



## Beyond schools:

The social embeddedness  
of educational inequality



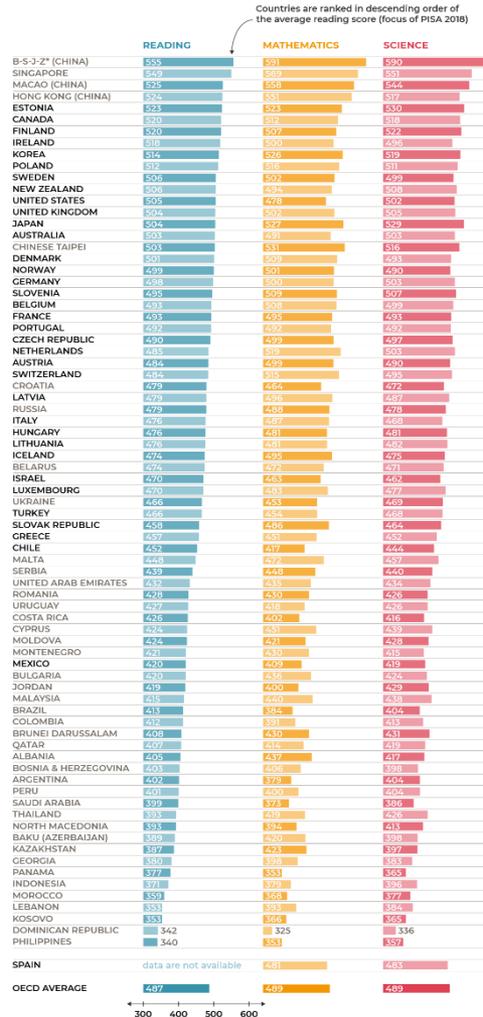
Heike Solga

Berlin, April 15, 2021

# Mean reading performance

## PISA 2018 results

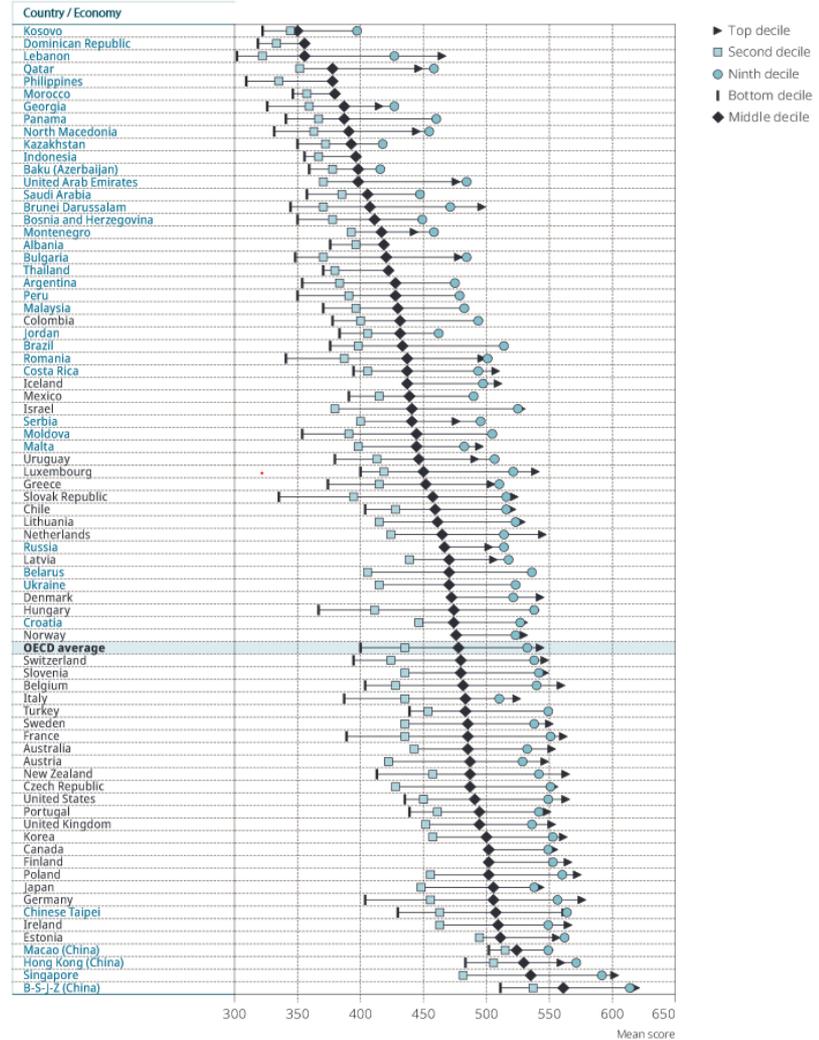
Snapshot of students' performance in reading, mathematics and science



