagogical content knowledge', 'teaching experience' and 'financial resources' do not differ significantly. Aspects, which are part of a procedure of the teaching process, have characteristic roles and meanings in each one of the teaching approaches and in some cases the means of the aspects differ significantly between the approaches.

The variety of maths teaching made it possible to analyse the relationship between policy variables and aspects of the teaching process by simple regression analyses. Not only strong but also weak relationships were found in the different teaching approaches. The variation of maths teaching is thus constituted not only by the different teaching approaches but also by variations within each approach. There exists a variation in each of the teaching approaches that is dependent on the policy variables.

The simple random sample allows conclusions to be drawn about the population and helps constitute a better foundation for policy decisions that could lead to improved teaching outcomes. In addition, knowledge of the different teaching approaches should be part of teacher training and in-service training. By a wider battery of rating items, it would be possible to obtain a more detailed map of the influence of policy variables on the teaching process.