

A photograph of a classroom scene. A female teacher with dark curly hair, wearing a blue sleeveless top, is leaning over a desk. She is pointing at a tablet held by a female student with long dark hair and glasses, who is wearing a blue denim shirt. Another student with curly hair is visible in the background, also looking at the tablet. The background shows a bright classroom with large windows and other students at desks.

Education disrupted – education rebuilt

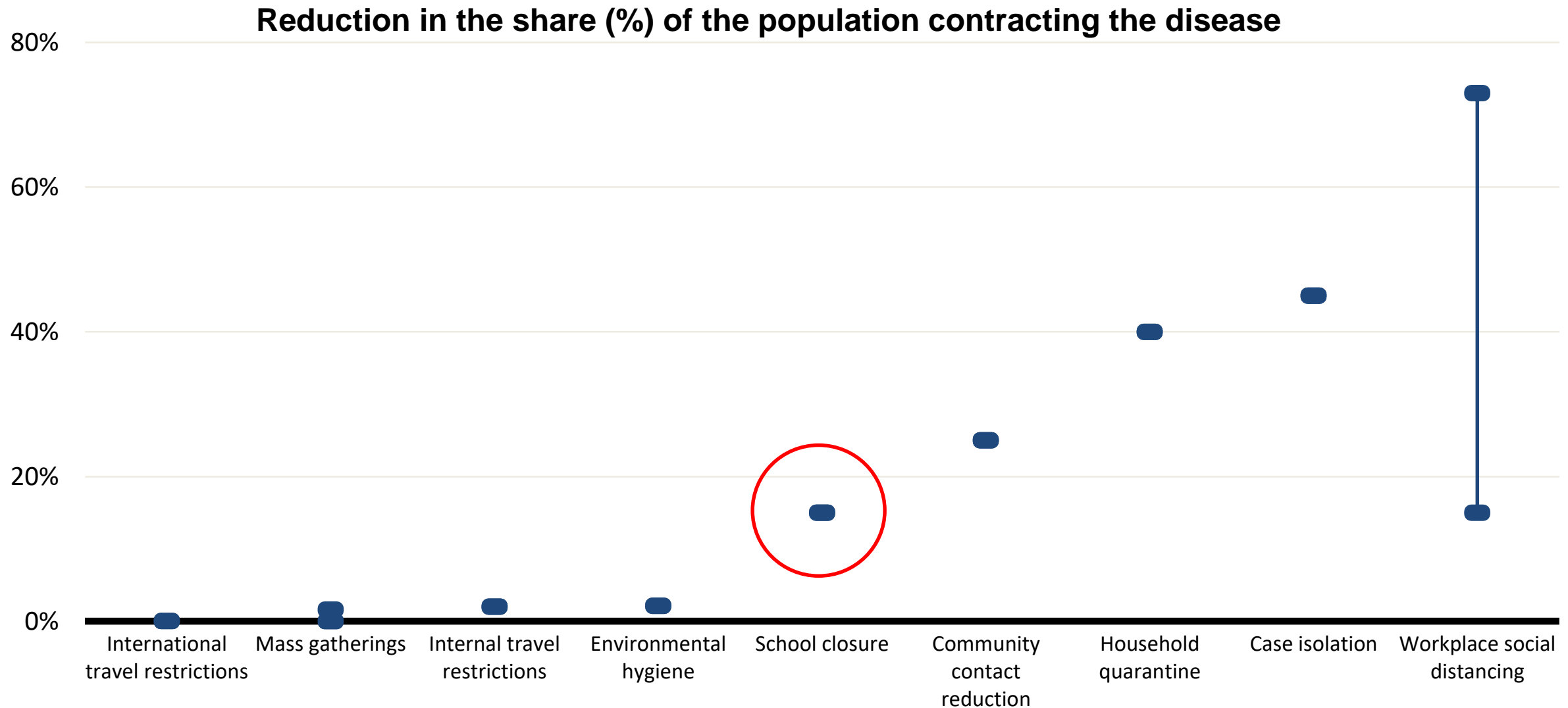
Global Science of Learning Education Network
Andreas Schleicher



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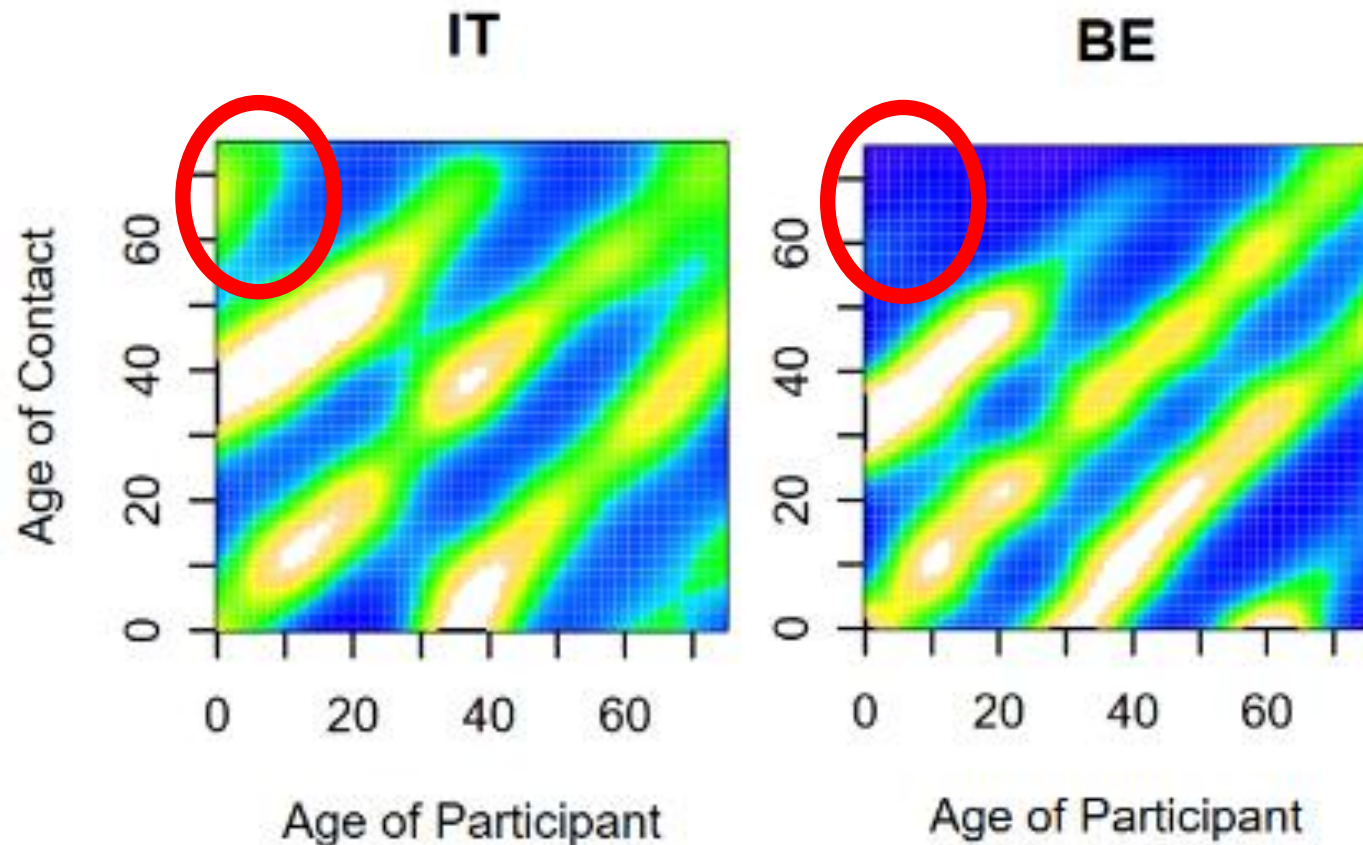


Evidence From Previous Epidemics Suggests That School-closure Can Prevent Up To 15% Of Infections



Reopening Schools May have A Different Impact Across Countries

Contact matrices for home interaction



In some countries (e.g. ITA and POL) the interaction children-elderly is much higher than in others (e.g. BEL, FIN).

Opening kindergartens and primary schools in ITA and POL may lead to a higher increase in mortality than in BEL and FIN

Impact of Covid-19 on education

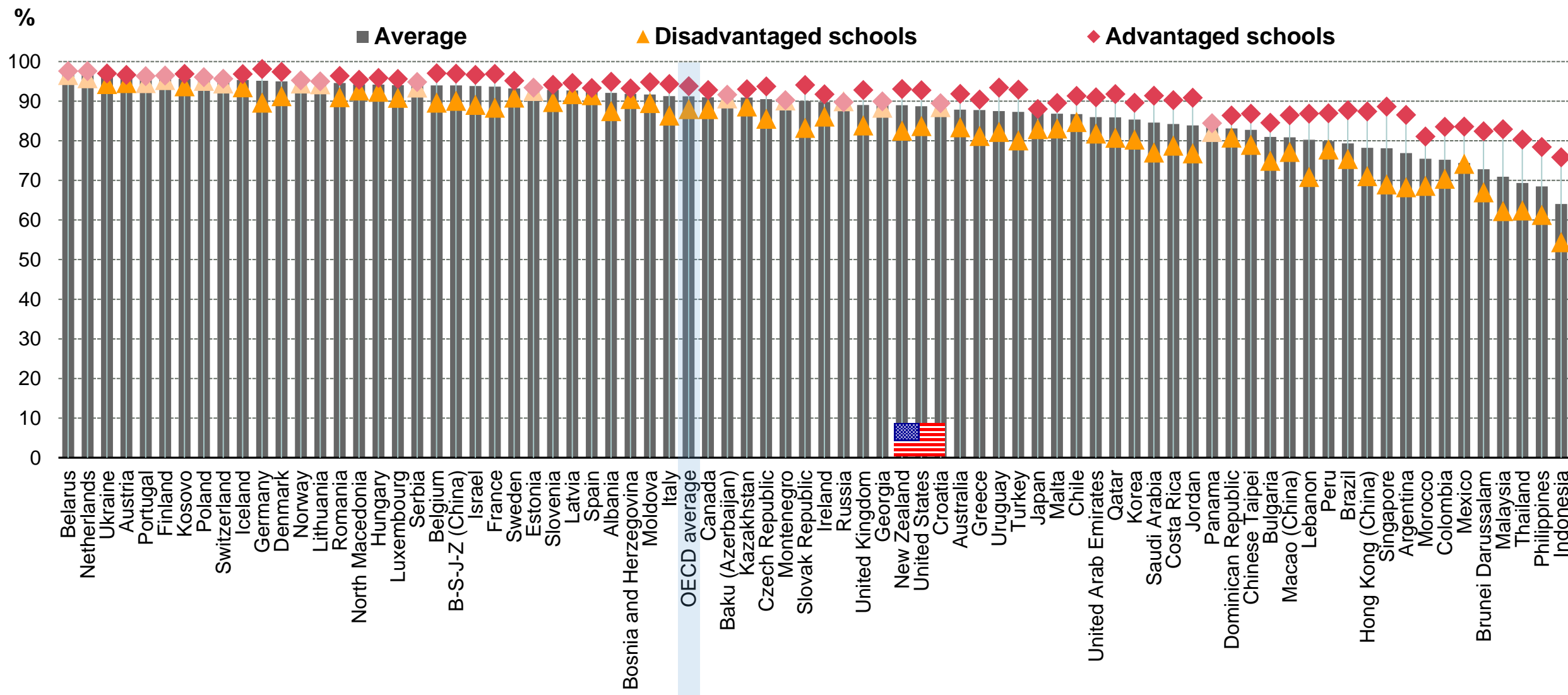
- **1.5bn** students impacted by school closures
- **Remote learning** has become the lifeline for learning but doesn't address the social functions of schools
- Access, use and quality of **online resources** amplifying inequality
- **Accreditation** at stake
- Huge needs for **just-in-time professional development**
- Re-prioritisation of curricula leads to new tensions
- But lots of **innovative learning environments** emerging !



