



## **Data-driven approach to developing support processes for learning, teaching and management in higher education: Modeling factors affecting study success from large-scale study-related data**

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Given that many learning characteristics have been shown to have significant effects on study success in higher education (e.g., Lizzio, Wilson, & Simons, 2002; Robbins, Lauver, Davis, Langley, & Carlström, 2004), we studied how some of them may be estimated at a large scale to develop support mechanisms and develop processes to support study success. An investigation was conducted as a part of AnalytiikkaÄly-project to examine of some of the characteristics that different stakeholder groups, such as students, programme leaders and academic advisers, identify as useful sources of information when planning and executing different support systems, tools and forecasts to meet student needs and improve study outcomes. Another key focus has been on examining what kind of studying and learning characteristics, such as tendency for fast progression or organised study habits, can be estimated on group level based on existing student feedback and registry data. The goal has been to investigate how these different sources of information can be combined to provide a more detailed view of study paths, student groups and the interactions of studying characteristics with study structures and success. Compiling multiple data sources also provides an opportunity for a longitudinal perspective on the perseverance of different characteristics, how they can be affected by structural or support changes, and how they are connected to study success.

We will introduce some examples of how such work has already been taking place, the collected stakeholder needs and views, and some of the surrounding conditional boundaries to what can be done, e.g. pedagogical, ethical and technical consideration. We will present some examples of the work that has already been conducted, and what it can indicate for the future.

We will demonstrate some examples using Bachelor's feedback material with study registry data, which can be combined to highlight some connections between self-perceived study habits and condition with study success. The key goal of such analyses is to identify practices, paths and processes, which can support successful study progression, and to indicate how these in turn can be enforced, and also provide information about earlier indicators for possible needs for further support or changes.

We will argue that more extensive combining and use of available data can provide a more comprehensive view into the factors related to study success, and provide information for planning and testing different support solutions.