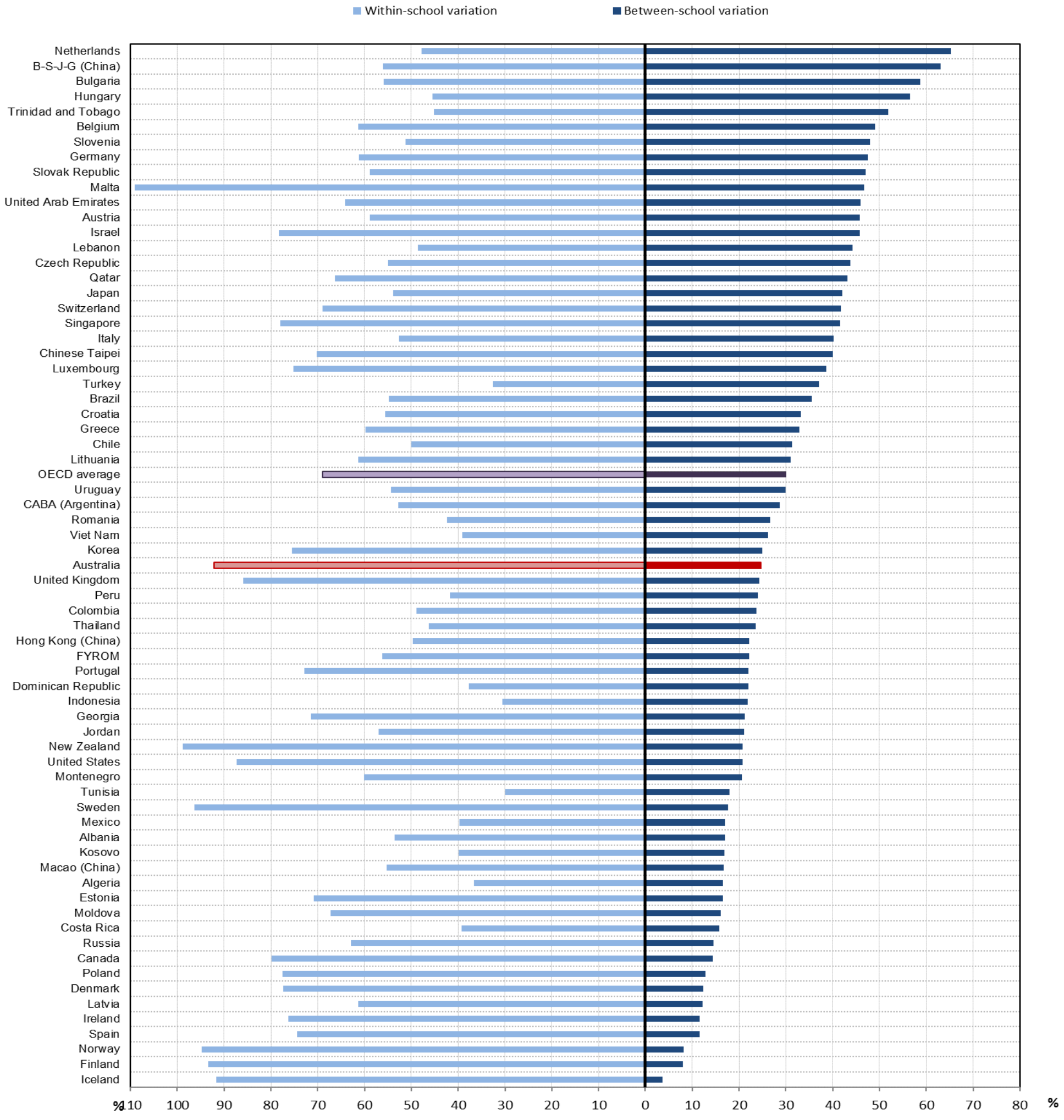
Activity 2: Within-school variations

PISA 2015: Variance in science performance between and within schools

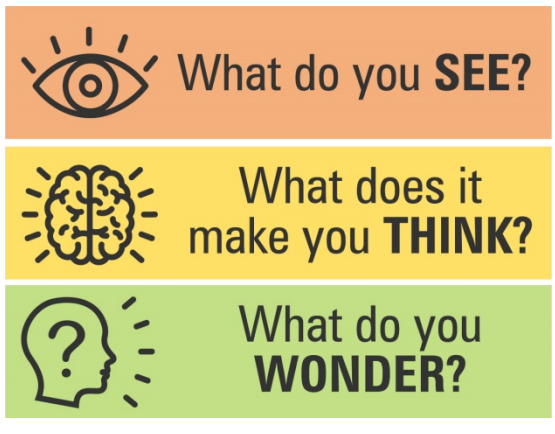


Data extracted from PISA 2015, www.oecd.org/pisa, accessed 4 March 2017

Between-school variation: the performance variation attributable to differences in student results in different schools

Within-school variation: the performance variation attributable to the range of student results that cannot be attributed to differences between schools[1]

What do you think are the implications for countries where there are large variations within schools?



[1] Thomson, De Bortoli & Underwood 2017, 'PISA 2015: Reporting Australia's results', ACER.

The largest barrier to student learning: Within-school variability

If we are to truly improve student learning, it is vital that we identify the most important barrier to such improvement. And that barrier is the effect of within-school variability on learning. The variability between schools in most Western countries is far smaller than the variability within schools (Hattie 2015). For example, the 2009 PISA results for reading across all OECD countries shows that the variability between schools is 36 per cent, while the variance within schools is 64 per cent (OECD 2010). John Hattie

https://visible-learning.org/wp-content/uploads/2015/08/John-Hattie_Study_Pearson_Solutions_What-works-best-in-education_The-politics-of-collaborative-expertise_2015.pdf

Activities

1. What do you see as the relationship between the 2015 PISA data displayed in the graph and Hattie's statement that 'the variability between schools in most Western countries is far smaller than the variability within schools'?
2. One factor believed to influence student performance is socio-economic status. Data from 2015 PISA showed that in Australia, and on average across the OECD, 63% of the performance differences observed across students in different schools can be accounted for by socio-economic differences across students and schools. Only about 4% of the performance difference between students attending the same school was associated with their socio-economic background.[2]

Below is a list of other factors that can influence student performance.

- Student motivation and beliefs
- School-level policies and practices
- Student background
- Parental attitudes and understanding of education
- Teacher support (e.g. showing interest in every student's learning, providing extra help, meeting individual student's needs)
- Teachers' professional development
- Social composition of schools
- Student self-efficacy
- Teachers and school leaders working together to maximise the impact of teaching on students
- Classroom discipline
- Inadequate or poor quality physical infrastructure
- Teacher expertise
- Assessment and evaluation tools that provide effective feedback to teachers
- Student engagement and wellbeing
- Positive school climate

In small groups, discuss the questions below.

- Which factors would you argue are the most significant within-school influences?
- Which factors would school leaders and teachers have most influence over?
- Which factors do you believe are most significant for your school setting? Why?

[2] Thomson, De Bortoli & Underwood 2017, 'PISA 2015: Reporting Australia's results', ACER.