Access to a quiet place to study (PISA)

Fig A1

Percentage of students that have access to a quiet place to study

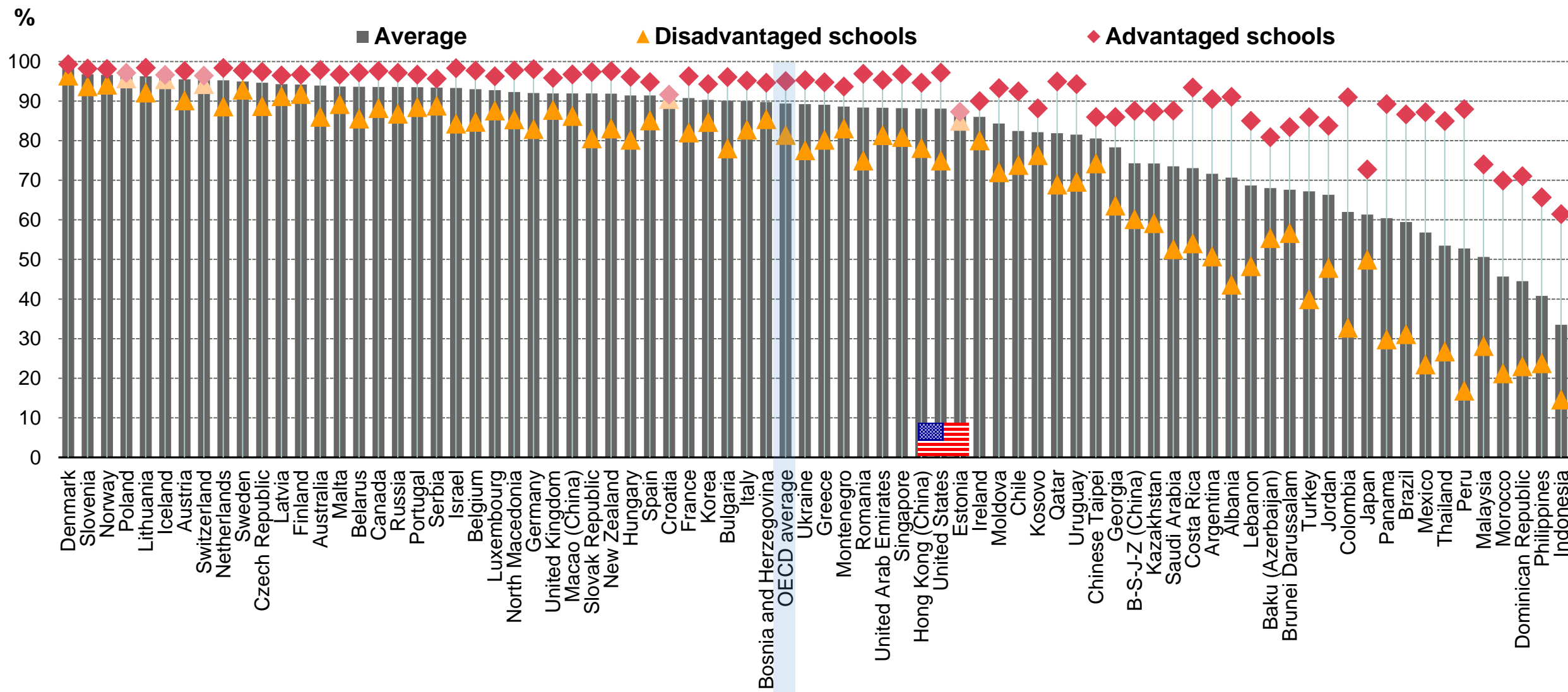




Access to a computer for school work (PISA)

Fig A2

Percentage of students that have access to a computer they can use for school work

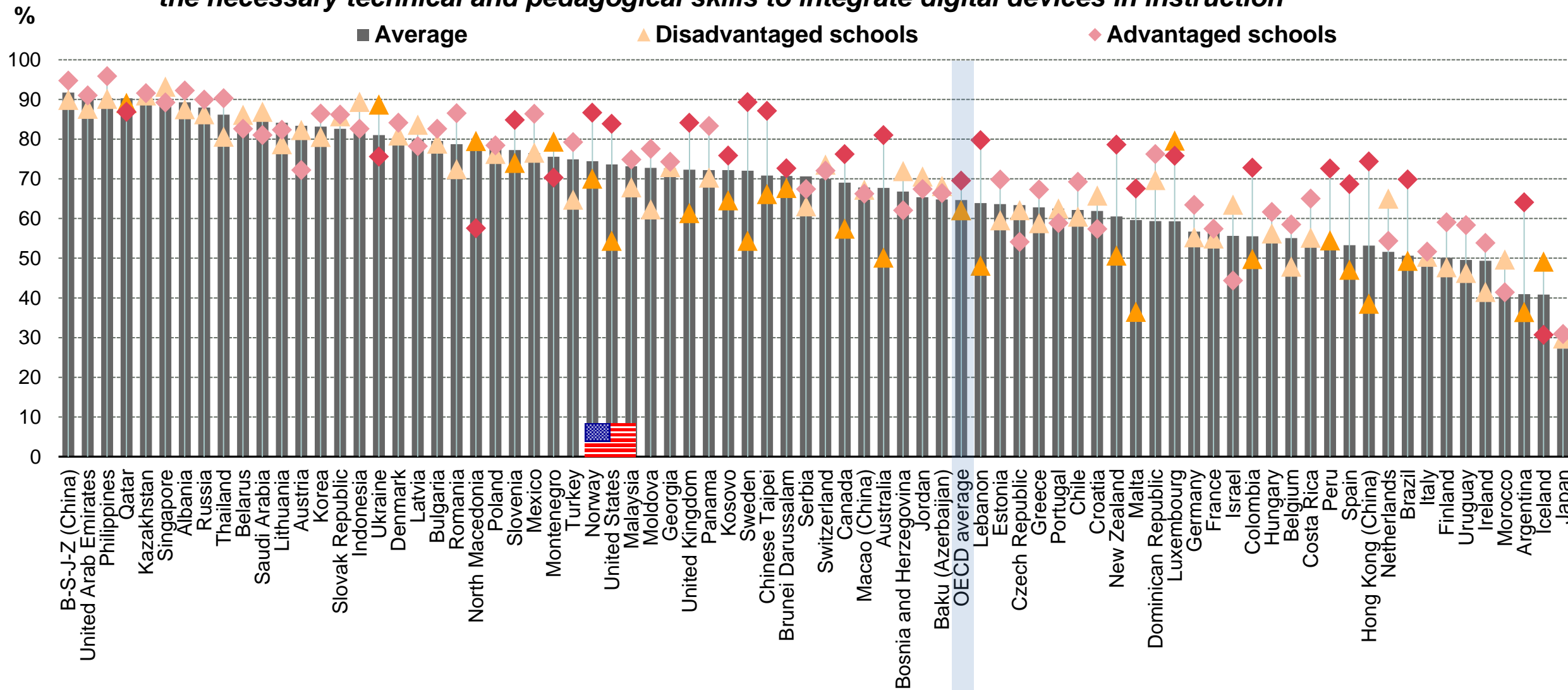




Teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction

Fig A9

Percentage of students in schools whose principal agreed or strongly agreed that teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction



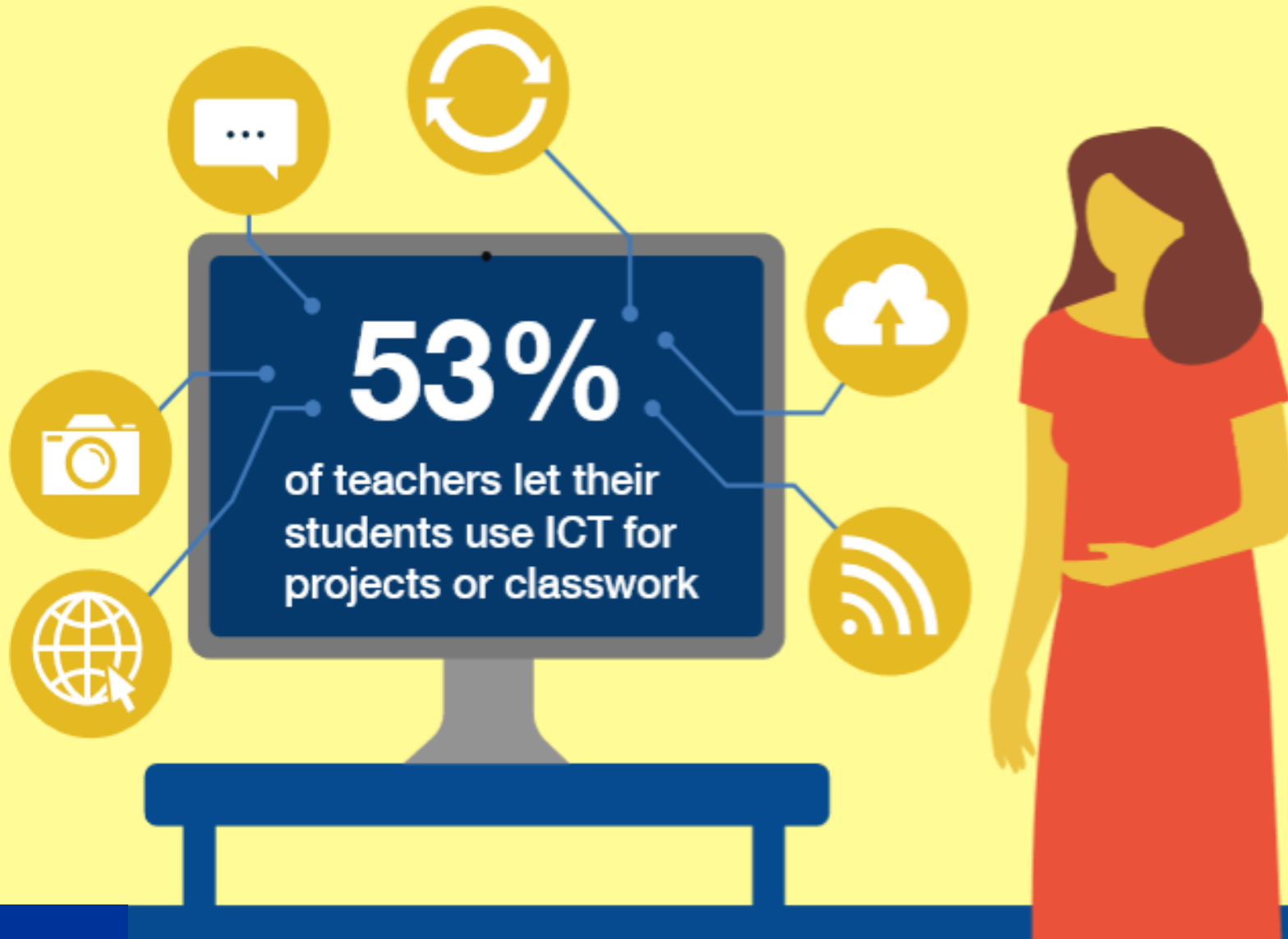


Teaching & Learning

TECHNOLOGY IS ONLY AS GOOD
AS ITS USE



Use of ICT for class work is widespread overall,
but not universal...

