

Organization
LUND UNIVERSITY

Document name
DOCTORAL DISSERTATION

Department of Educational Research
Box 23501
S-200 45 Malmö, Sweden

Date of issue
September, 1985

CODEN: LUSADG/(SAPP-1029)/1- 208(1985)

Authors
Leif Hellström

Sponsoring organization
National Board of Education

Title and subtitle
Undervisningsmetodisk förändring i matematik: villkor och möjligheter
/Instructional change in mathematics teaching: conditions and possibilities/

Abstract

This dissertation aims to cast some light on the problem of change in mathematics instruction in the compulsory school ("grundskolan"). In spite of centrally initiated steps towards changes of mathematics instruction in connection with the introduction of a new curriculum in Sweden ("Läroplan for grundskolan, 1969"), there are indications which seem to support the conception that changes have been limited or non-existing.

Within the framework of a case study, the aim of which was to initiate a change of mathematics instruction and describe and to some extent explain critical phases of the change process, a study of change has been carried out by the flexible use of different kinds of information.

The scientific approach could be described as Action Research where observations, questionnaires and interviews have been used to describe teachers' reactions and Conceptions. Participating pupils have been tested by the use of Raven's matrices and an attitude scale. A sample of pupils have also been interviewed as well as the headmasters in the municipality concerned.

In discussing the results different theoretical perspectives have been used; organizational, ecological and individual.

The results indicate that a practice-centered in-service training could promote changes in mathematics instruction. A major conclusion is that change has to be considered a problem that concerns both the teacher and the educational setting, meaning a development of individual competence as well as developing the school as an organization. Some consequences for future In-service training are presented.

Keywords

Action research, change, innovation, in-service training, instructional methods, mathematics teaching, teachers' conceptions

Li.berFörlag, S-20510 Malmö, Sweden

September, 1985