



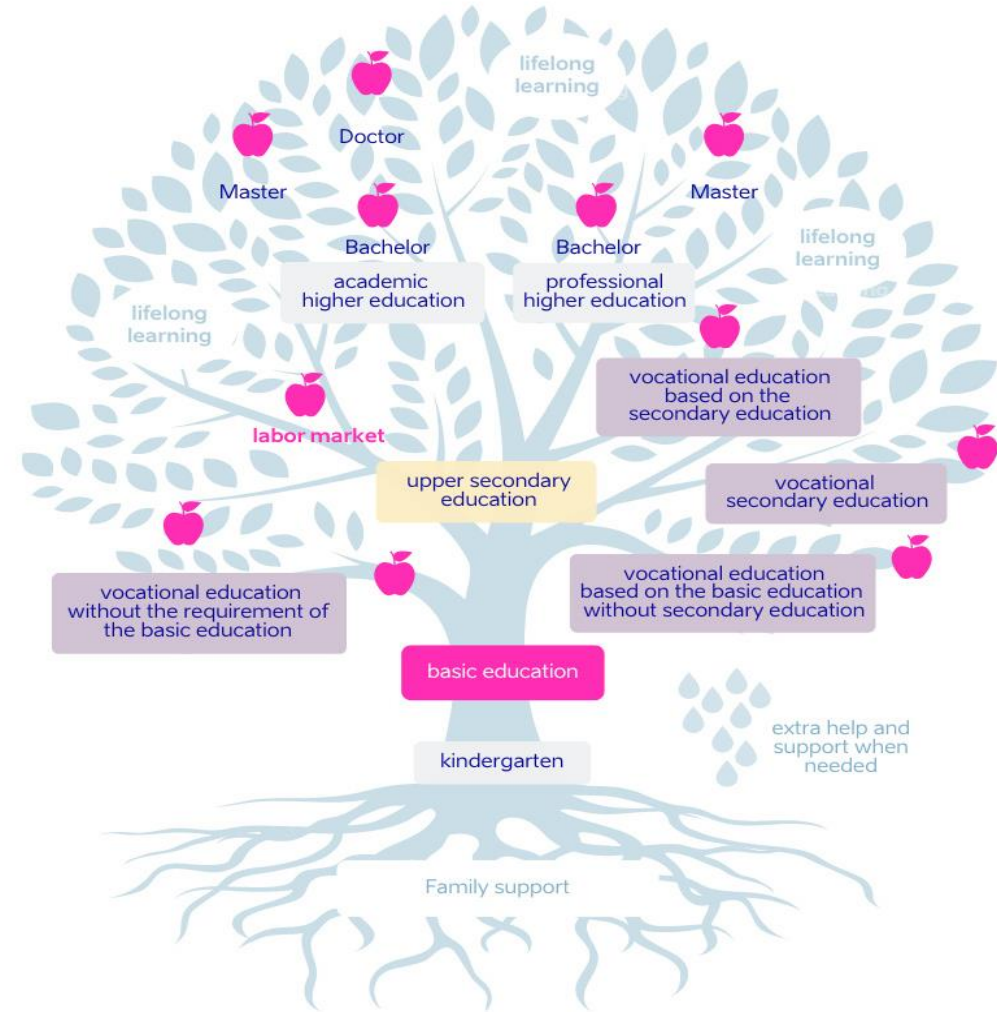
What stands behind PISA 2022 results?

education
estonia

Gunda TIRE /
Head of International
Assessments,
Education and Youth Board
of Estonia

Education as a lifestyle

- + Pre-school education
- + Basic education
- + General upper-secondary education
- + Vocational education
- + Higher education
- + Adult education



Statistics for 2022-23

157 00 students
in general
education

862 students in
vocational
education

14 100 children
in grade 1

16 569 teachers
in general
education
schools

511 general
education
schools

18 institutions
for higher
educations with
44 611 students

Estonian policy reforms

- + Law on education in 1992
- + National curriculum (1996) provides framework for education establishments. It includes learning outcomes, competencies, values, updated on regularly
- + School autonomy since 1996
- + Digital competencies since 1996 "Tiger Leap"
- + External evaluation since 1997 now include e-tests, national exams
- + Lifelong learning strategy 2020
- + Education Strategy 2035



PISA assesses knowledge and skills of 15-year-old students in mathematics, reading and science



PISA 2000
Lugemine



PISA 2003
Matemaatika



PISA 2006
Loodusteadused



PISA 2009
Lugemine



PISA 2012
Matemaatika



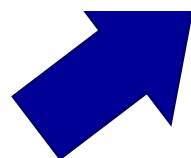
PISA 2015
Loodusteadused



PISA 2018
Lugemine



PISA 2022
Matemaatika



PISA 2022

- + Tested around 690 000 students representing about 29 million 15-year-olds from schools in 81 participating countries and economies.
- + In **Estonia**, 6392 students, in 196 schools, completed the assessment in mathematics, reading or science, representing about 13 300 15-year-old students (an estimated 94% of the total population of 15-year-olds).
- + In **Croatia**, 6135 students, in 180 schools, completed the assessment in mathematics, reading or science, representing about 35 000 15-year-old students (an estimated 89% of the total population of 15-year-olds).



Koševi

Pitanje 1 / 1

Prouči "Koševe" na desnoj strani. Odgovori na pitanje klikom na jedan od ponuđenih odgovora, a zatim utipkaj obrazloženje.

S obzirom na prosječnu koš-razliku ove sezone, je li moguće da ova momčad zapravo nikada nije dobila utakmicu s 19 koševa razlike?

- Da
- Ne

Obrazloži svoj odgovor:

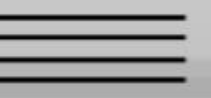
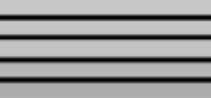
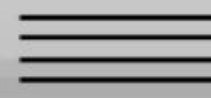
KOŠEVI

Košarkaška momčad Zedlandije osvanula je na naslovnici lokalnih novina.

ZEDLANDIJSKI LIST

Košarkaška momčad osvaja prvenstvo!

- Dobivene sve utakmice sezone.
- Prosječna koš-razlika u sezoni: 19 koševa.