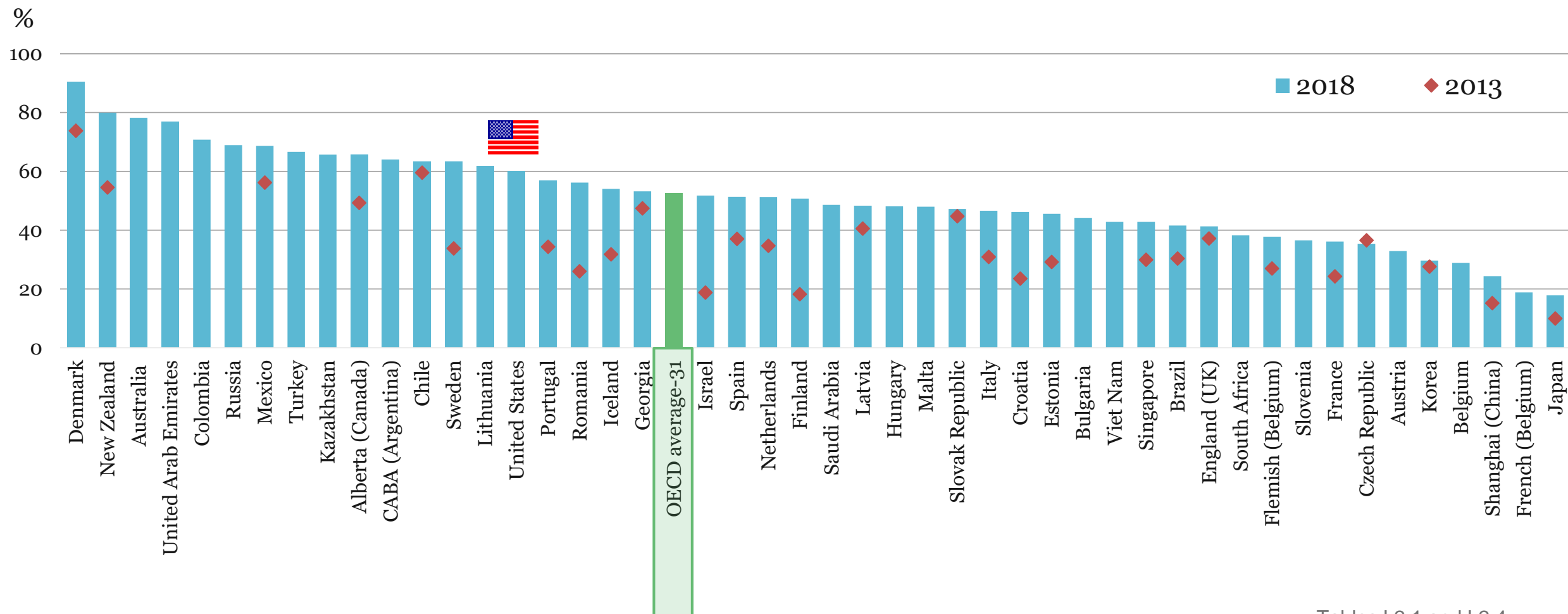




Even before the crisis, the use of ICT for class work was already on the rise...



Percentage of teachers who “frequently” or “always” let students use ICT for projects or class work



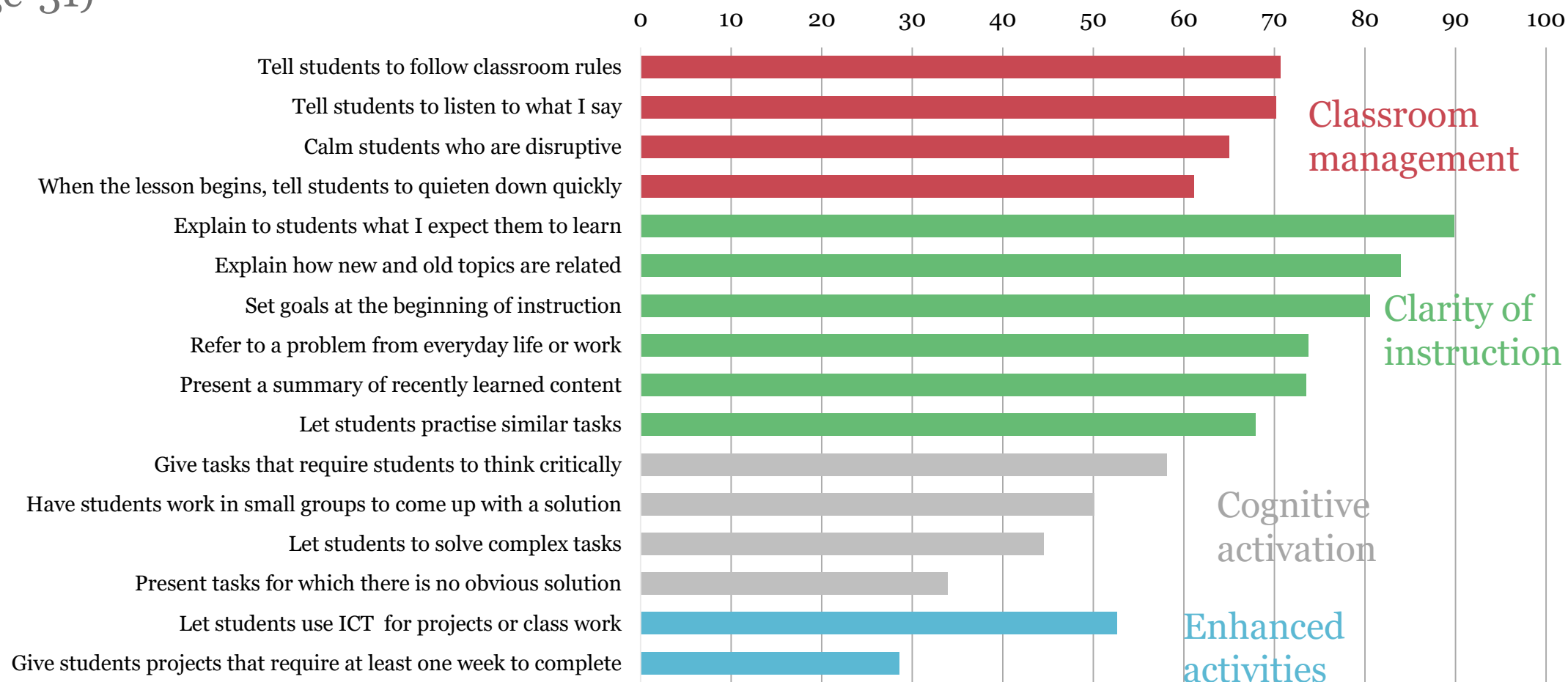


Innovative projects and the use of ICT can be useful strategies to address the current challenges to school



Teaching practices

Percentage of teachers who frequently or always use the following practices in their class (OECD average-31)





Teaching & Learning

OWNERSHIP AND
EMPOWERMENT



Most teachers feel control over their practice



How much professional autonomy do teachers have?



Over **90%** of teachers say they have control over:

- choice of teaching methods
- assessing students' learning
- discipline
- amount of homework



84% say they are involved in deciding overall course content



In only **56%** of schools do teachers play a role in school management, according to principals





Most teachers feel control over their practice



Teachers' autonomy in determining course content in their target class

Percentage of lower secondary teachers who "agree" or "strongly agree" that they have control over determining course content in their target class



Fig II.5.12

The logo consists of three concentric white curved lines on a green background, resembling a stylized 'C' or a partial circle.

Teaching & Learning

TEACHERS SEEM MORE OPEN
TO INNOVATION THAN OUR
INDUSTRIAL SCHOOL
ORGANISATION SUGGESTS



The vast majority of teachers have a positive attitude towards change and innovation...



Teachers' views on their colleagues' attitudes towards innovation

Percentage of lower secondary teachers who "agree" or "strongly agree" with the following statements

