

Institutionen för pedagogik och specialpedagogik

Dimensionality and Predictive validity of  
school grades: The relative influence of  
cognitive and social-behavioral aspects

av

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## Abstract

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The purpose of the thesis is to investigate the relative influence of cognitive and social-behavioral aspects on compulsory school grades and the importance of the different dimensions for the predictive validity of grades. Data is retrieved from the Gothenburg Educational Longitudinal Database (GOLD) and the Evaluation Through Follow-up (ETF) database. The sample in Study I consisted of three cohorts each of about 100 000 students in Grade 9, in Study II of about 4000 students in Grade 9, and in Study III of about 9000 students who were followed-up through compulsory school. All analyses were conducted using structural equation modelling (SEM).

Both criterion-referenced and norm-referenced compulsory school grades were found to be multidimensional, reflecting both subject-specific dimensions and a common-grade dimension, cutting across grades and teachers. The common-grade dimension, which in previous research has been found to be related to social-behavioral aspects, contributed to predict study success in upper secondary school, indicating that social-behavioral aspects partly contribute to explain the predictive power of school grades.

The influence of cognitive aspects was substantial. Fluid abilities had a continuous direct influence on the development of knowledge and skills throughout compulsory school, which is in line with the predictions from Cattell's (1987) Investment theory. Substantial indirect effects of fluid abilities on school grades were found, although no direct effects. In sum the results in the present thesis show that both cognitive and social-behavioral aspects contribute to explain the predictive validity of school grades.