Source: OECD, PISA 2018 Database || \*B-S-J-Z refers to Beijing, Shanghai, Jiangsu and Zhejiang

# Social inequality in reading performance

Figure 4 • Mean performance in reading, by international decile of socio-economic status



[https://www.oecd.org/pisa/PISA-results\\_ENGLISH.png](https://www.oecd.org/pisa/PISA-results_ENGLISH.png)

PISA 2018 Results (Volume II): Where All Students Can Succeed (OECD 2019)

## PISA 2018: Insights and interpretations, Andreas Schleicher

- ▶ The results offer a snapshot of education systems at a certain moment in time.
- ▶ Since 2000, PISA has shown that education systems can provide both high-quality instruction and equitable learning opportunities for all.
- ▶ Children from wealthier families may find many open doors to a successful life, but children from poor families often have **just one chance** in life – and that is **a good teacher and school** that give them an opportunity to develop their potential.

<https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf>

The chapter also illustrates how some school systems achieve excellence and weaken the association between students' socio-economic status and performance in PISA.

(PISA 2018, Vol. II)

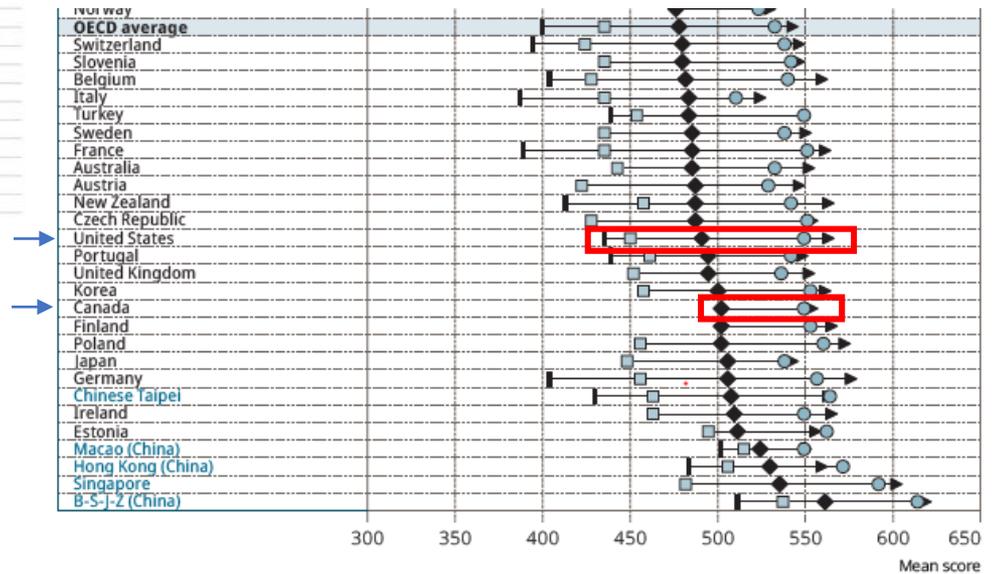
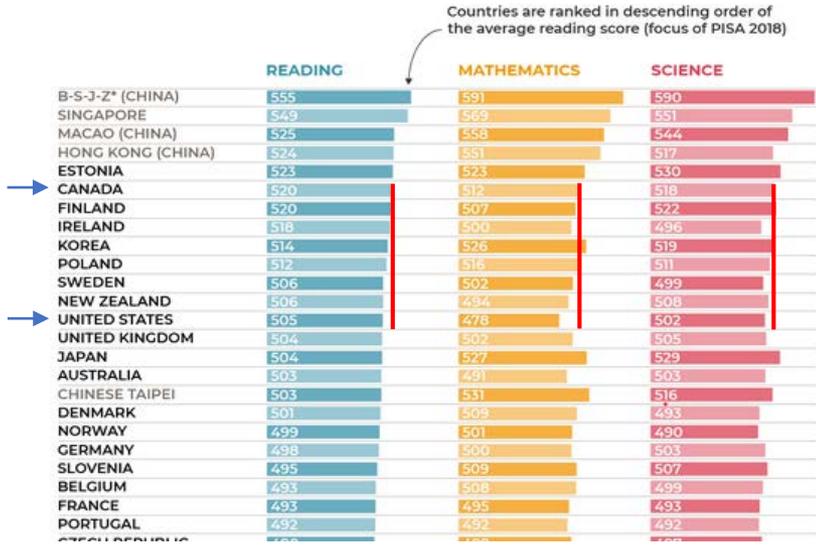
**PISA results = outcome of education systems and what happen in school**