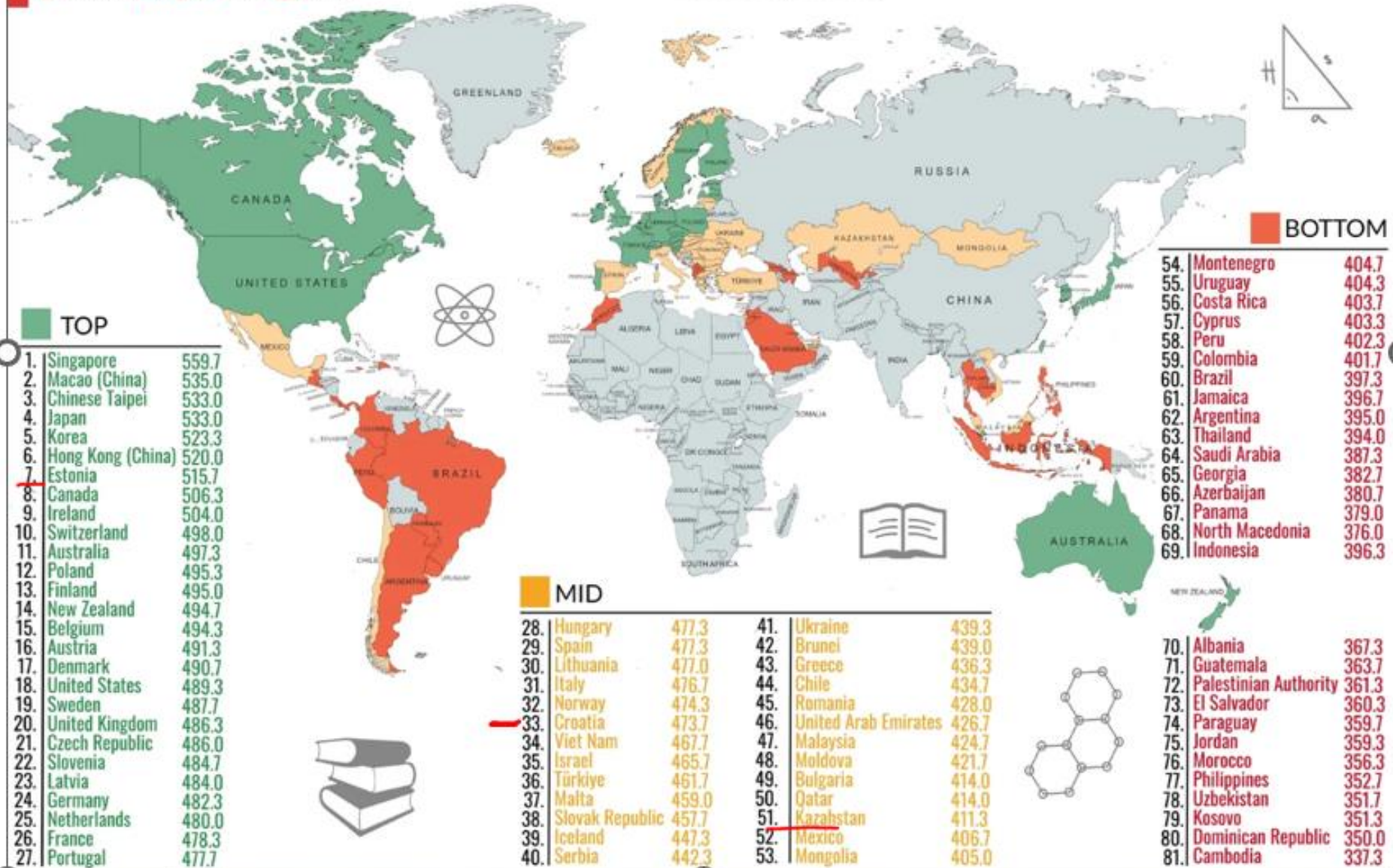
PISA 2022 Worldwide Ranking

average score of math, science and reading

factsmaps.com

Source: OECD, 2022-2023

The Program for International Student Assessment (PISA) is a worldwide study by OECD in more than 80 nations of 15-year-old students' scholastic performance on mathematics, science and reading.



Mean scores in PISA 2022

Estonia

6th in Reading

7th in Mathematics

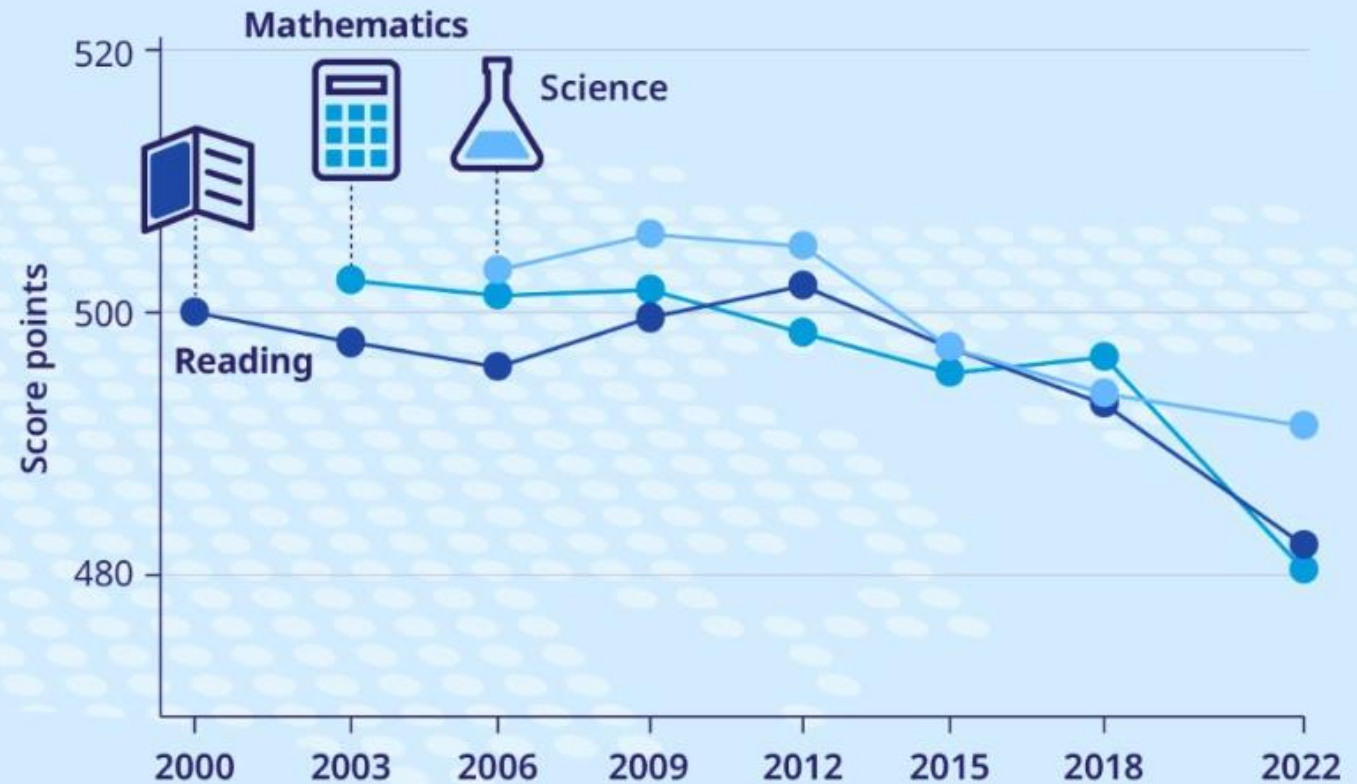
6th in Science

10 Countries with Highest PISA Scores:

1. Singapore - 560
2. Macau - 535
3. Taiwan - 533
4. Japan - 533
5. South Korea - 523
6. Hong Kong - 520
7. Estonia - 516
8. Canada - 506
9. Ireland - 504
10. Switzerland - 498

Trends in PISA 2022

Mathematics, reading and science performance **declined significantly** since PISA began



The results for mathematics remained statistically constant from 2003 to 2018.