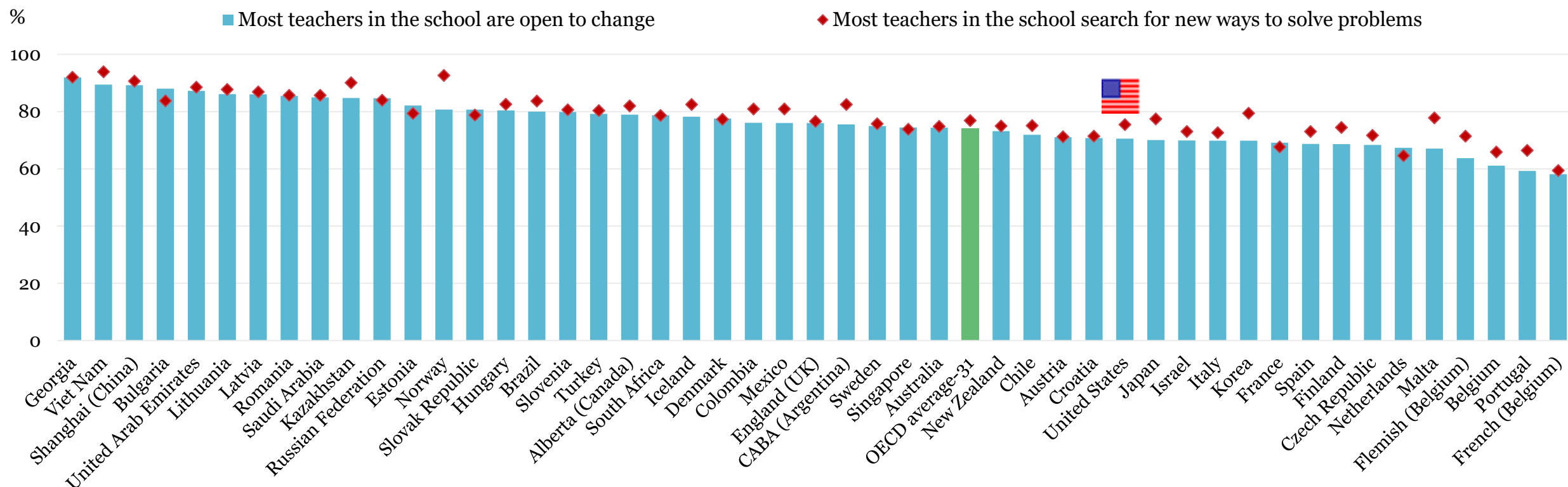


Table I.2.35



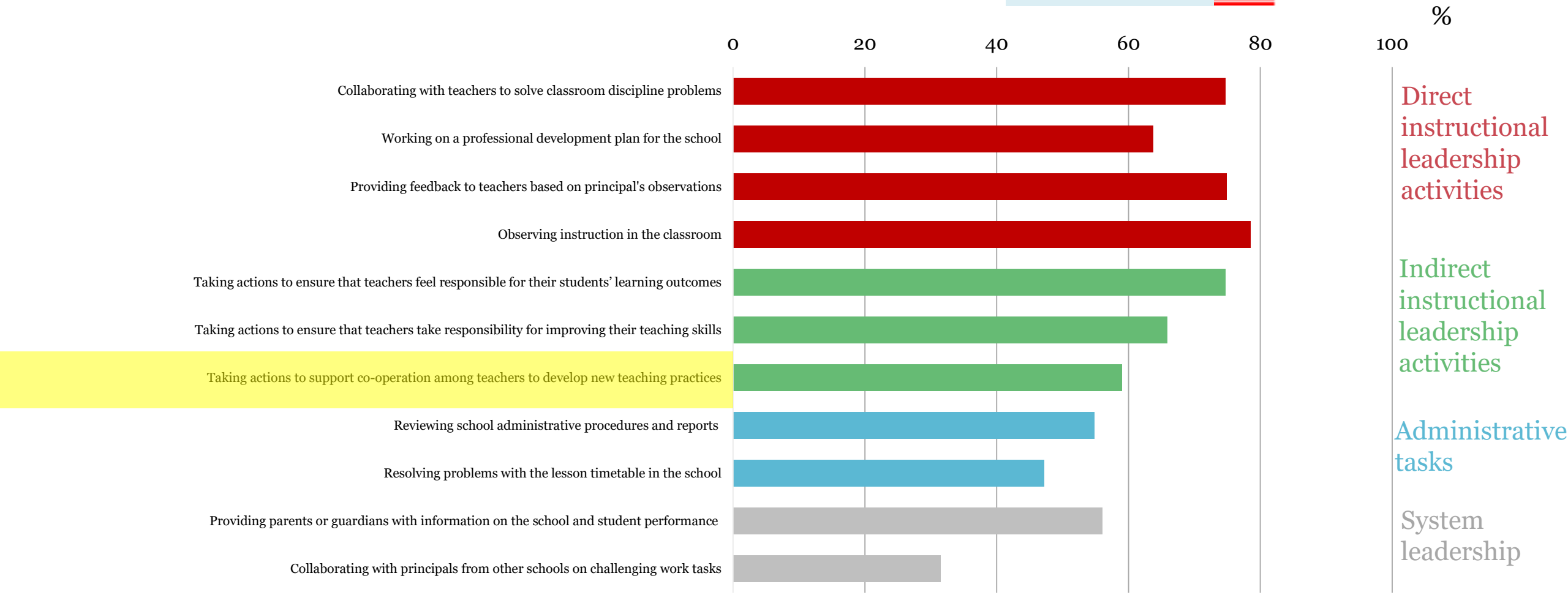
Guidance from school leaders matters for innovation, but is not widespread across the board...



Principals' leadership activities

Percentage of low secondary principals who "often" or "very often" engaged in the following activities in their school in the 12 months prior to the survey

United States 



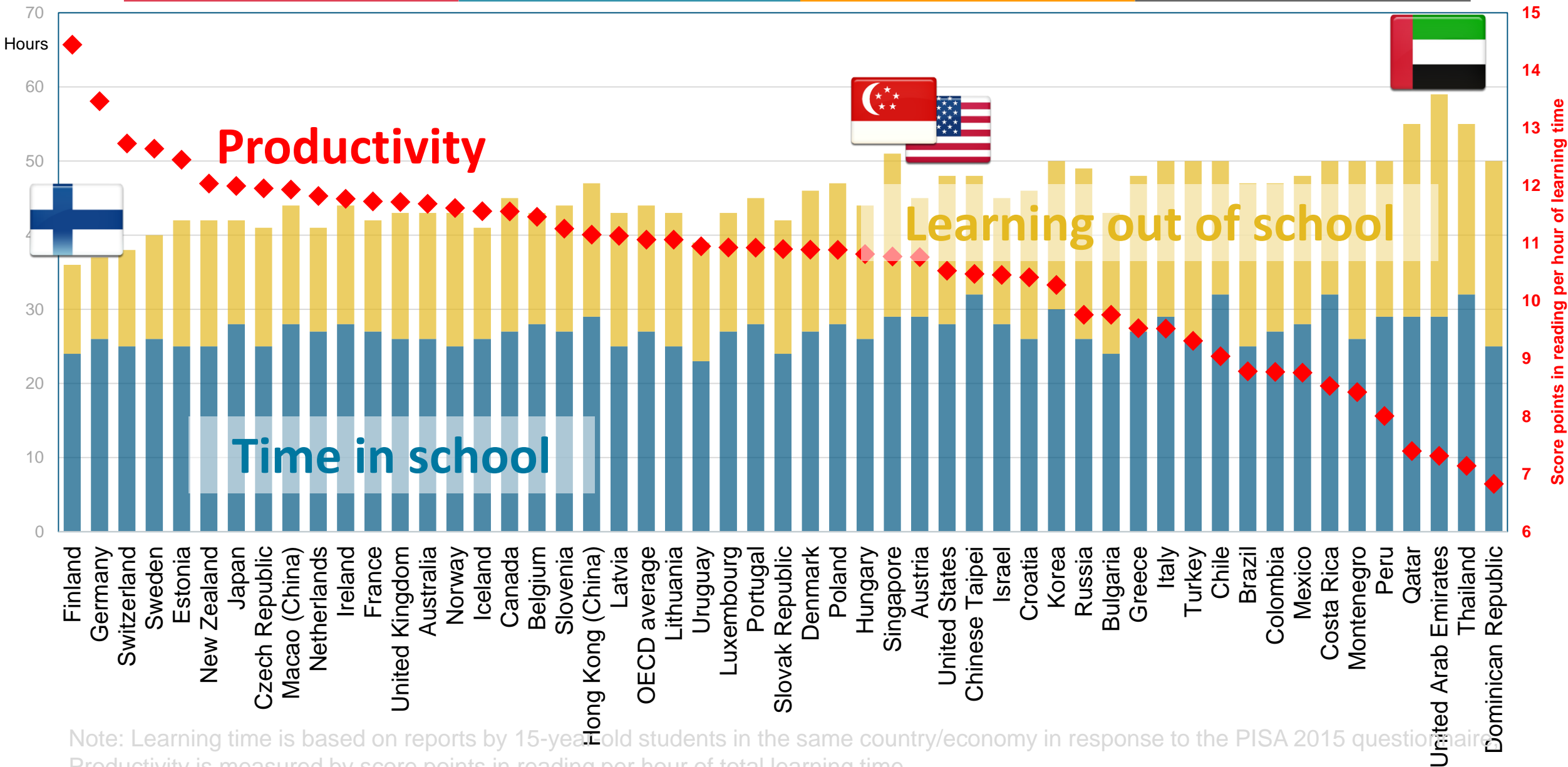


Teaching & Learning

STRENGTHENING
RELEVANT OUTCOMES

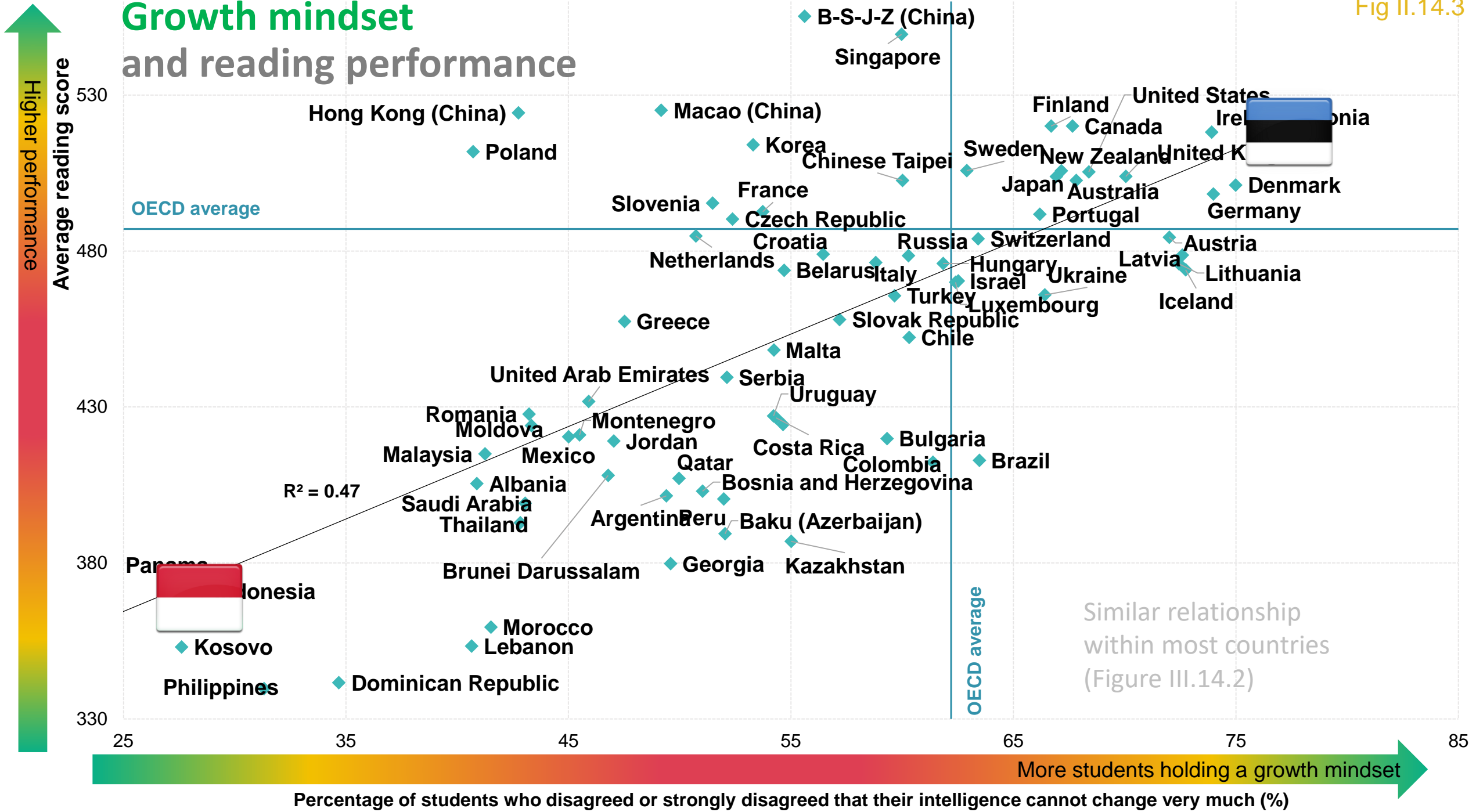


Learning time ≠ learning outcomes



Note: Learning time is based on reports by 15-year-old students in the same country/economy in response to the PISA 2015 questionnaire. Productivity is measured by score points in reading per hour of total learning time.