# Mean reading performance

# Social inequality in reading performance

## PISA 2018 results

Snapshot of students' performance in reading, mathematics and science



[https://www.oecd.org/pisa/PISA-results\\_ENGLISH.png](https://www.oecd.org/pisa/PISA-results_ENGLISH.png)

PISA 2018 Results (Volume II): Where All Students Can Succeed (OECD 2019)

## Joseph J. Merry: Why does the US lag behind so many other countries in international education assessments?

- ▶ The most popular interpretation is that **the US education system is at fault and is in need of greater efficiency, accountability, and curricular reform** (Chubb and Moe 1990; Hanushek 2011). U.S. schools attract poorer teachers and lack the proper incentives.
- ▶ In contrast, common explanations for the overall success of the Canadian school system are policy implementations that focus on **equalized funding across schools and teacher selectivity** and the influence of Canadian culture.
- ▶ This traditional view targets school-based explanations.

→ **School-based approach** (“schools are the problem”)

## Joseph J. Merry: Why does the US lag behind so many other countries in international education assessments?

- ▶ **BUT** the U.S. educational system may also serve **children with comparatively greater academic challenges as a result of poorer social conditions.**
- ▶ Differences in PISA reading skills btw. the US & Canada:  
Comparison of the magnitude of social differences in vocabulary test scores of 4-to-5-year-olds (National Longitudinal Studies) & the magnitude of social differences in PISA scores of 15-to-16-year-olds of similar cohorts (PISA 2000, 2003, 2009)
- ▶ **Finding: the Canadian advantage in PISA (0.30 standard deviation units) already existed at ages 4 to 5, before formal schooling had a chance to matter.**
- ▶ “Traditional” school-based approach assumes that U.S. schools face the same challenges that schools in other countries confront. ... **however, the social conditions in the United States**—such as high levels of inequality, poverty, and poor access to health care—present special challenges to teaching U.S. children, making it difficult to interpret international test scores.
  - Thus one might even argue: the fact that the advantage did not increase might rather indicate a better performance of US schools than Canadian school.

### ➔ **School-based approach vs. social-conditions approach**

Merry, Joseph J. (2013). Tracing the U.S. Deficit in PISA Reading Skills to Early Childhood: Evidence from the United States and Canada. *Sociology of Education* 86: 234–252.