Croatia

Estonia

Figure 1. Trends in performance in mathematics, reading and science

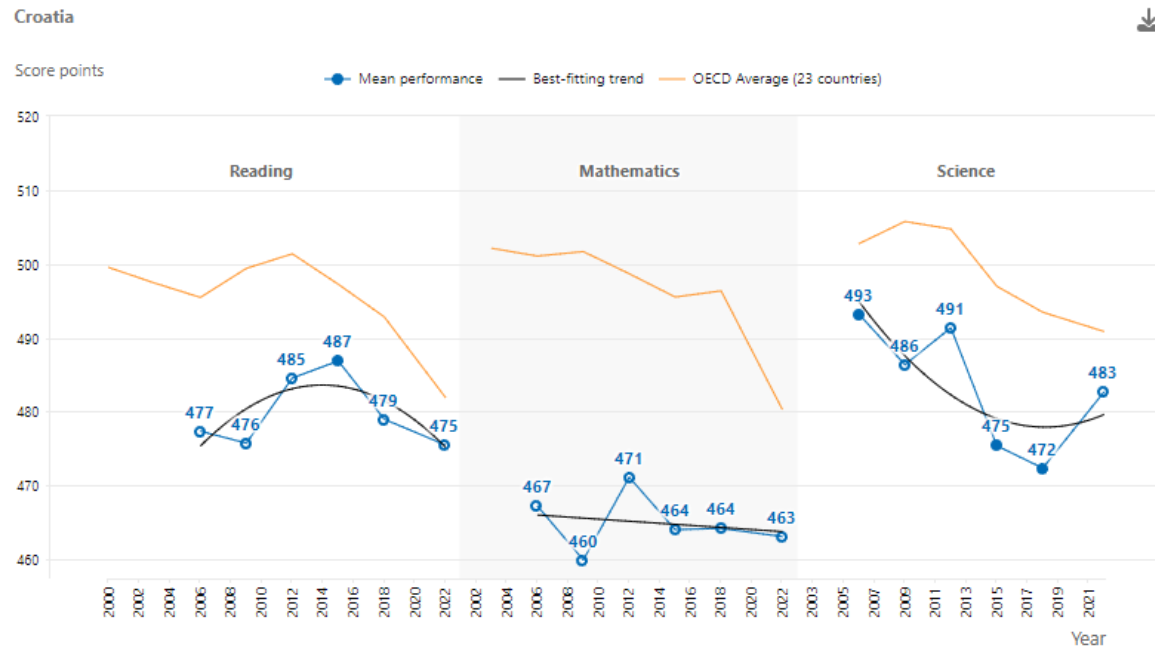
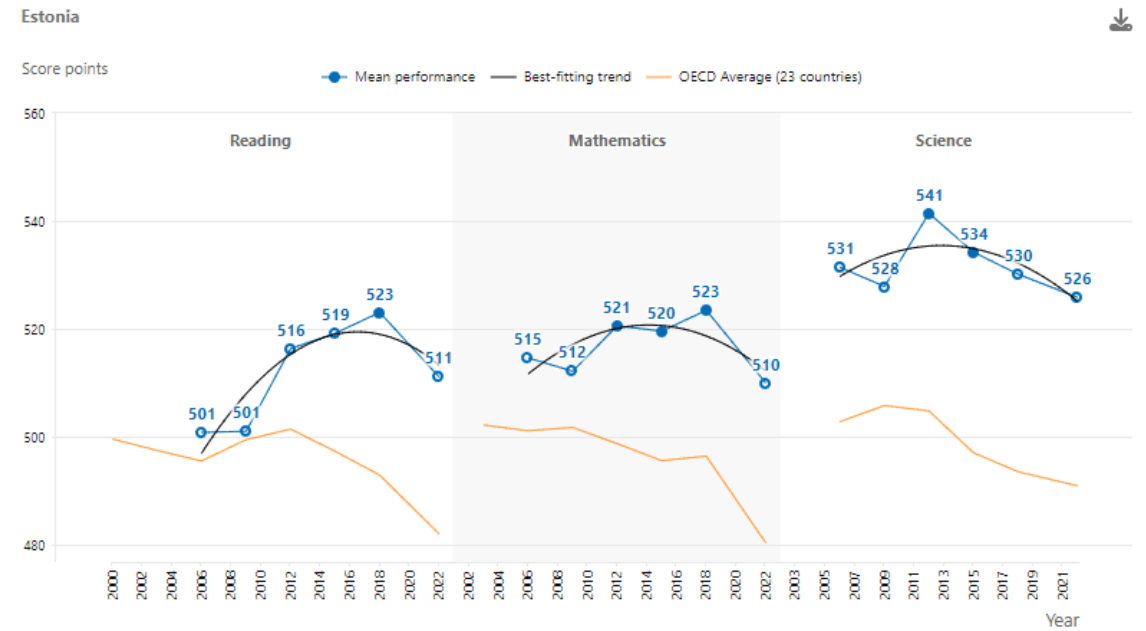


Figure 1. Trends in performance in mathematics, reading and science



Croatia

Estonia

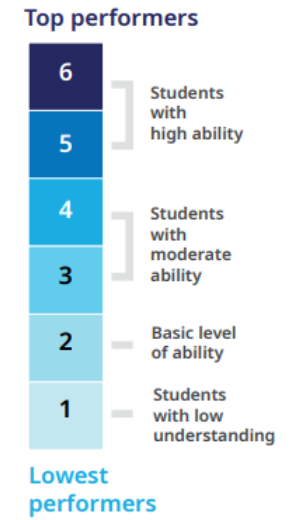


Figure 3. **Top performers and low-performing students in mathematics, reading and science**