Growth mindset and reading performance

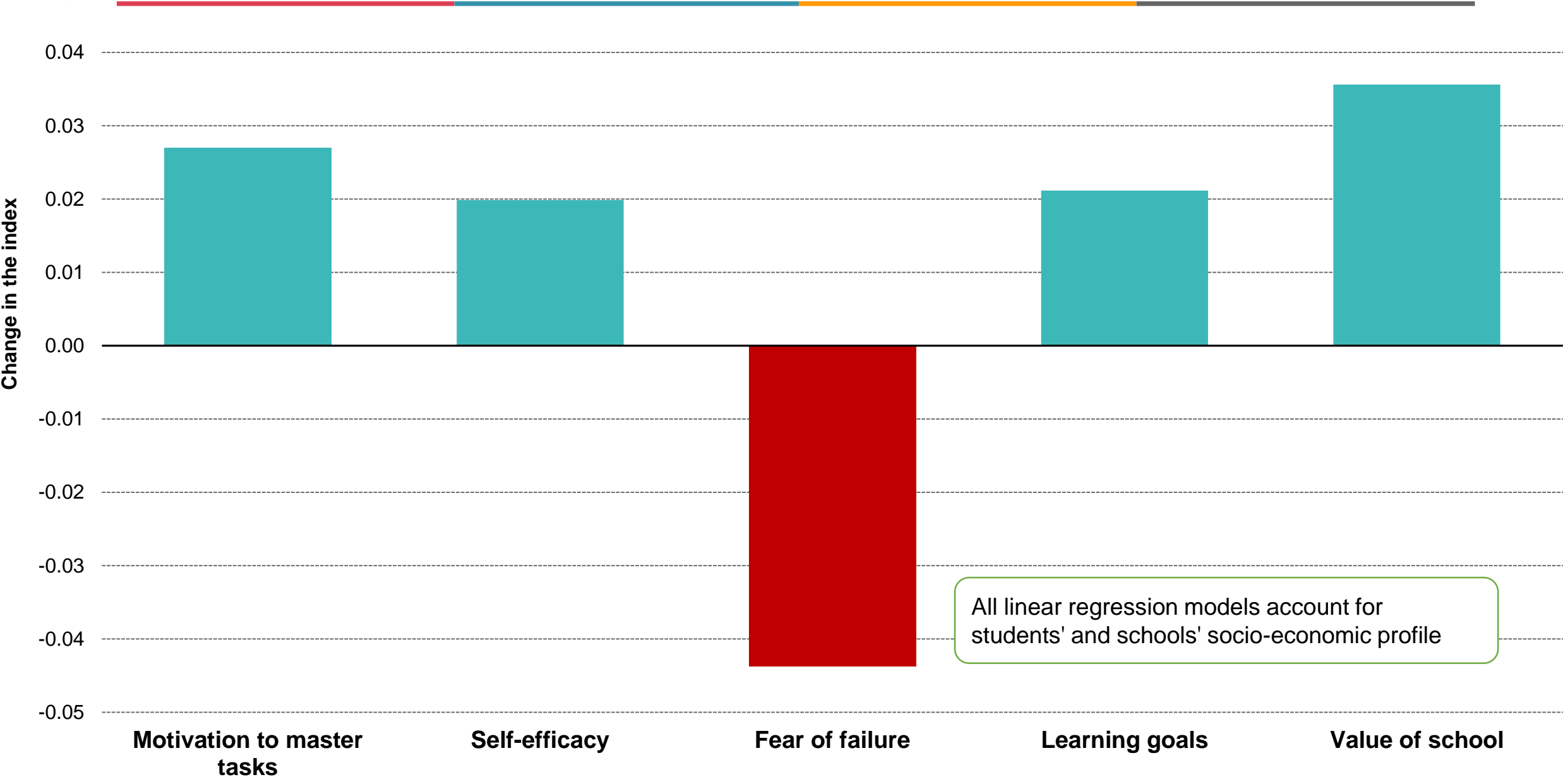




Growth mindset and student attitudes

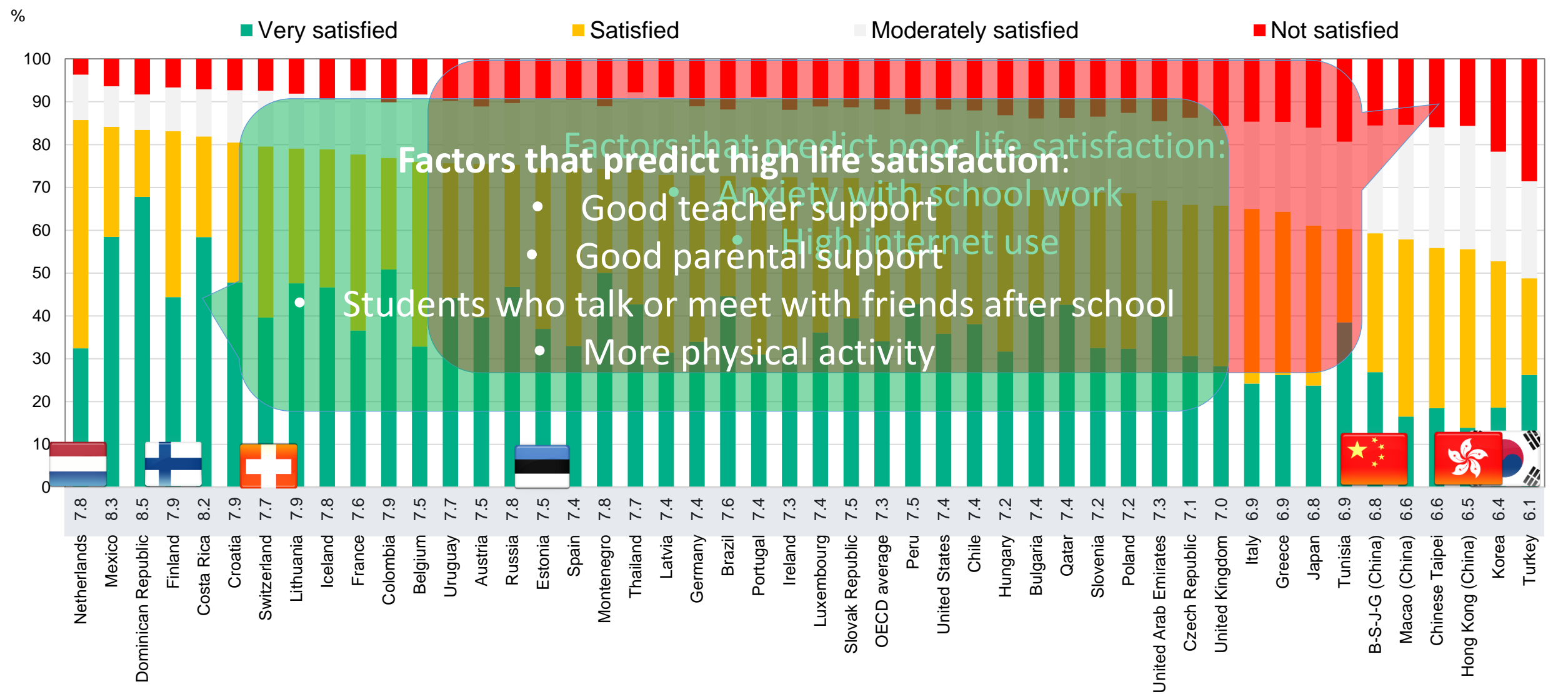
Change in the following indices when students disagreed or strongly disagreed that "your intelligence is something about you that you can't change very much":

Fig III.14.5



Life satisfaction among 15-year-old students

Figure III.3.1





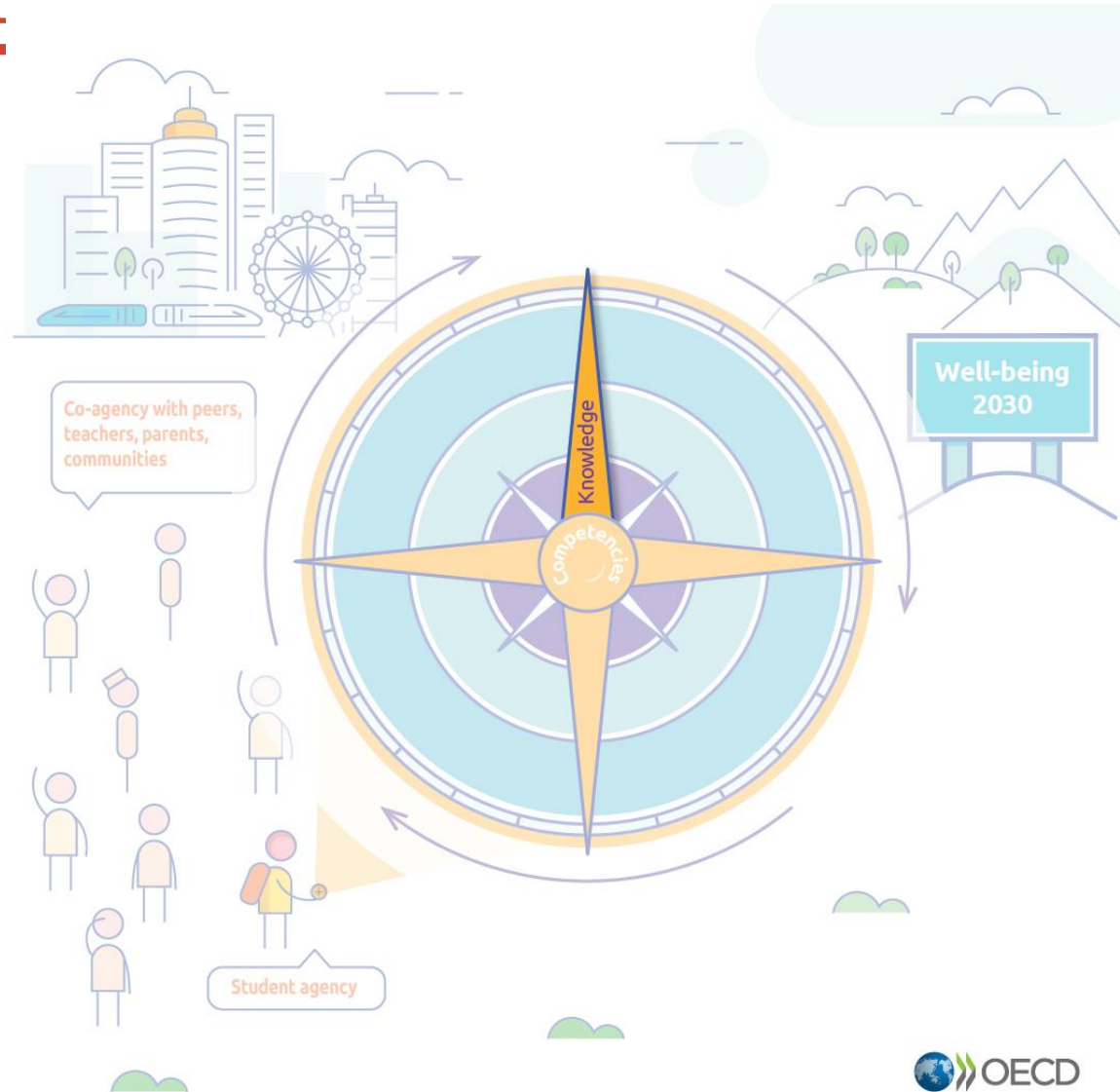
Students' life satisfaction and school climate