# The social embeddedness of educational inequality (& performance)

- ▶ School performance (of all children) also depends on the social conditions outside, and beyond the control, of schools.
- ▶ In our book chapter (see below), we reviewed research on selected outside-school challenges to educational (in)equality:
  - **poverty** (individual level)
  - income inequality (national/aggregate level)
  - **socioeconomic residential segregation**
  - **health inequality**
  - early childhood education

# The social embeddedness of educational inequality (& performance)

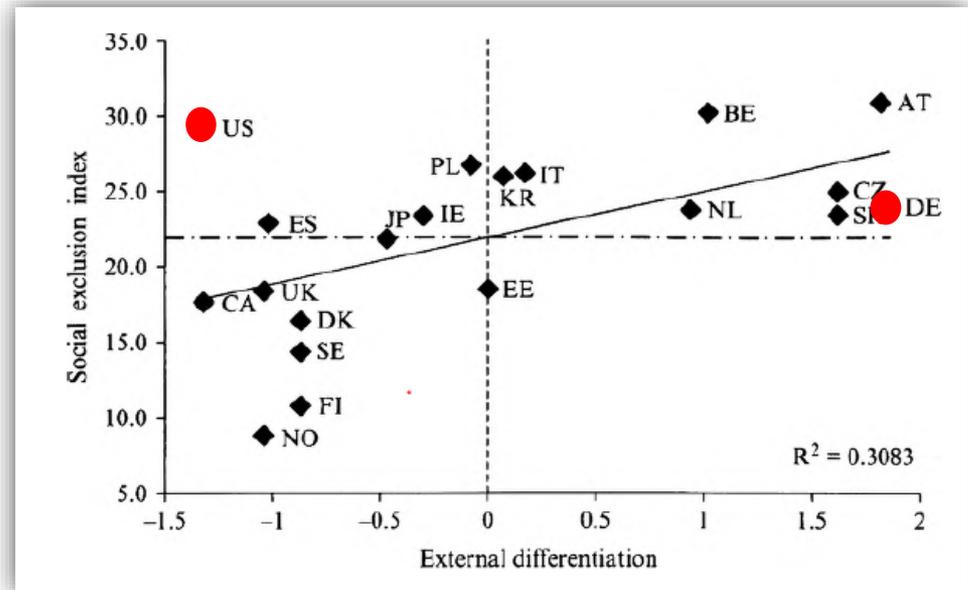
## Child poverty

- ▶ Strong association btw. child poverty and educational outcomes
- ▶ Causal? Consistent findings of **experimental studies**:
  - **Increases in family income positively impact cognitive development, school achievement and educational attainment from early childhood up until adolescence and early adulthood**
  - An income increase appears to benefit children in families at the lower end of the income distribution most, especially those who live below the poverty line.  
(reviews by Cooper & Stewart 2013; Duncan et al. 2017a; Hannum & Xie 2017; studies by Blanden & Gregg 2004; Duncan et al. 2011; McLoyd, Jocoson & Williams 2017)
- ▶ **Theoretical explanations**:
  - Gary Becker's investment model
  - Glen Elder's family stress model (economic hardship affecting parental practices)
  - Neuroscience explanations of adverse environmental factors on early brain development
- ▶ Most studies are **US-based**: Income-support programs might have more room to make a difference because of a weak welfare state and thus lack of other safety-net measures
  - Experimental studies from **Norway** (strong welfare state) support these conclusions
  - Support from developing countries: **Mexico** and **Brazil**

# The social embeddedness of educational inequality (& performance)

## Economic spatial segregation

- ▶ Related to economic inequality are spatial disparities in socioeconomic conditions and resources of neighborhoods
- ▶ Economic residential segregation → increasing concentration of low- and high-income children attending separate schools
- ▶ Between-school differences in the socio-economic composition of schools' student populations are larger in the USA (comprehensive educ system) than in Germany (the most externally differentiated educ system)
- ▶ Rumberger & Palardy (2005) analyse learning rates from grades 8 to 12: the school's average socio-economic status has as much impact on students' achievement gains as has their own socioeconomic status



**“Housing policy is school policy”**

(Schwartz 2010)

**External differentiation** = tracking

**Social exclusion index** = variance in students' economic, social and cultural status *between* schools, divided by the sum of the total variance in students' socio-economic background *between* & *within* schools.

