

Does it matter? Do large educational reforms in Norway and Germany reduce social inequalities in academic achievement?

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Background

In 2000 students in Germany and Norway scored under the OECD-average in academic achievement (reading literacy). At the same time students' academic achievement is significantly associated with socio-economic status (SES) of the family. Thus, both countries have initiated incremental reforms which address highly ambitious and potentially conflicting aims: 1) Raising the level of academic achievement for all students. 2) Weakening the association between students' academic achievement and SES of the family. For Germany, scholars have reported decreasing social differences in academic achievement between students according to SES, while findings reported for Norway are ambiguous depending on the data used.

Objective

To identify changes in the association between students' academic achievement (reading literacy) and SES for students in Norway and Germany, To discuss whether and how these changes are linked to large educational reforms in both countries.

Methods

A comparative analysis of students in Germany and Norway using data from the Programme for International Student Assessment (PISA) studies 2000 and 2009 with focus on reading literacy

Results

Germany

- 1) Increase in the level of reading literacy for all students from 484 (2000) to 497 (2009) for reading literacy.
- 2) Significant reduction in social differences in reading literacy from 2000 to 2009.

Norway

- 1) Minimal decrease in the level of reading literacy for all students from 505 (2000) to 503 (2009) for reading literacy.
- 2) Slight reduction in social differences in reading literacy from 2000 to 2009.

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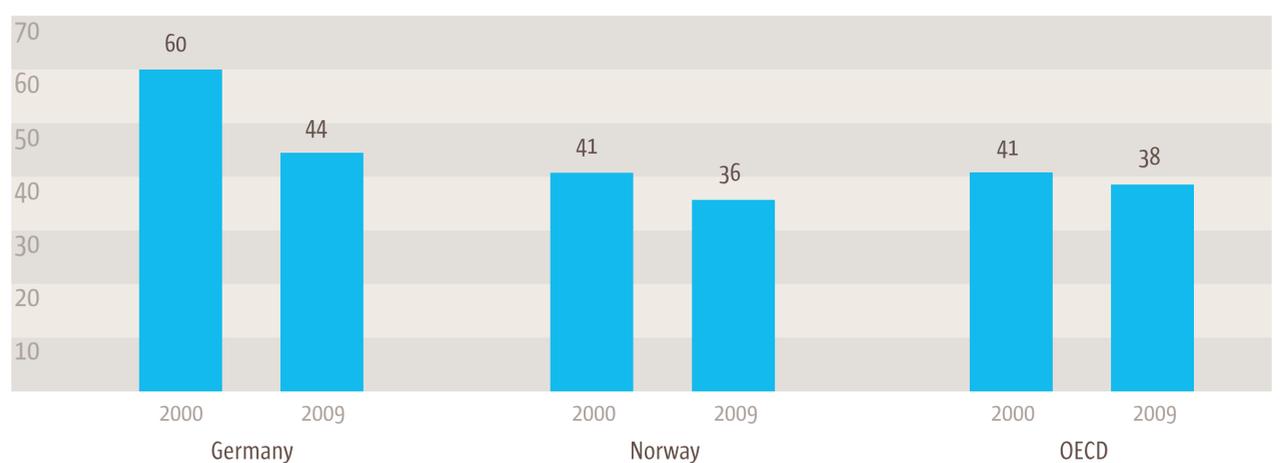


Figure 1. Score point difference associated with one unit increase in ESCS

Index of economic, social and cultural status (ESCS):

captures a range of aspects of a student's family and home background combining information on parents' education and occupations and home possessions, derived from the following variables: the international socio-economic index of occupational status of the father or mother, whichever is higher; the level of education of the father or mother, whichever is higher, converted into years of schooling; and the index of home possessions.

The rationale for choosing these variables is that socio-economic background is usually seen as being determined by occupational status, education and wealth. As no direct measure of parental income or wealth was available from PISA (except for those countries that undertook the PISA Parent Questionnaire), access to relevant household items was used as a proxy.

Gradient of the PISA index of ESCS: slope of a line that describes reading performance as a function of socio-economic status. The more even the slope, the weaker the association between SES and reading literacy.

School reforms

Both countries have initiated important reforms to

- 1) increase academic achievement for all students, and
- 2) to reduce the influence of SES on student achievement.

Germany:

Examples of initiatives in consequence of the 'PISA shock' (which might vary in different federal states)

- 1) Development of national educational standards and new assessments based on the standards

2)

- Extension of universal primary education from four to six years
- Combining Realschule and Hauptschule into one school
- Introducing a comprehensive secondary school for all students
- Increasing school hours (no obligation for schools)
- Improvement of preschool education

Norway:

Two main reforms implemented in 1997 and 2006.

- 1) 'Knowledge promotion' reform ('Kunnskapsløftet') in 2006 provides all grades with new curricula with clear competence objectives, focusing on basic skills (e.g., reading literacy).
- 2) Reform 1997: Introduction of ten-year compulsory education with a new curriculum strengthening the principle of a comprehensive school for all.

Conclusion

Challenges to link students' academic achievement in 2009 directly to the reforms outlined, reforms which were only partially implemented so far (Germany) and implemented only few years before PISA 2009 (Knowledge promotion in Norway).

Challenges to link students' outcomes in 2009 directly to curriculum reforms; PISA only measures students' general ability and skills to retrieve and use knowledge within three selected domains.