Change in the school-level index associated with a one-point change on the student life-satisfaction scale

Fig III.11.7

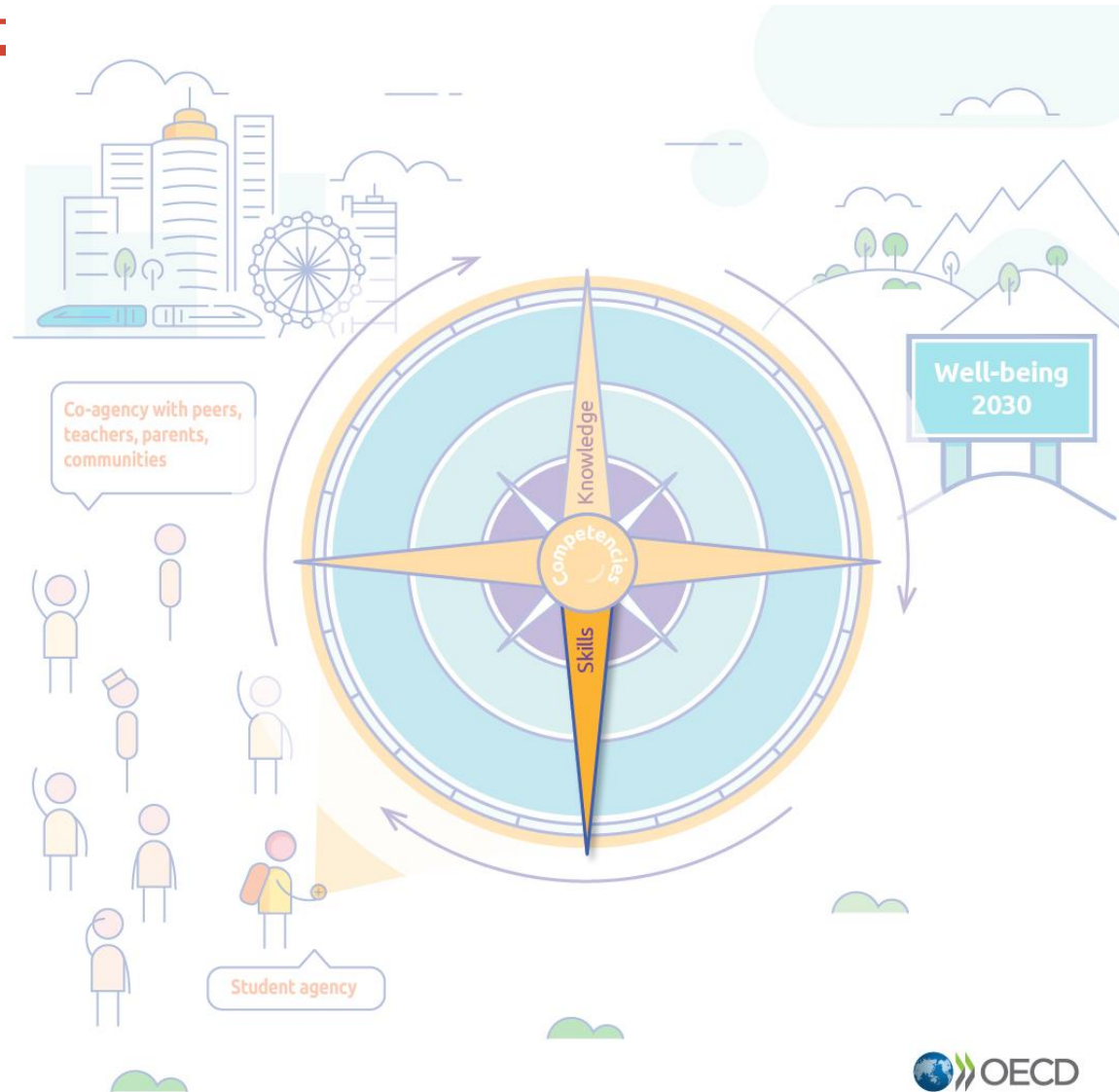
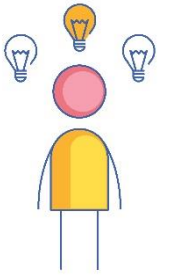


Fostering creativity in schools: Knowledge



- Disciplinary
- Interdisciplinary
- Epistemic
- Procedural

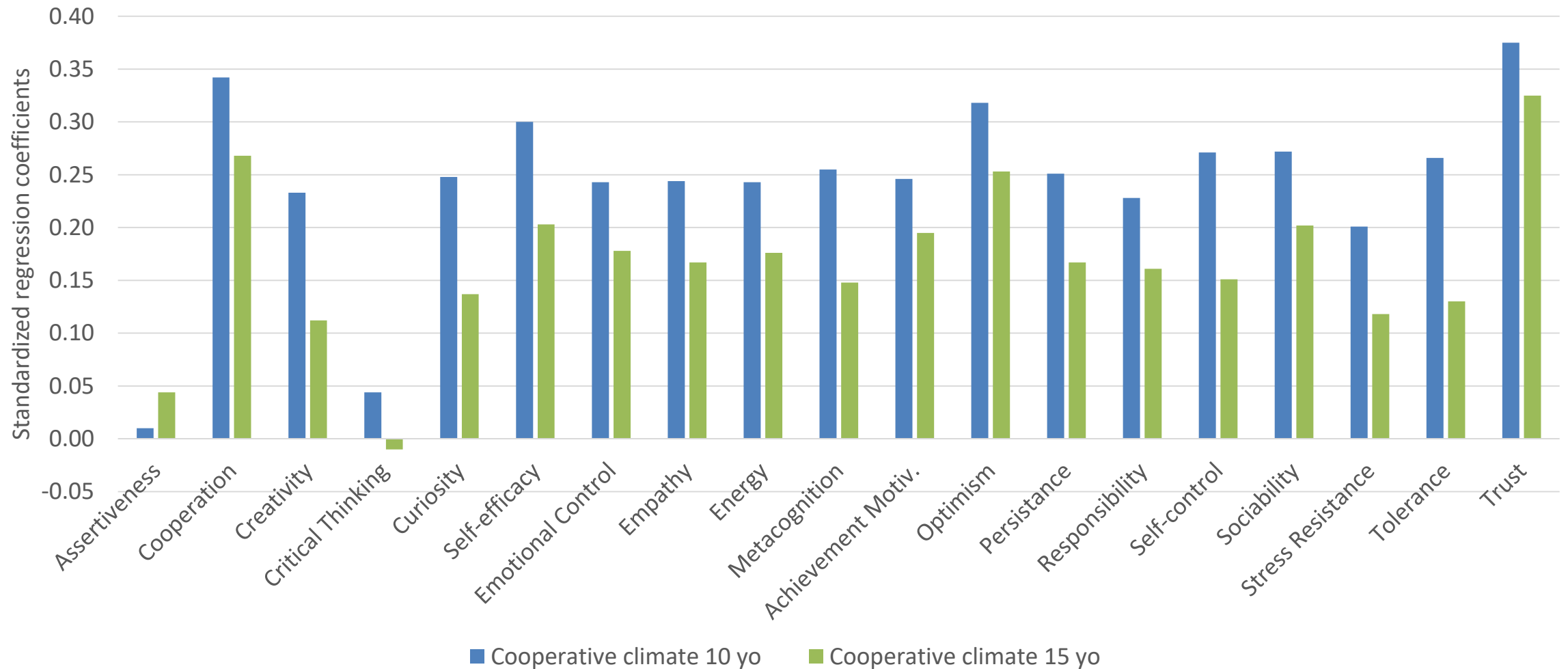
Fostering creativity in schools: Skills



- Cognitive & meta-cognitive
- Social & emotional
- Physical & practical

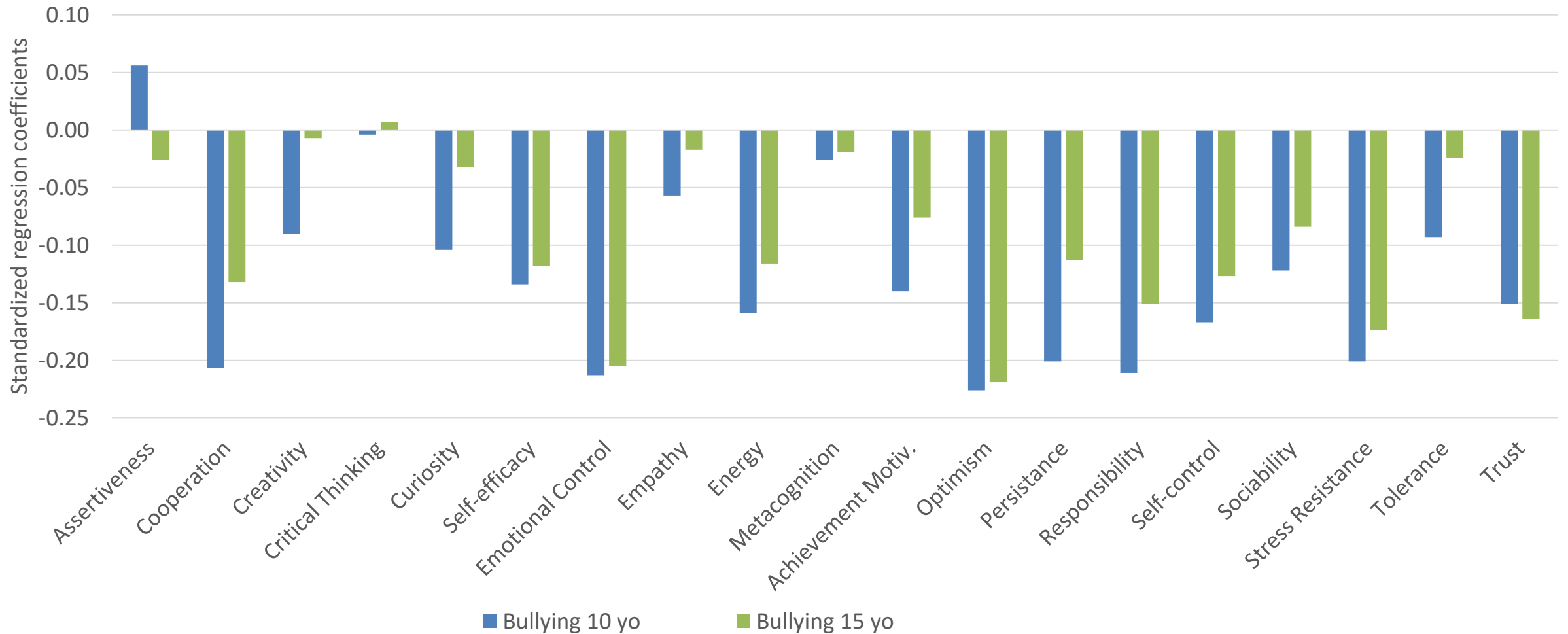
Influence of students' environment – Classroom climate