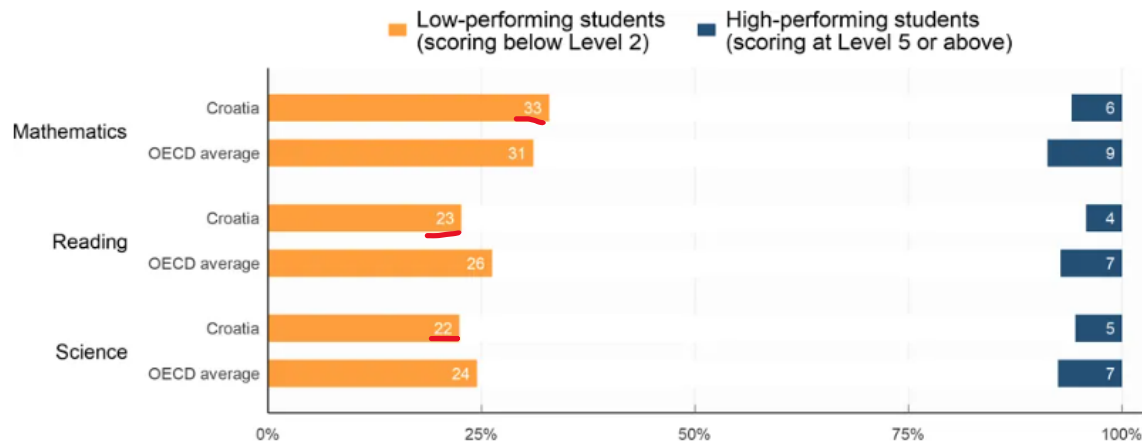
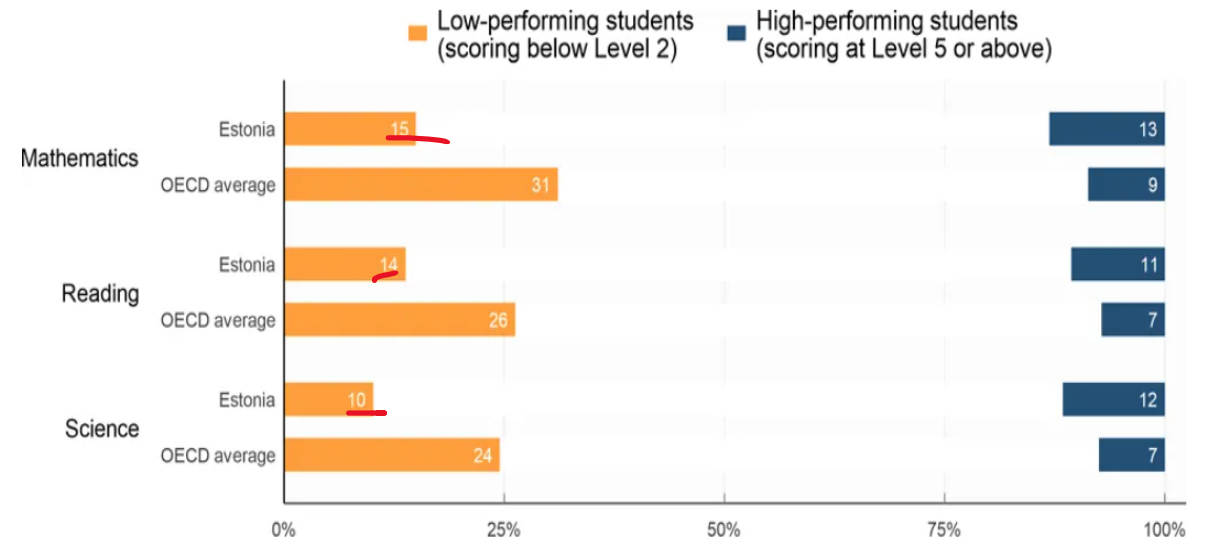
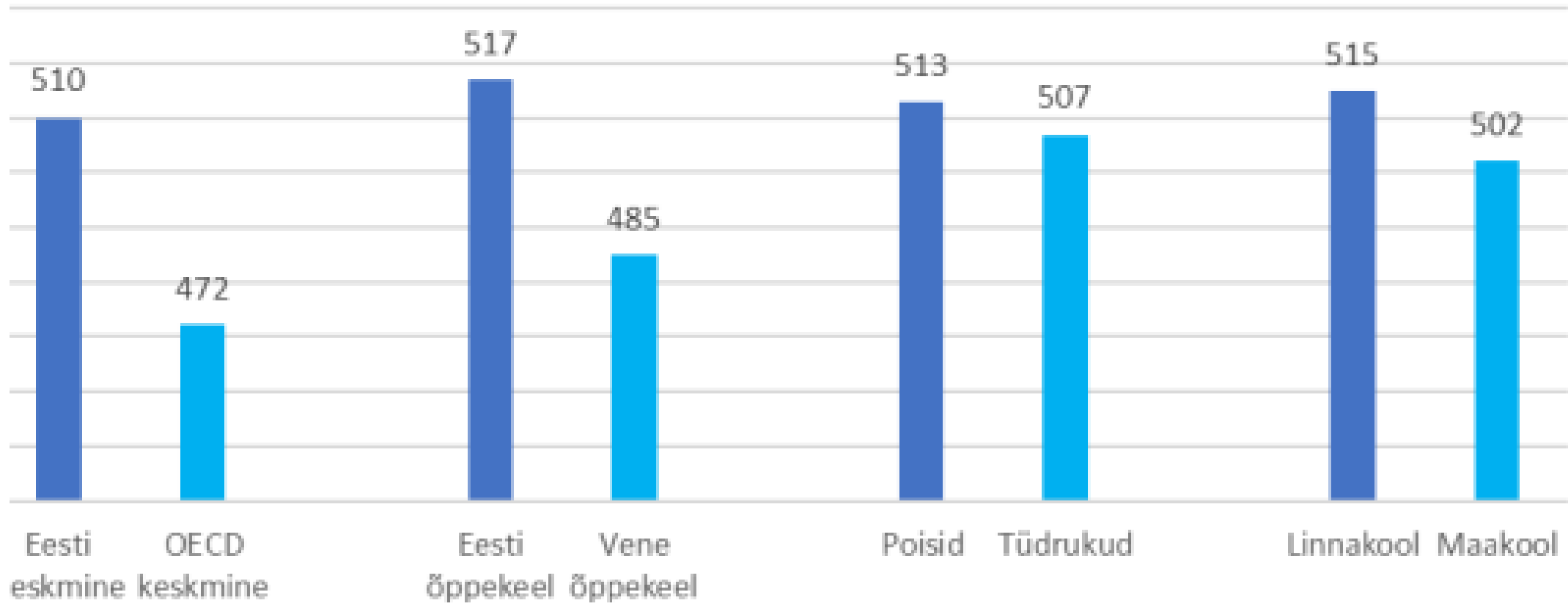


Figure 3. **Top performers and low-performing students in mathematics, reading and science**



