Quantative policy oriented educational research in Denmark 2010-2016

Professor, ph.d., dr.paed. Niels Egelund,
Danish School of Education, Aarhus University
EIPPEE Conference, November 2016

CSER
CENTRE FOR STRATEGIC RESEARCH IN EDUCATION

Aim

- The aim of the research has been:
- To answer a series of questions about education and competence building
- To supply policy-makers with research-based facts about education
- To strengthen attainment
- To minimise attrition
- To serve as knowledge centre for other researchers and projects and thereby to improve the quality of education in Denmark.

Partners and financing

- Aarhus University, Department of Economics
- Aarhus University, School of Education (DPU)
- Danish Institute for Local and Regional Government Research (KORA)
- Danish National Centre for Social Research (SFI)
- Total grant 7 million EURO
- Danish Council for Strategic Research 5.6 million EURO
- Co-financing 1.4 million EURO.

Participation and production

- 46 researchers from partner institutions
- 13 researchers from other Danish institutions
- 8 researchers from foreign institutions
- ---
- 19 peer reviewed articles or book chapters
- 10 scientific reports
- 5 ph.d. dissertations
- 29 working papers
- 2 popular science books
- 65 titles i total.

Research areas and designs

- Preschool area
- Primary and lower secondary school
- Upper secondary education
- Participation in labour market/income
- ----------
- Natural experiments
- RCT (one study)
- Longitudinal follow-up studies.

Preschool quality

- Preschool staffing has positive effects on examination marks at the age of 15
- 30 % increase in staffing give 0.01 higher marks
- Increase in male staffing from 20 % to 30 % give 0.01 higher marks
- Increase in trained staff from 45 % to 57 % give 0.025 higher marks.

Nursery versus family day care

- Children from nursery enjoy school start more than children from family day care
- Children from nursery get significant higher marks at the age of 15 than children from family day care
- Children from nursery enter upper secondary academic track more often than children from family day care.

Participation in preschool

- Mothers who - from 1963 to 1975 sent their children in institution - effects:
- Increase mothers time in the labour force by 5 %
- Increase children total education time with 0.06 years and increace children earning - at the age of 35 - with1.5 %.

School size effects

- Effects on: school-leaving exam marks, completion of upper secondary education, labour market participation, salary at the age of 30. 615,125 students who left 9th grade in 1984-2004
- Increasing school size has positive effects on all outcomes, and the effects were highest for boys from low income families.

School consolidation

- School closure and merging of schools – effects on national test results in 2rd and 4th grade
- 312 schools closed og merged from 2010 to 2011. 14,025 students
- Negative effect size 0,027 (Cohens d) but the negative effect fade over 4 years
- Joint leadership has positive effects on test results.

Class size

- Class size effects on school leaving exam marks:
- 10th grade on 485 schools 2001-2006. 46,267 students. Average class size 20.9
- A reduction of class size with 10 students has a positive effect of 0.1 mark points.

Having a high risk child in class

- Negative effect on the class as a whole:
- 237,815 – 246,022 students – outcome school leaving exam marks
- One student with a psychiatric diagnosis - minus 0.02 mark point
- One student with criminal parents - minus 0.03 mark point.

RCT study of Classroom Management training

- One week course and one day follow-up
- 1,296 students in 1st and 2nd grade on 24 schools split randomly in two groups
- Outcomes: intelligence test, SDQ-test, reading test, concentration test, national test i Danish
- Concentration effect size +0.20. Danish effect size +0.10.

Prediction of status at age 27

- 1,881 students participating in PISA 2000 og PIAAC 2012-2013
- Reading competence develop with further academic training
- Absence from labour market or education give a dramatic reduction of reading competence
- Reading competence at the age of 15 predict salary level at age 27.

Cognitive and non-cognitive competences

- 1,210 students participating in PISA 2000
- Outcome at age 27: reading competence, income and participation in labour market
- Reading competence is important for both income and employment
- Non-cognitive competences (self- efficacy, persistence, orientation towards future) are important for income notwithstanding cognitive competences
- Non-cognitive competences (not being late, low degree of absenteeism) are important for completion of vocational education
- Non-cognitive competences (self- efficacy, persistence, orientation towards future) are important for employment notwithstanding salary level.