

## PUPILS' ATTITUDES AND PERFORMANCE LEVELS IN LEARNING TO LEARN ASSESSMENTS IN GRADES 1, 4, 6, AND 9

T-1

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Diagnosis and evaluation in the learning process have proved their usefulness in the development and improvement of the education system. The Finnish learning-to-learn test as preparedness for learning consists of cognitive tasks measuring reading comprehension, mathematical thinking skills and reasoning skills, and questionnaires measuring learning-related attitudes (see Hautamäki et al., 2002).

*The aim* of the present study is to analyze how the four (using 25% grouping) performance group levels in the assessment of cross-curricular learning-to-learn skills and attitudes towards learning change from the 1<sup>st</sup> to the end of the 9<sup>th</sup> grade of comprehensive school.

The specific research questions are: (1) What are the stability and the trends within the 1<sup>st</sup> grade performance level classification of pupils into four groups, when students are followed through the 4<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup> grades? (2) What are the trends within attitudes towards school and learning of those pupil groups when they are followed through the 4<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup> grades?

*Methods:* Learning-to-learn test was administered as a group test to 40 first grade classes (16 schools, N=744) in autumn 2007. It worked as a baseline measurement for a 9-year longitudinal study on learning-to-learn. The learning preparedness test at the 1<sup>st</sup> grade comprised six cognitive tasks and two drawing tasks, which will not be discussed in this paper. The 1<sup>st</sup> grade grouping of pupils into four 25% groups was based on the average of the cognitive scales.

In the 4<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup> grade, pupils took the Finnish learning-to-learn test, measuring reading comprehension, mathematical thinking skills and reasoning skills. Pupils' attitudes towards school and learning were measured by self-report scales based on Skinner's action-control theory (e.g. Skinner, Chapman & Balter 1988). The follow-up of students in their groups was done with repeated measures ANOVA.

*Expected Outcomes:* Studies have shown that there are (structural, i.e. correlational) connections between the learning-to-learn test as preparedness for learning results in the beginning of the elementary school and pupils' performance on standardized mathematics and reading tests at the end of the second grade (Vainikainen, 2011).

Our results indicate that the four groups based on initial learning preparedness follow different paths of development throughout compulsory school in the 4<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup> grades. Group differences remain relatively stable over time. This shows particularly in the group with high achievement.

The dynamics of the development of learning-to-learn skills has changed, however, as all groups were approaching more average values. This was most noticeable for the weakest group, which largely reached the level of the second lowest group.

Controlling gender differences and mother's education did not make group differences disappear, but the mother's higher education predicted belonging to a higher-achieving group.

In general, there is a tendency in which pupils' attitudes towards school and learning rise in all four groups. This trend is especially noticeable in the sixth and ninth grades.