PISA 2022 MATEMAATIKA



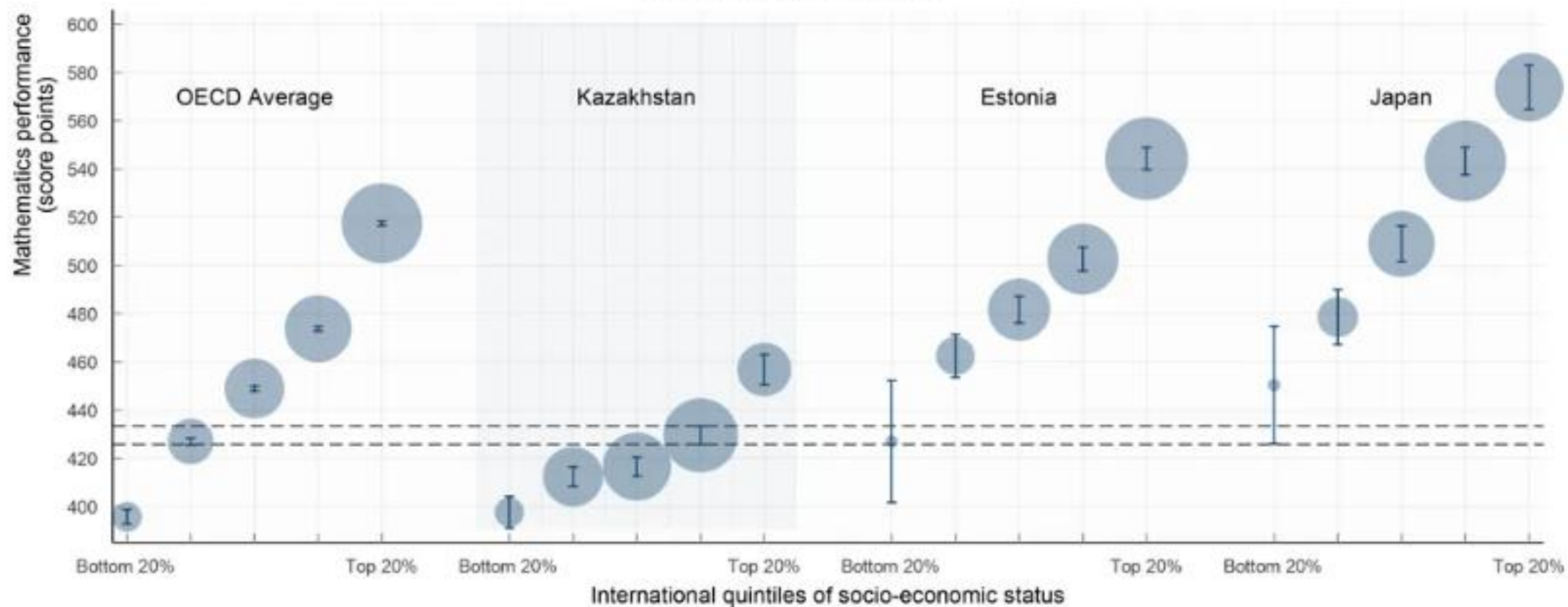
+ Estonian mean,

language of instruction,

boys/girls,

rural/urban

Figure 4. Mean performance in mathematics, by international quintiles of socio-economic status



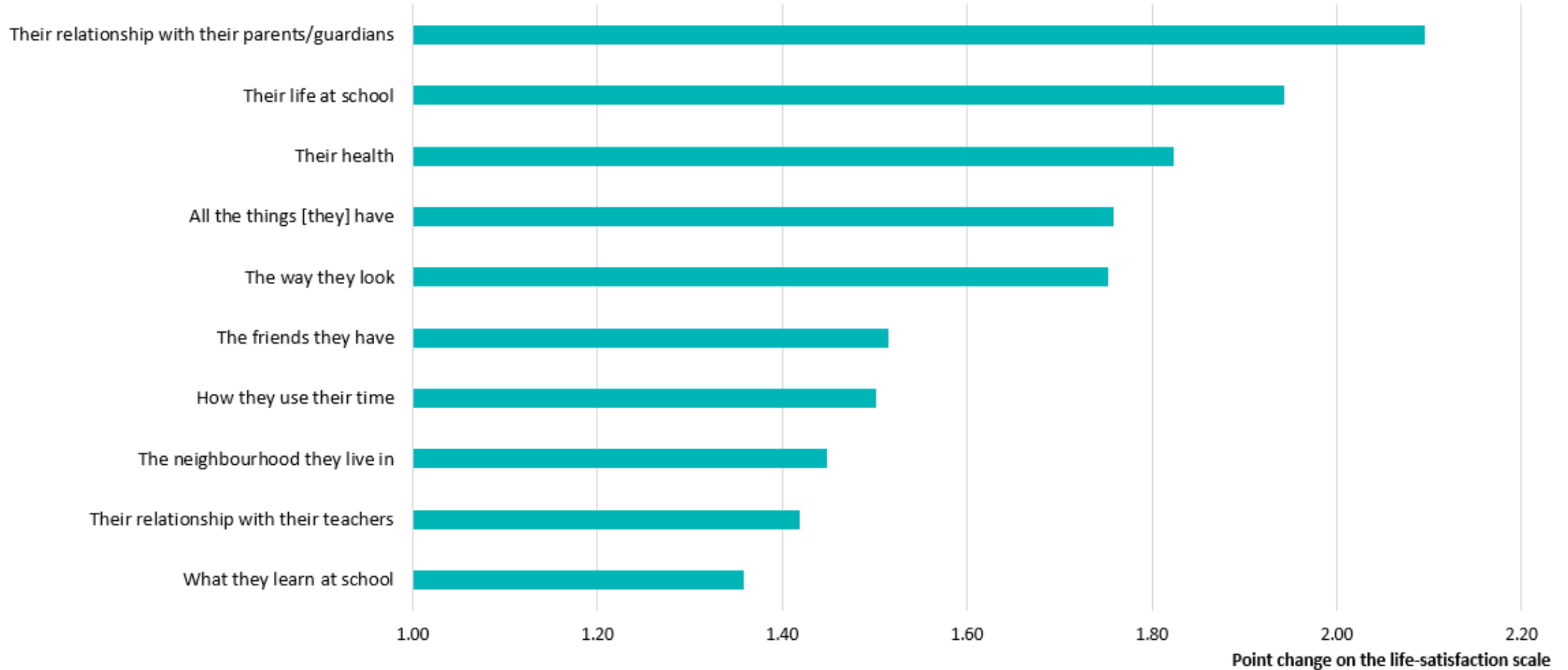


Life satisfaction and satisfaction with different aspects of life

Figure II.1.7

Average of countries/economies with available data

Change in life satisfaction when students reported that they are satisfied or totally satisfied with the following:

