



## Preliminary results on the relationship between learning approaches and students' achievements in a Social Statistics introductory course in Finland

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We study the relationship between learning approaches and students' achievements in a fairly large ( $n=350$ ) introductory course of Social Statistics in the Faculty of Social Sciences at the University of Helsinki, Finland. As such, these topics have been studied a lot, but despite on the fact that statistics is needed and taught everywhere, especially as a minor subject, there is not so much specific research about the learning approaches related to studying statistics in higher education. In general, University students have different learning approaches, depending on their interests and commitments. These learning approaches can be classified in three classes: deep, surface, and strategic learning approach. The deep approach is related to a personal interest in the subject and to a good commitment to learning. It is more likely to result in a better knowledge and higher outcomes, whereas the surface approach, describing a lack of personal interest, may lead to poor outcomes and misunderstanding of essential concepts. The third approach, namely the strategic learning approach is more focused on achieving the highest possible grades using one way or another, often depending on the assessment demands. We present preliminary results from a Social Statistics introductory course. The content and the structure of the course were greatly simplified some years ago. Recently, the name of the course was changed to refer to the Social Statistics instead of plain Statistics, to better describe the current content and implementation of the course. Changing the name of the course had somewhat unexpected but positive consequences, as the proportion of the students of Social Sciences increased clearly. Because the course is compulsory to most new students of the Faculty of Social Sciences, the collected data are better focused on first year students of Social Sciences and represent their conceptions well. To analyze these data, factor analysis and structural equation models are applied. In addition to studying the relationship between the learning approaches and students' achievements we explore the students' preferences for different types of teaching and see how these relate to their conceptions of learning. This is the first study of teaching and learning on this course, and at this stage, the results are preliminary. However, the data collection process in three phases was successful and it is hoped that the results will contribute fruitfully to the on-going cross-country comparisons of different statistics courses.

**Keywords:** learning approaches; student achievements; multinational studies.