

# Linking home background, gender, and reading literacy – a comparative analysis with PISA 2009 data from Germany and Norway

Sabine Wollscheid, Norwegian Knowledge Centre for the Health Services  
Are Turmo, University of Oslo

Workshop 3 – PISA cake  
EIPPEE Conference 2013: March 6, 2013, Frankfurt a. Main

# Structure

- Background
- Aim of the study
- Methodology: Secondary analyses using the PISA 2009 dataset
- Findings
- Conclusions and implications for further research to enhance evidence-informed policy and practice in Europe

# Background

- PISA study 2000: significant associations between home background and reading literacy for students at the end of compulsory education, in particular for students in Germany
- Germany and Norway represent two different types of 'welfare-state regimes' (Esping-Anderson, 1990)
- Germany: 'corporatist regime' vs. Norway: 'social democratic regime'

Higher gender and educational equality in Norway vs. Germany

# Theoretical Framework

- Germany and Norway differ in their compulsory education system according to differences in welfare-state regimes
- Germany: students are selected and streamed into different tracks at the end of primary school
- Norway: compulsory education up to grade 10 is the same for all opening for flexible choice at upper secondary

# Theoretical Framework

Two dimensions of home background:

- Economic capital: well-off parents are better able to offer their children access to education, which might increase their reading literacy.
- Cultural capital: Reading literacy can be explained largely by a greater amount of 'cultural resources' in the home of well-off parents.

# Aim of the study

## Assumptions:

1. Differences in compulsory education might provide unequal chances to compensate for social inequalities with its roots in home background
2. Between-country differences in the associations between home background and students' reading literacy are related to differences in the distribution of cultural and economic capital.

**Aim:** To show how social and gendered inequalities in reading literacy, as earlier found in both countries, can be further explored and compared.

# Questions

1. What is the association between different dimensions of home background and student's reading literacy in Germany and Norway?
2. How does the interplay in the association between home background and its two dimensions (cultural and economic capital), and reading literacy vary for female and male students in both countries?

# Methodology

- Secondary analyses drawn on PISA 2009 dataset
- Evaluation of education systems by assessing 15-year-olds' reading skills (also math and science skills).
- Comparison between Germany and Norway, countries representing two different types of welfare state regimes.
- Earlier findings: both countries performing above the OECD-average, with Norway having a higher 'equality level' in terms of gender and education

# Methodology

Including all students, and separately for female and male students in both countries we calculated...

1. associations between home background, i.e., economic and cultural capital, and student reading literacy
2. associations between constructs related to one or both dimensions and reading literacy

# Methodology

Linking the constructs in PISA, constituting the dimensions of home background

- Economic capital:

  - Wealth

- Cultural capital:

  - highest parental education

  - cultural possessions

  - home educational resources

- Combined measures:

  - Home possessions

  - Highest parental occupational status

  - Index of economic, social and cultural status

# Main results

- For students in Germany, a higher percent of the variance in reading literacy can be explained by home background (Germany: 21.5 % vs. Norway:17.5)
- Separate analyses according to gender show that home background explains
  - a similar percentage of the variance in reading literacy for female and male students in Norway (19.3 vs. 17.2 %)
  - a visibly higher percentage of the variance for female students in Germany (25.8 vs. 19.1 % for males).
- Between country differences in the association between home background and reading literacy are marginal for male students, but evident for female students.

Independent variable	Germany			Norway		
	<i>Pearson's r Correlation</i>			<i>Pearson's r Correlation</i>		
	<i>All (N=4,979)</i>	<i>Female (N=2,434)</i>	<i>Male (N=2,545)</i>	<i>All (N=4.660)</i>	<i>Female (N=2,285)</i>	<i>Male (N=2,375)</i>
<i>Economic capital</i>						
Wealth	.135	.176	.128	-.037	-.025	-.018
<i>Cultural Capital</i>						
Highest parental educational status	.314	.342	.312	.150	.197	.135
Cultural Possession	.298	.282	.288	.323	.325	.317
Home educational Ressources	.296	.309	.279	.189	.205	.211
<i>Combined measures</i>						
Home possession	.324	.362	.302	.190	.210	.197
Highest parental occupational status	.355	.394	.343	.294	.313	.310
Index of economic, cultural and social capital	.423	.462	.412	.295	.332	.301

# Main results

According to the two dimensions of home background

- Economic capital:
  - Wealth and reading literacy are more strongly associated with students' reading literacy in Germany;
  - no positive association with students' reading literacy in Norway
- Cultural capital:
  - Relatively high difference in the association between *highest parental educational status* and reading literacy.
  - Cultural possessions: Stronger association with reading literacy for students in Norway !

## Implications for policy and practice

- These results might inform the development of complex intervention studies with the aim to reduce social inequalities in reading achievement
- Further research: Focus on different dimensions of home background and gender difference
- Germany: how to decrease gender inequalities related to the association between home background and reading literacy
- Larger policy reforms to reduce gender and social inequality