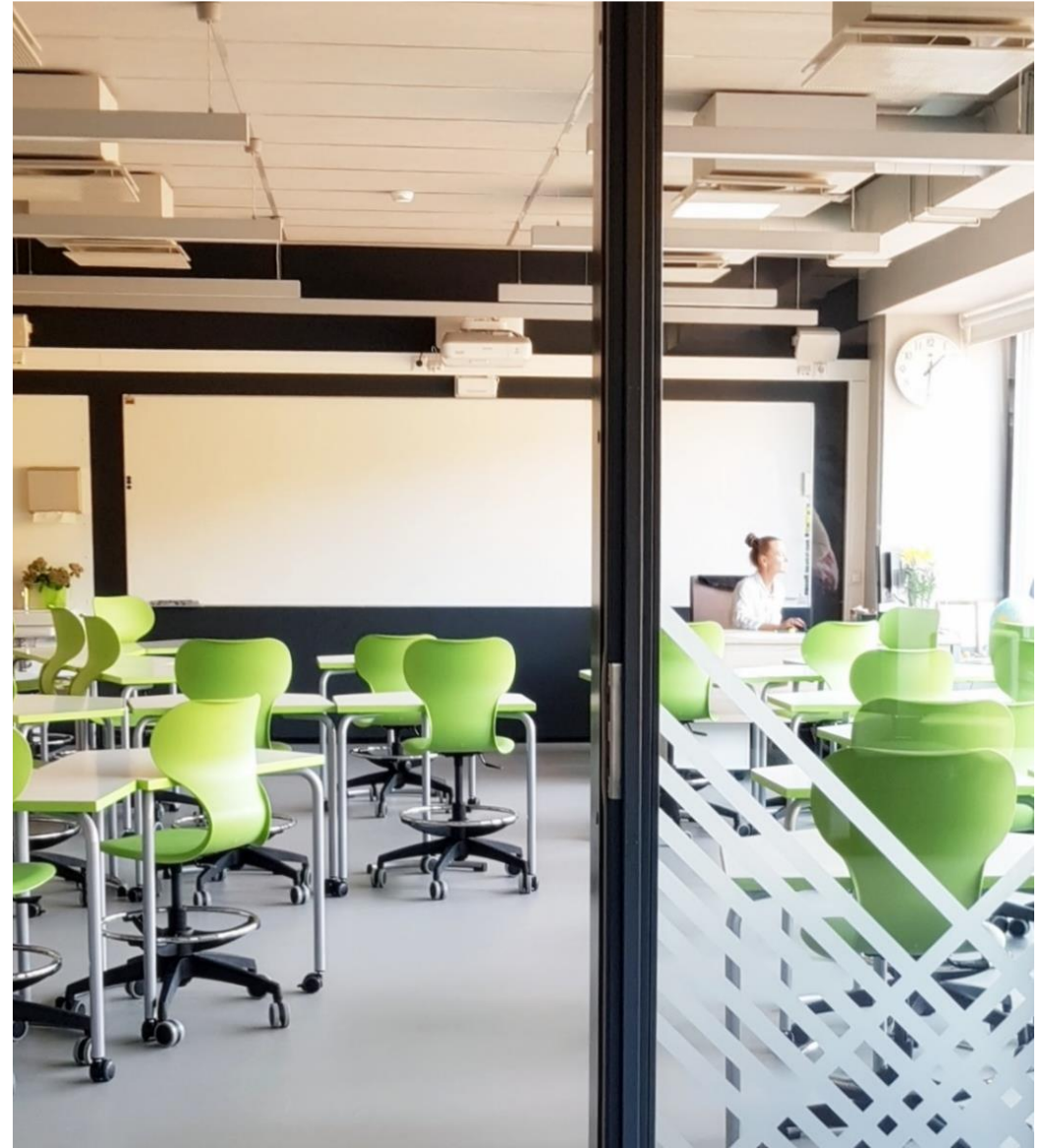


How students progress

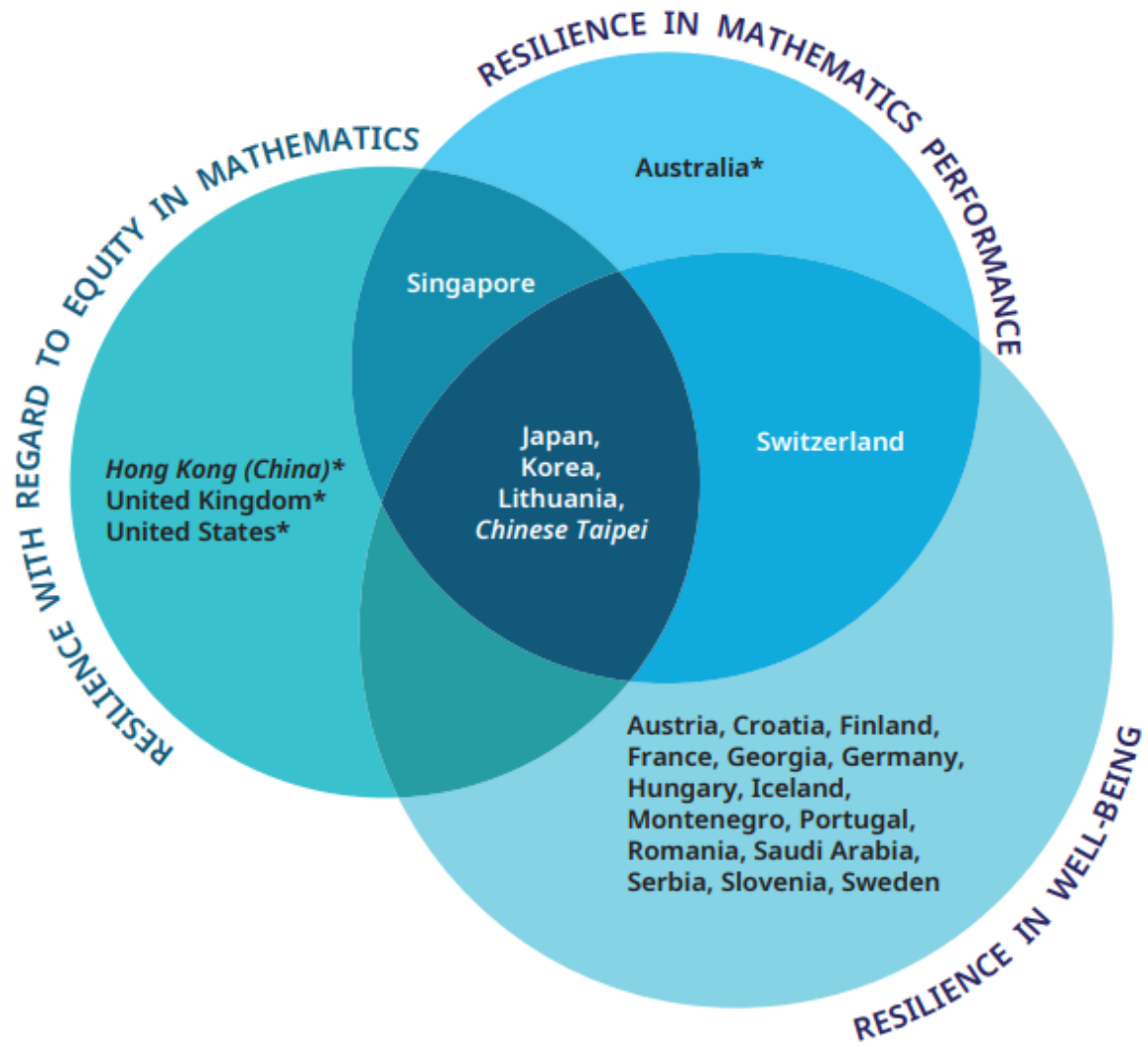
Croatia	Estonia
When they sat the PISA test in 2022, 79% of 15-year-old students in Croatia were enrolled in 9th grade.	When they sat the PISA test in 2022, 76% of 15-year-old students in Estonia were enrolled in 9th grade.
In Croatia, 83% reported that they had attended pre-primary education for one year or more (OECD average: 94%).	In Estonia, 96% reported that they had attended pre-primary education for one year or more

