

**LEARNING-RELATED ATTITUDES, SUPPORT NEEDS AND PERFORMANCE
IN LEARNING TO LEARN ASSESSMENT****Mari-Pauliina Vainikainen***Centre for Educational Assessment, University of Helsinki*

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The current trend of transferring national and international large-scale assessments on computer-based platforms gives new possibilities for evaluating students' effort in these assessments by utilizing log data. Recently, log file analyses of a Finnish low-stakes assessment of cross-curricular learning to learn skills showed that time on task mediated the effects of 15-years-old students' detrimental learning-related attitudes, and it was a strong predictor of performance in the assessment (*Kupiainen et al., in press*).

In Finland, an increasing number of students are receiving support for their studies, and lately the educational legislation has also been changed to better fulfil the principles of early intervention (see *Thuneberg et al., 2013*). One aim of the support system is to secure that the gap between students with support needs and others would not increase over the years. In the present study the log data of more than 1,500 Finnish 12-years-old students are analysed, first to see if time investment mediates the effects of attitudes as it does for older students (*Kupiainen et al., in press*). It is also examined how support needs affect the relationships between attitudes, time investment and test performance when prior cognitive competence is controlled for.

A structural equation model is fitted on the data drawn from a municipal longitudinal learning to learn study, first without background variables and then adding support needs and gender, which is often related to support needs in the model. It is expected that students with support needs have lower initial cognitive competences, measured three years earlier, and they therefore need more time than others for doing the tasks (*Carroll, 1963*).

While for 15-year-olds time on task mediated the effects of detrimental attitudes, for younger students time investment is influenced by mastery attitudes which in turn predict higher performance. Support needs are related to lower cognitive competences three years earlier, but, contrary to the expectations, students with support need spend even less time than others on the tasks which affects their test scores indirectly. They also have more detrimental attitudes than others. In addition, there is a direct negative effect from support needs to test score. There are more boys than girls identified as having support needs. Girls have slightly higher mastery attitudes and they spend more time on tasks, which partly explains their better performance in the assessment.

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