Cooperative classroom climate is positively related to SE skills



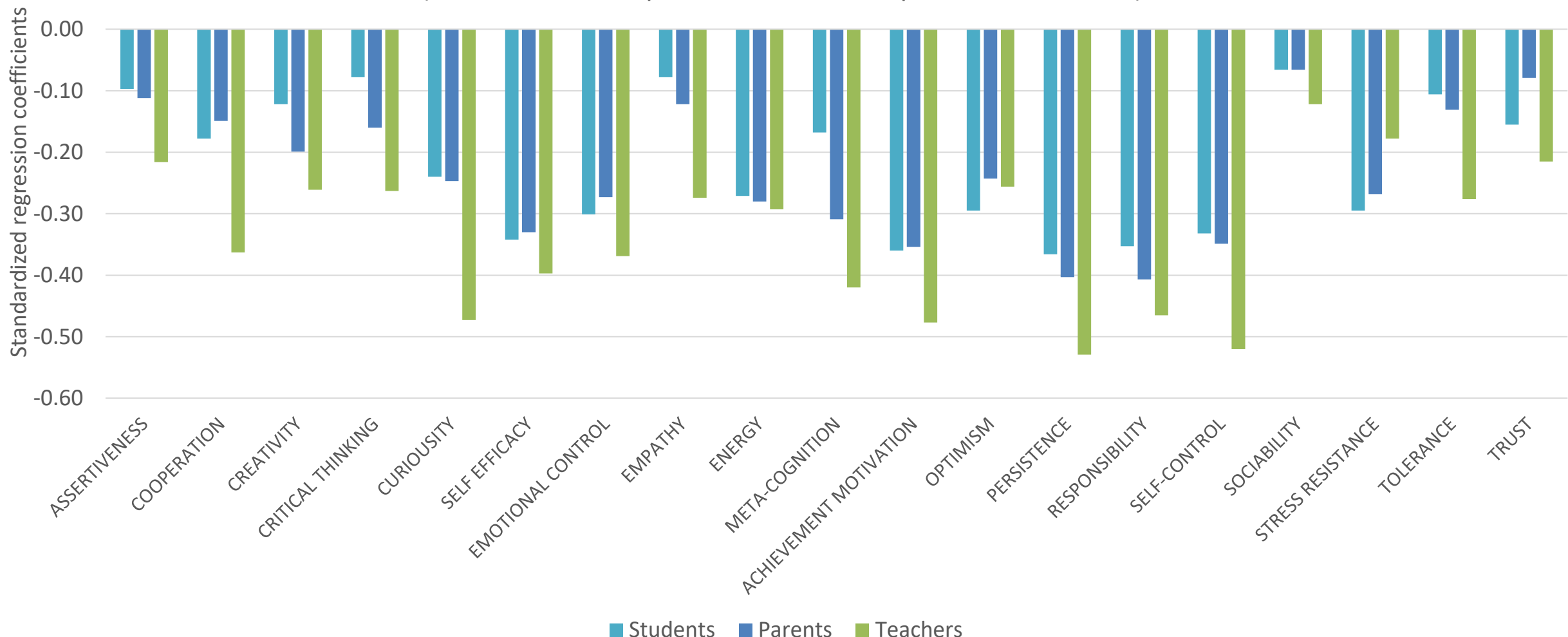
Influence of students' environment – School bullying

School bullying is negatively related to students' SE skills

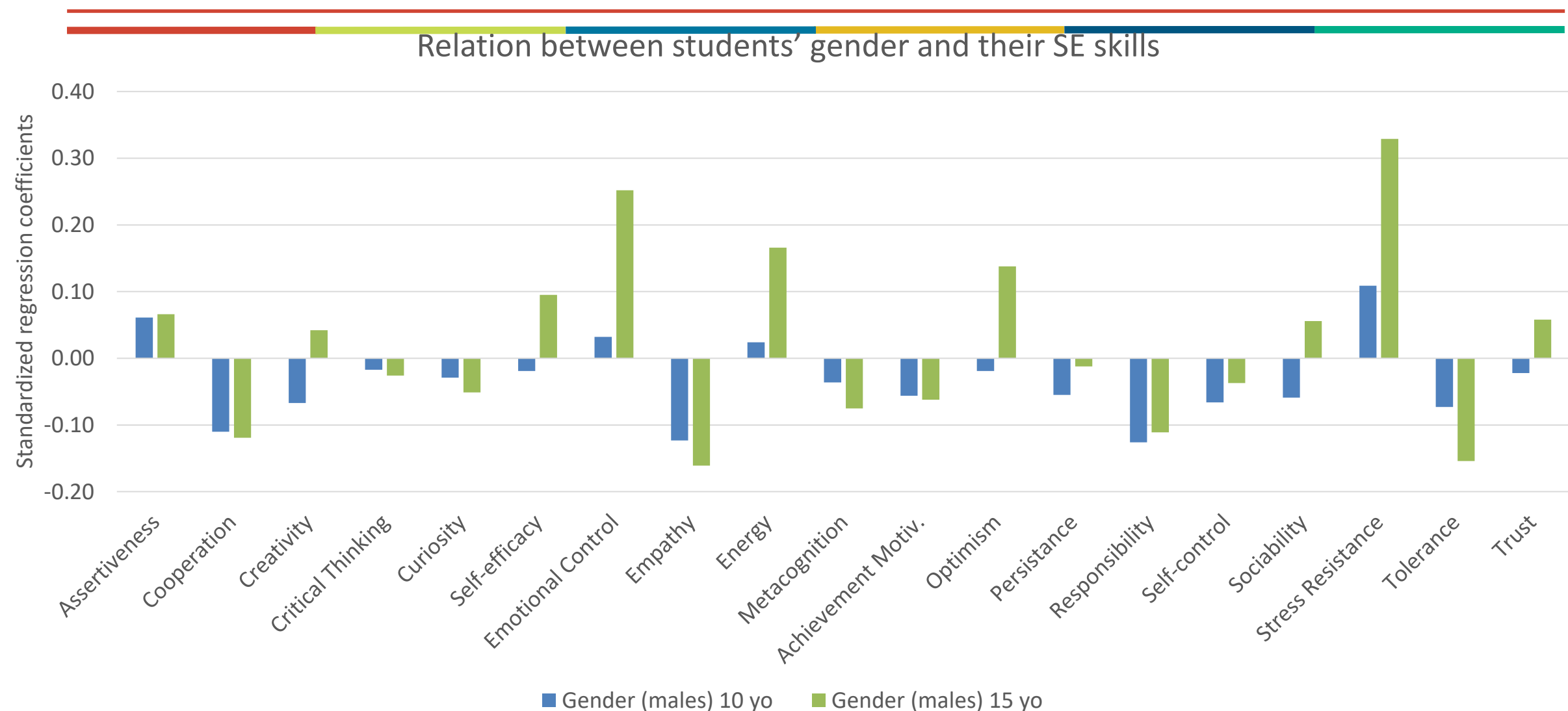


Importance of SE skills – Better focus, harder to distract during class

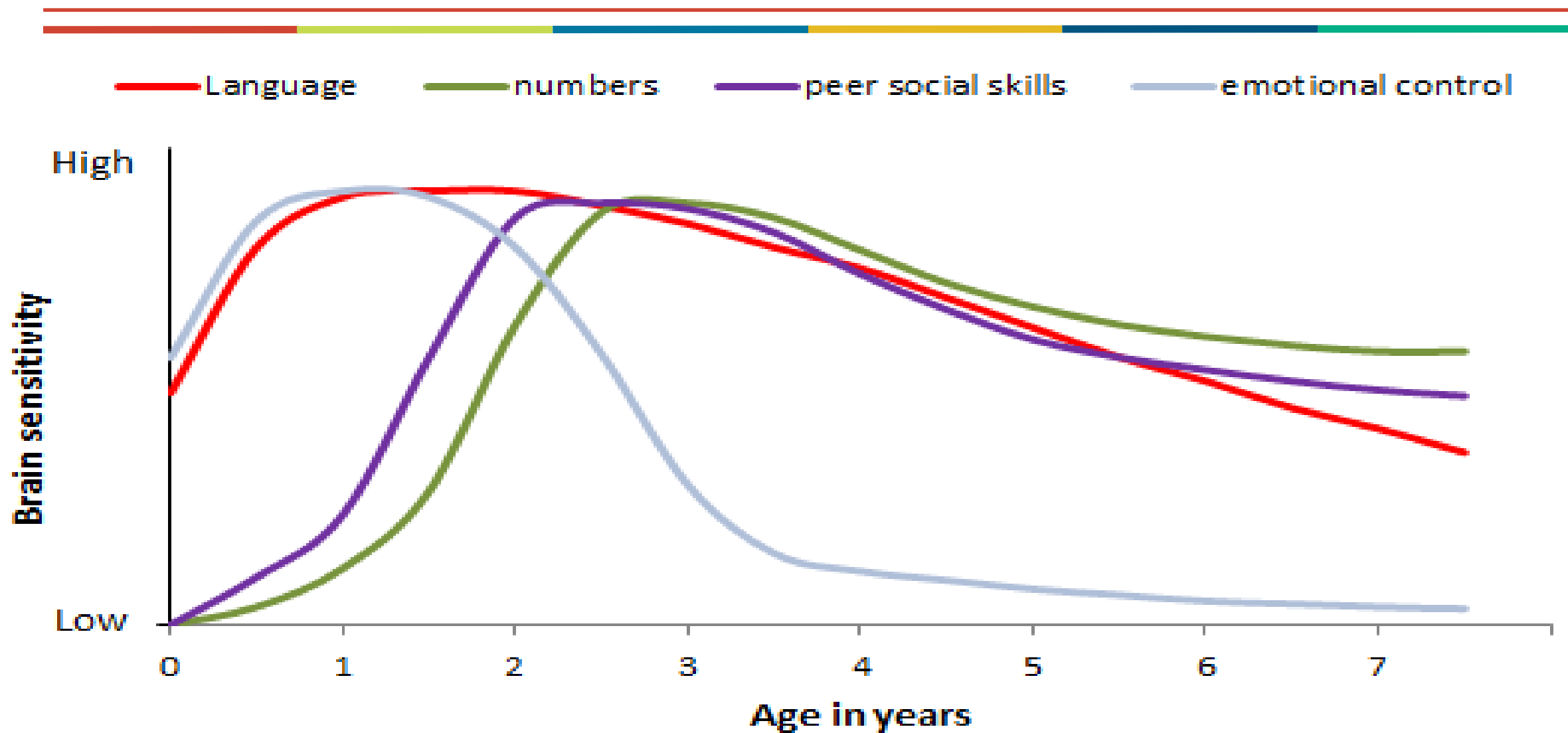
Trouble focusing is related to social and emotional skills
(based on student, parent and teacher reports – older cohort)