School Autonomy

- + In Croatia, **35%** of students attended a school where principals had the main responsibility for hiring teachers (OECD average: 60%), and **80%** were enrolled in a school where teachers had the main responsibility for choosing which learning materials are used (OECD average: 76%).
- + In Estonia, **94%** of students attended a school where principals had the main responsibility for hiring teachers (OECD average: 60%), and **97%** were enrolled in a school where teachers had the main responsibility for choosing which learning materials are used (OECD average: 76%)

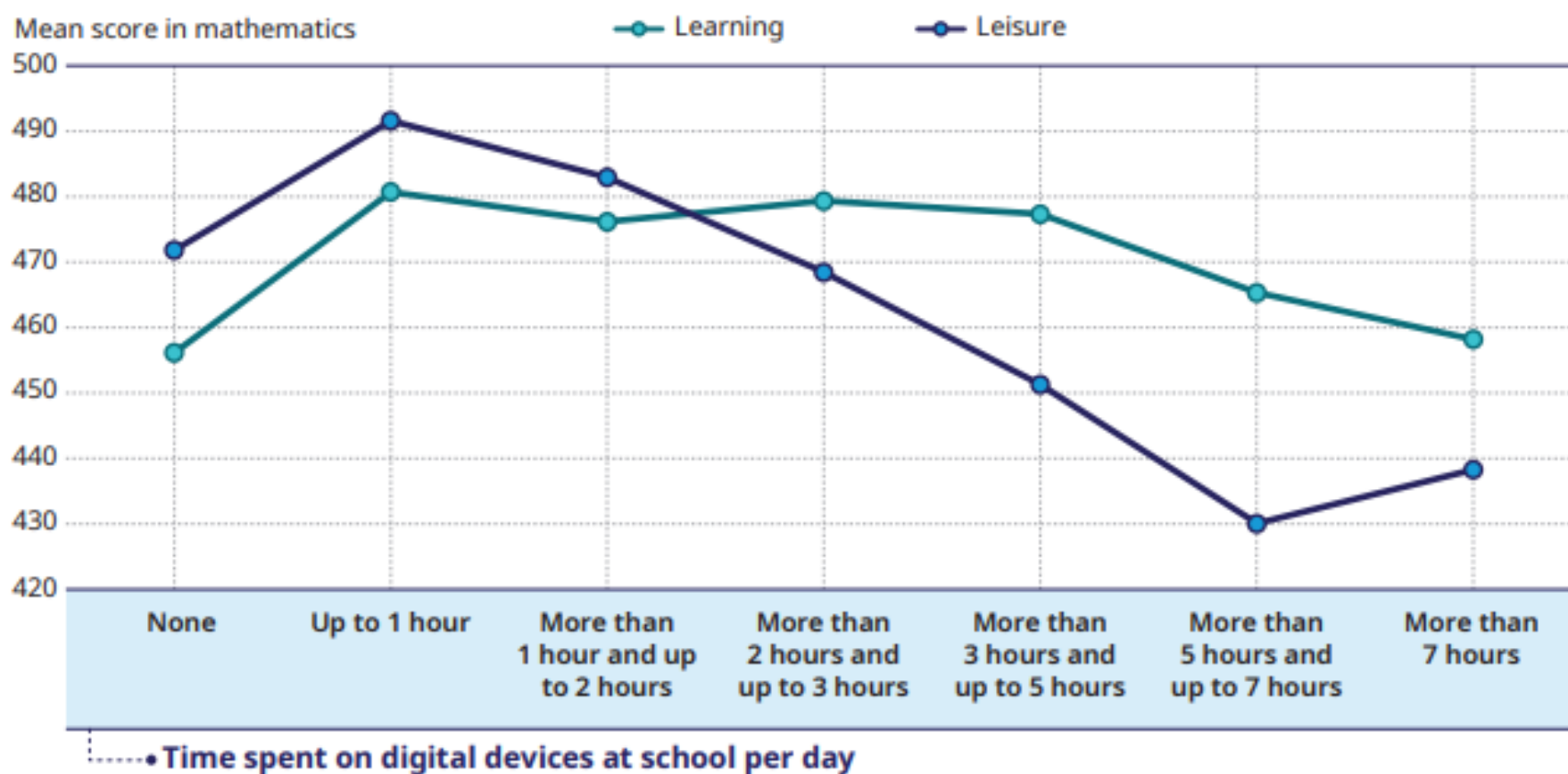


Resilient education systems



Time spent on digital devices at school and mathematics performance

Based on students' reports; OECD average



Supporting students at school and outside school (OECD)



8%

of students suffer food insecurity



30%

of students get distracted by digital devices



20%

of students are bullied at least a few times a month

Students in Estonia perform better in PISA (mathematics) if:

They speak Estonian at home



They never faced grade repetition



They attend a school with a positive climate (disciplinary climate, high sense of belonging, close cooperation among students)



