

**Identifying Inter-subject Difficulties in Norwegian**

**GPA Data Using Item Response Theory**

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Continuous Draft

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#### Abstract

##### Research Topic

Grade point averages (GPA) play monopolistic roles in Norway's tertiary admission processes. Earlier studies, however, raised methodological and fairness concerns over GPA as an appropriate measure for graduates' academic competency. Violations of the unidimensionality assumption arose when different subjects contribute to the final GPA scores at different weights, causing invalid statistical inferences under the item response theory framework. Additionally, misaligned subject difficulties distort candidates' incentives, leading to misallocation of youth's time and effort at a most critical point in their studies hence future career. Using Norway's administrative data archive, this study quantified the difficulty parameters of major GPA subjects and revealed sizeable differences in inter-subject difficulties. This observation largely agrees with previous reports from the UK and the Netherlands with a unique findings that students aiming at medical school admissions exhibited [this and that pattern].

##### Theoretical Framework

##### Methodology

##### Expected Results

##### Relevance to Nordic Educational Research