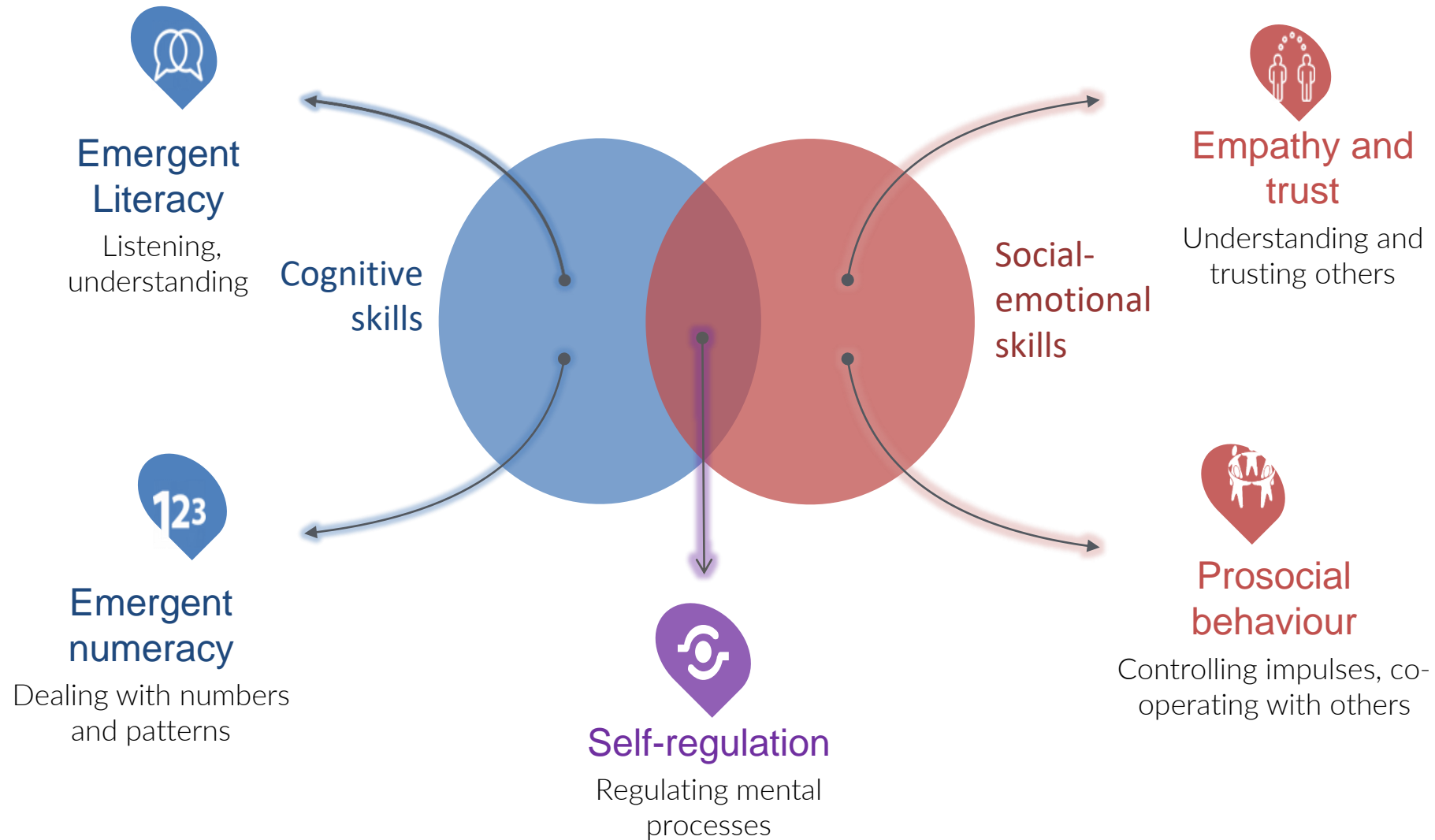
Relationship of social and emotional skills and students' gender



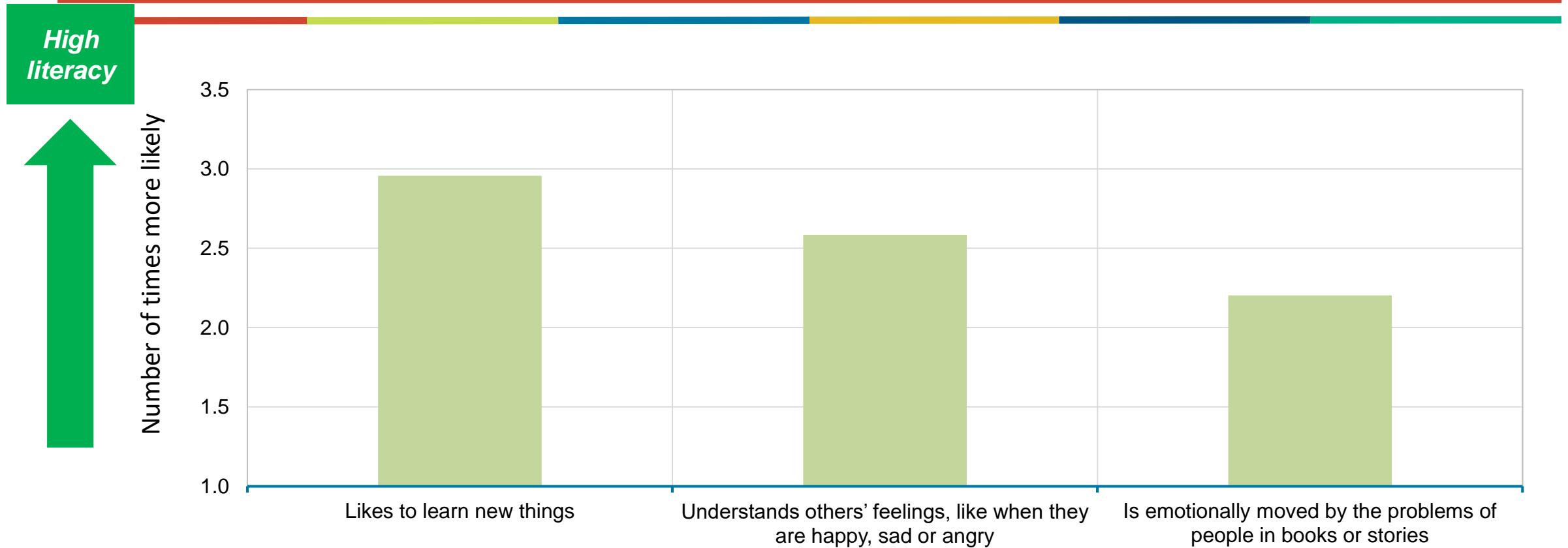
Brain sensitivity of important developmental areas



Based on a balanced, broad set of domains



An example



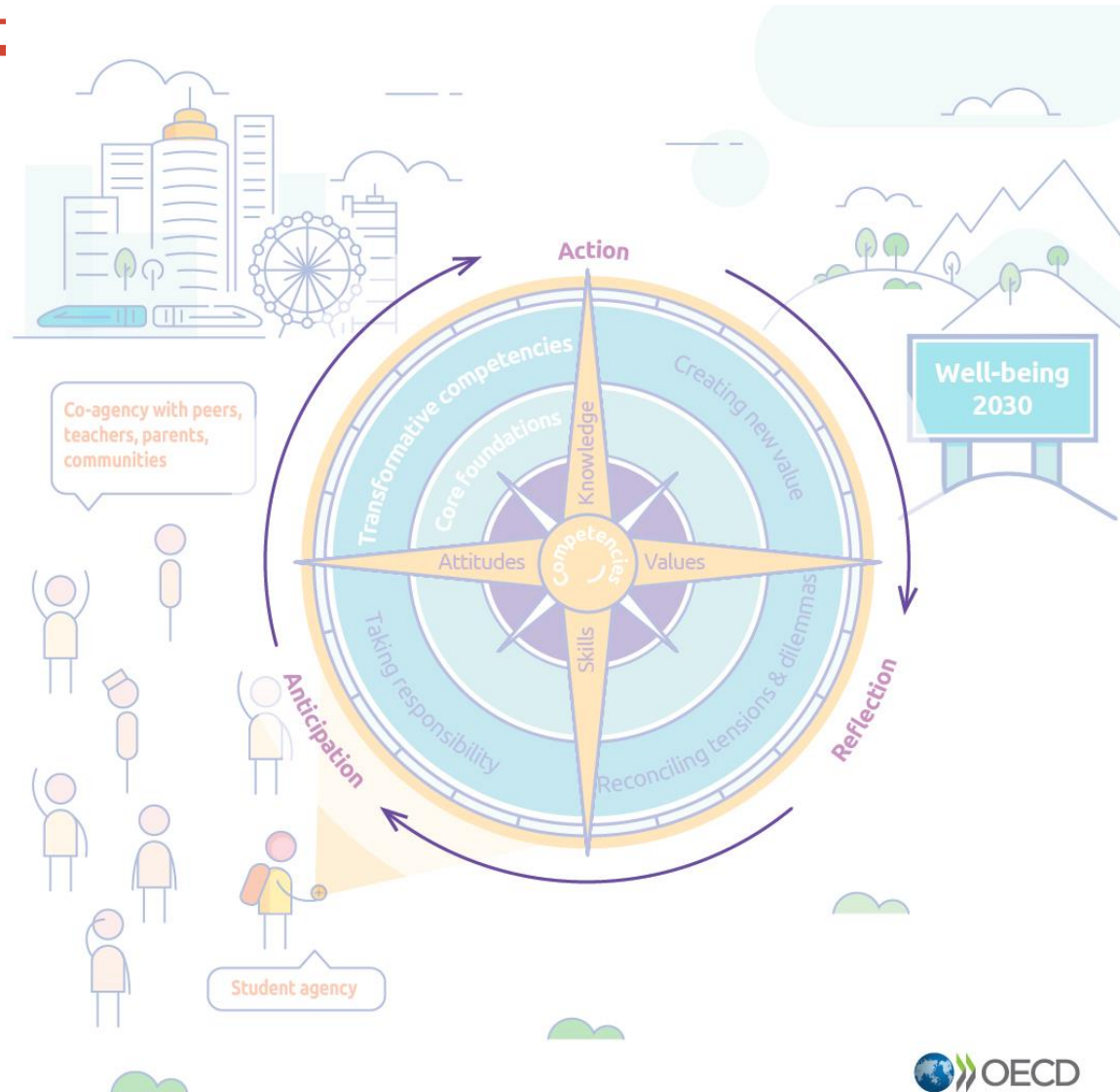
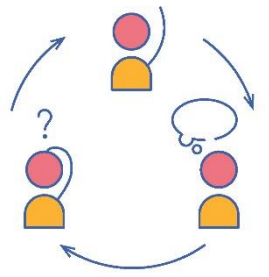
Source: IELTS Main Study

Transformative competencies



- Creating new value
- Taking responsibility
- Reconciling tensions & dilemmas

Implications for pedagogy



- Anticipation
- Action
- Reflection

When fast gets really fast, being slow to adapt makes education really slow

Industrial systems

World class systems

Student inclusion

Some students learn at high levels (sorting)

All students need to learn at high levels

Curriculum, instruction and assessment

Routine cognitive skills

Complex ways of thinking and doing

Teacher education

Standardisation and compliance

High-level professional knowledge workers

Work organisation

'Tayloristic', hierarchical

Flat, collegial

Accountability

Primarily to authorities

Primarily to peers and stakeholders

Thank you

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