# The social embeddedness of educational inequality (& performance)

## Health inequality

- ▶ Strong association btw. children's health status and SES
- ▶ Explanations are, e.g., lower material standards of living resulting in nutrition problems, problems of health care purchase and quality of health care, low education of parents is associated with being less equipped to manage their children's health problems and to make informed health decisions ...
- ▶ Health factors are crucial mechanisms through which low SES influences children's academic achievement and educational attainment (Basch 2011, p. 594)
- ▶ **A substantial effect of children's health status on their school performance, after controlling for SES.** Poor health directly influences students' performance and cognitive development as well as their psychosocial adjustments with peers and schools.
- ▶ **Mechanisms:** e.g., disrupted class attendance due to illness, concentration problems because of mental health issues, or impaired cognitive development
- ➔ **"Healthier students are better learners"** (Basch 2011, p. 593)
- ▶ Little attention in research on the relationship btw. health inequalities and educational attainment/achievement ➔ thus, most research does not account for an important source of challenges to learning processes and of cross-national differences in these challenges (Merry 2013)

## Education as *the equalizer* (reverse perspective)

- ▶ **School-based approach:** schools (are in/equalizer) → educational attainment/inequality
- ▶ **Social-conditions approach:** social conditions (in/equalizer) → educational attainment/inequality
- ▶ **Social investment state:** educ. attainment & in/equality → social in/equalities in society
- ▶ OECD skills strategy (“Better skills, better jobs, better lives”): The global economic crisis, with high levels of unemployment, in particular among youth, has added urgency to fostering better skills. At the same time, **rising income inequality**, largely driven by **inequality in wages** between high- and low-skilled workers, also needs to be addressed. **The most promising solution** to these challenges is **investing effectively in skills** throughout the life cycle. (2012, p. 3)
- ▶ **My study:** Comparison of the association btw. economic inequalities/poverty and educational performance/inequalities **vs.** direct measures of welfare-state redistribution
- ▶ **Finding: Direct measures of welfare-state redistribution are far more effective in combating poverty than indirect measures involving the educational system.**
- ▶ Moreover, reducing economic inequality in the parental generation can help improve educational attainment in the next generation. (**social-conditions approach**)

Solga, H. (2014). Education, economic inequality, and the promises of the social investment state. *Socio-Economic Review* 12(2): 269–297.

## Lessons learned

- ▶ **Do the findings presented mean that “schools don’t matter?” No**
- ▶ **Awareness:** Education policy & research does not end at the school door
  - Educational research should pay more attention to the social contexts in which schools and families are embedded and the context-specific challenges they face.
  - Effective policies and strategies for reducing educational inequality need to embed the children’s learning processes and educational careers into a broader social context.
  - Educ. researchers should increase the awareness that policies expecting schools alone to offset the impact of these outside-school factors on educational inequality are insufficient, if not doomed to fail.  
One vivid policy example of this approach = ‘No Child Left Behind’ (NCLB) Act (introduced in the early 2000s in the USA): **to improve educational achievement of disadvantaged children by changing schools**
    - ➔ Quality of education provided by schools was measured by students’ test scores
    - ➔ The consequences of this law have worsened the learning conditions of disadvantaged students, and thus exacerbated rather than mitigated educational inequalities.
- ▶ **We should not be overestimated** (and over-stated) **education** as a means of fighting poverty and reducing inequalities in society.
- ▶ **So if you draw conclusions about the impact of schools pay attention to potential *outside* mediating, moderating and confounding factors.**

# Thanks for your attention!

Merry, J.J. (2013). Tracing the U.S. Deficit in PISA Reading Skills to Early Childhood: Evidence from the United States and Canada. *Sociology of Education* 86: 234–252.

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Borgna, C., Ch. Brzinsky-Fay, M. Dieckhoff, A. Ch. Holtmann and H. Solga (2019). Beyond schools: The social embeddedness of educational inequality. In: R. Becker (Ed.), *Research Handbook on the Sociology of Education*. Edgar Elgar, p. 575–590.

