

RESEARCH ON STUDENT ADMISSIONS



BASIC SYLLABUS ON RECENT STUDENT ADMISSION REFORMS

- Certificate-based admissions utilizing Matriculation Examination in 2020
 - was prepared hastily in 2017-2018 under demands from the Ministry of Education and Culture
 - scoring is NOT based on research but on rationale of workload: you get on average more scores for advanced mathematics (13 obligatory courses) vs. health education (3 obligatory courses)
- Cross-university co-operation was increased from 2018 on: collective entrance exams and criteria in many fields to ease applicants' opportunities to apply for several study programmes
- Entrance examination do not require lengthy preparation from 2020 onwards
- A new project was started in 2022 to develop admissions and fix some problems
 - This time the reform should be research-based or at least data-based
 - <https://blogs.helsinki.fi/valintahanke/>



INTRODUCTION TO RESEARCH ON STUDENT ADMISSION AND RELATED TOPICS

- Predictive power of former grades
- Predictive power of entrance exams
- Matriculation Examination and success in student admissions (before the reform)
- After the reform: follow-up study, HowULearn and Pioneered



PREDICTIVE POWER OF GRADES – FINNISH RESEARCH

1/2

- Research is quite scarce, and findings are contradictory, indications on interdisciplinary differences
- View on predictive power is often quite narrow, in relation to GPA, cumulative credits at university and skills.
- **1996, 1999:** success in Matriculation Examination did not predict later success well, but together with entrance examination success it explained 24% of *medical students' later success* (Lindblom-Ylänne et al., 1996, 1999)
- **2017:** success in Matriculation Examination predicted argumentative skills in *applicants in educational sciences* (Utriainen et al., 2017)
- **2018:** final GPA in the upper secondary school (lukion päättötodistus) did predict but average grade in Matriculation Examination did not predict later success in sport sciences and languages students (Kallio et al., 2018)



PREDICTIVE POWER OF GRADES – FINNISH RESEARCH

2/2

- **2019:** success in Matriculation Examination was associated with both study success and study progress in *Law students*, additionally, students with a grade in Advanced Mathematics succeeded better and progressed faster than others (Kleemola & Hyytinen, 2019)
- **2019:** success in Matriculation Examination was only weakly associated with later success and progress in *students of English philology* (Kleemola, 2019)
- **2022:** the grade in the native language in Matriculation examination predicted critical thinking and argumentation in novice higher education students in a large, national dataset, the grade in mathematics did not (Kleemola et al., 2022)



PREDICTIVE POWER OF GRADES – INTERNATIONAL RESEARCH

- **2012:** In an international meta-analysis, it was found that the GPA in secondary school and success in standardized tests (SAT, ACT) were best predictors of later success in higher education ($r=0,30-0,50$)
 - the analysis included several demographical, motivational, contextual predictors and variables connected with personality and self-regulation (Richardson et al., 2012).
- **2017:** Mathematics success in secondary school predicted study progress in higher education in *students of natural sciences* in Netherlands, interestingly, the prior grades in natural sciences did not have significant predictive value (Koster & Verhoven, 2017).
- **2018:** General study success and the grades in native language and mathematics in the secondary school predict different aspects of study success (e.g. applying knowledge, making judgments, communication etc.) *in Netherlands*. (Steenman 2018).



PREDICTIVE POWER OF ENTRANCE EXAMS

- **2017:** success in VAKAVA exam was related with critical thinking skills (Utriainen et al., 2017)
- **2022:** success in VAKAVA exam was related with student perceptions of their own capabilities during the first study year (Virtanen et al., 2022)

VAKAVA: collective entrance exam in educational sciences



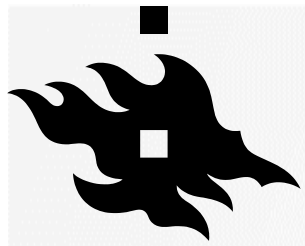
MATRICULATION EXAMINATION AND SUCCESS IN STUDENT ADMISSIONS (BEFORE THE REFORM)

- **2019:** Success in Matriculation Examination was associated with success in VAKAVA exam (Metsäpelto et al., 2019)
- **2019:** Those who were admitted to universities in 2013-15, 55% had a grade in advanced mathematics (while proportion in all graduates was 33%). (Kaleva et al., 2019)
- **2022:** Those who were admitted to educational sciences in 2013-15, had better grades in advanced mathematics and psychology, compared with those who were not admitted (Kunnari et al., 2022)



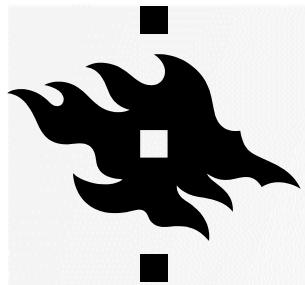
AFTER THE REFORM: FOLLOW-UP STUDY

- 2-year follow-up study was funded by the Ministry of Education and Culture (Karhunen et al., 2022) (nb! Not peer-reviewed)
 - Applicants applied to more study programmes than before.
 - Applicants chose to apply to universities outside of their place of residence more likely than before.
 - The proportion of 19-year-olds among the accepted applicants grew.
 - There was no change in gender and socioeconomic divisions of accepted applicants.
 - Those who were accepted were more likely to apply a new study place later.



AFTER THE REFORM: HOW U LEARN

- Submitted manuscript (Kleemola et al., 2022)
 - Data included students in the faculties of biological and environmental sciences, theology and social sciences (n=247).
 - HUL0 and HUL1: motives for attending university, approaches to learning, study burnout, self-efficacy, experiences on study environment + first year GPA + cumulative credits + method of admission
 - Comparing students who were admitted in certificate-based admissions compared with other students
 - No differences in GPA and grades
 - Students admitted with certificate
 - perceived their motive for attending university more often as default and less often and personal-intellectual.
 - perceived their first-year studies to be less interesting than other students
 - were more cynical already in the beginning of their studies, and after first year their risk for burnout was larger than other students'
 - were higher in non-reflective approach to learning by the end of the first year compared with others
 - had weaker self-efficacy compared with others.



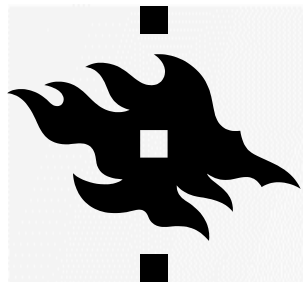
AFTER THE REFORM: INTERVIEWS IN PIONEERED PROJECT

- Pioneered: Pioneering policies and practices tackling educational inequalities, a Horizon 2020 funded project
- Research is ongoing! (Toom & Kleemola, 2023)
 - Interviewees were teachers, study counselors, special education teachers and principals in lower and upper secondary schools
 - They were asked about their everyday experiences at school on the reform of certificate-based admissions.
 - General attitude towards utilizing grades in higher education admissions was positive, but implementation is problematic.
 - Students have a lot of pressure to success, some of it originating from parents.
 - Students are fixed with their grades and do not consider entrance examinations even when they are encouraged to do so. They also only look at the scores that are awarded for the Laudatur, even if it is not a realistic goal for them.
 - There is a dramatic change in choice of subjects in upper secondary school: in one of the target schools, there was no group for basic mathematics as all but two students chose advanced course.
 - Interviewees saw a clear connection between admissions reform and student burnout



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