They have more than 4 mathematics lessons per week



They attend school with a more socio-economically privileged composition



They are boys

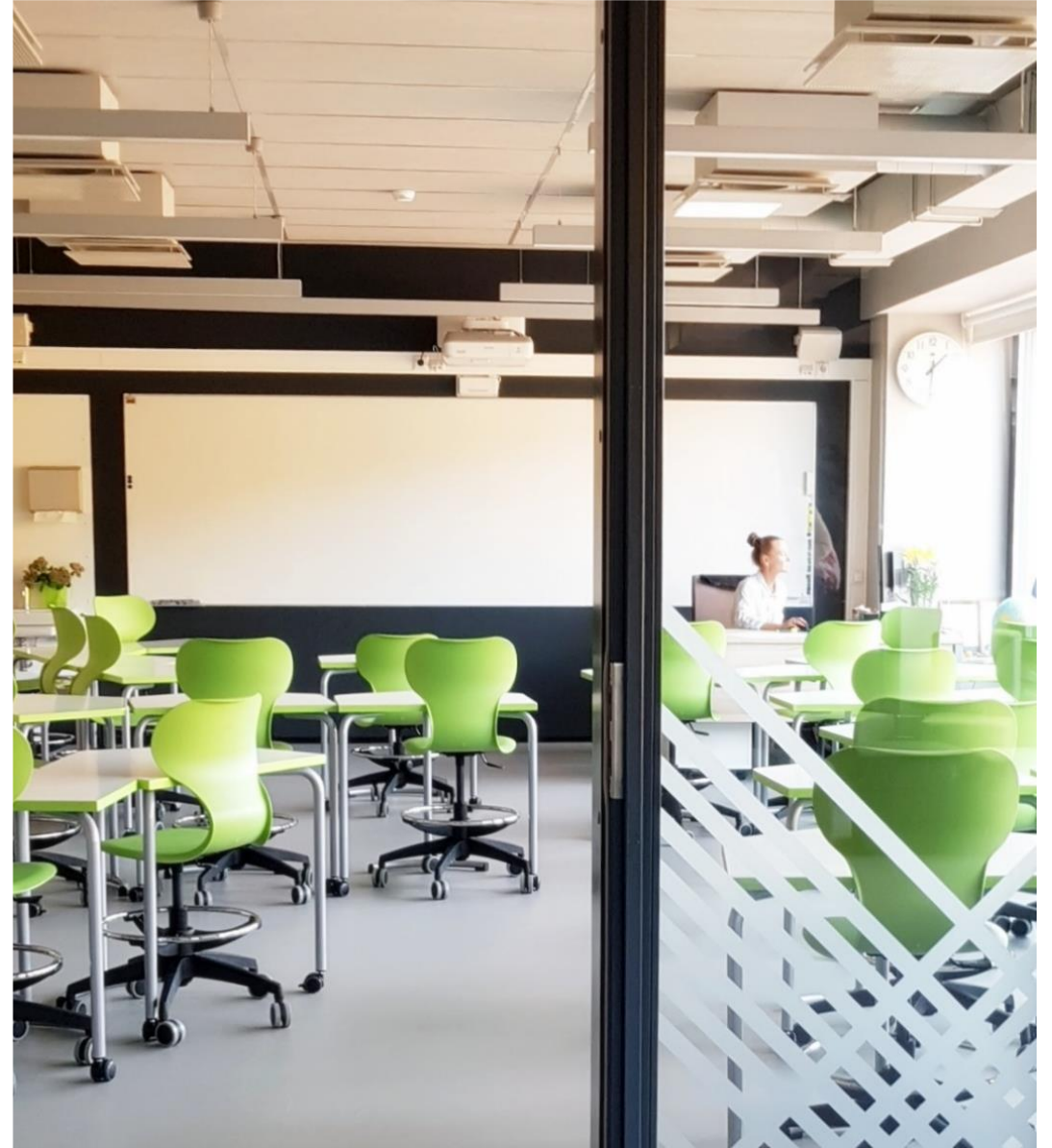


They come from a family with high socioeconomic and cultural status



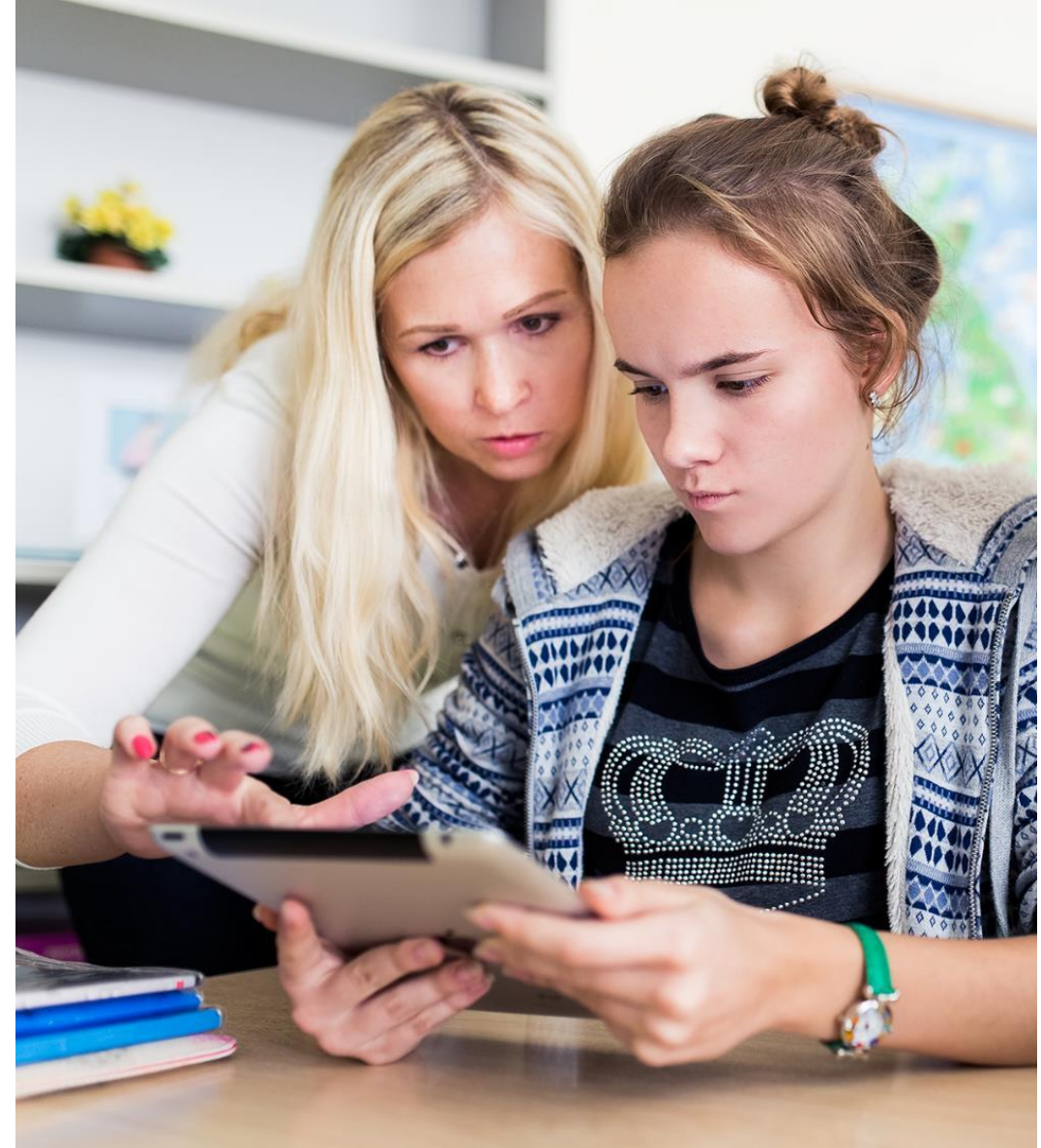
Estonian school

- + Schools are autonomous, and principals have extensive rights to arrange life at schools
- + Flexible curricula arrangements allow schools to shape their own face
- + Accountability- sample based tests in grades 4, 7, examinations in grades 9 and 12
- + Policy of inclusive education
- + Schools have to provide free access to social pedagogues, speech therapists, psychologists, etc for students who need support
- + Free textbooks
- + Free school lunch for all students



Estonian teacher

- + Teachers are free to use teaching methods and textbooks of their own choice
- + All teachers are required a master's degree
- + 1% of school's payroll budget goes to teacher training
- + Many free in-service training courses available
- + Mentoring system for novice teachers and school principals
- + Average age 49
- + 86 % of teachers are female
- + 86% of lesson time is spent on teaching and learning



Possible reasons for success

- + Students and teachers, schools!
- + Comprehensive curriculum
- + External evaluation tradition
- + Priority to provide equal education for everybody
- + Support systems for students in need
- + Free school lunch, textbooks, transportation
- + All schools have many after-school activities (choirs, dance, technology, sports, art)
- + Schools are autonomous to arrange their daily life, teachers free to use teaching materials and textbooks
- + Teacher networking
- + Digital solutions



Society
(media)
active in
discussions
about
education

Postimees, December
5, 2023



Urmas Nemvalts joonistab. — Foto: Urmas Nemvalts







Let's Build the Future Together!

education
estonia

Thank you!

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    Education Estonia