



# Beyond Averages: ILSA as avenues for discussions and sharing

Paulína Koršňáková, PhD

International Association for the Evaluation of Educational Achievement

[www.iea.nl](http://www.iea.nl)

# ILSAs are known for the averages

## MATHEMATICS—FOURTH GRADE

### International Mathematics Achievement (Average Scale Scores)



**East Asian Countries Top Achievers in Mathematics by a Substantial Margin**

Singapore **625**  
Hong Kong SAR **602** • Korea, Rep. of **600** • Chinese Taipei **599** • Japan **593**  
  
Russian Federation **567** • Northern Ireland **566** • England **556** • Ireland **548**  
Latvia **546** • Norway (5) **543** • Lithuania **542** • Austria **539** • Netherlands **538**  
United States **535** • Czech Republic **533** • Belgium (Flemish) **532**  
Cyprus **532** • Finland **532** • Portugal **525** • Denmark **525** • Hungary **523**  
Turkey (5) **523** • Sweden **521** • Germany **521** • Poland **520** • Australia **516**  
Azerbaijan **515** • Bulgaria **515** • Italy **515** • Kazakhstan **512** • Canada **512**  
Slovak Republic **510** • Croatia **509** • Malta **509** • Serbia **508** • Spain **502**  
Armenia **498** • Albania **494** • New Zealand **487** • France **485** • Georgia **482**  
United Arab Emirates **481** • Bahrain **480** • North Macedonia **472**  
Montenegro **453** • Bosnia and Herzegovina **452** • Qatar **449** • Kosovo **444**  
Iran, Islamic Rep. of **443** • Chile **441** • Oman **431** • Saudi Arabia **398**  
Morocco **383** • Kuwait **383** • South Africa (5) **374** • Pakistan **328** • Philippines **297**

## SCIENCE—FOURTH GRADE

### International Science Achievement (Average Scale Scores)



**Singapore and Korea Top Achievers in Science**

Singapore **595** • Korea, Rep. of **588**  
Russian Federation **567** • Japan **562**  
Chinese Taipei **558** • Finland **555** • Latvia **542** • Norway (5) **539**  
United States **539** • Lithuania **538** • Sweden **537** • England **537**  
Czech Republic **534** • Australia **533** • Hong Kong SAR **531** • Poland **531**  
Hungary **529** • Ireland **528** • Turkey (5) **526** • Croatia **524** • Canada **523**  
Denmark **522** • Austria **522** • Bulgaria **521** • Slovak Republic **521**  
Northern Ireland **518** • Netherlands **518** • Germany **518** • Serbia **517**  
Cyprus **511** • Spain **511** • Italy **510** • Portugal **504** • New Zealand **503**  
Belgium (Flemish) **501** • Malta **496** • Kazakhstan **494** • Bahrain **493**  
Albania **489** • France **488** • United Arab Emirates **473** • Chile **469** • Armenia **466**  
Bosnia and Herzegovina **459** • Georgia **454** • Montenegro **453** • Qatar **449**  
Iran, Islamic Rep. of **441** • Oman **435** • Azerbaijan **427** • North Macedonia **426**  
Kosovo **413** • Saudi Arabia **402** • Kuwait **392** • Morocco **374**  
South Africa (5) **324** • Pakistan **290** • Philippines **249**

# TIMSS 2019 Assessment Frameworks

**Exhibit 1.1: Target Percentages of the TIMSS 2019 Mathematics Assessment Devoted to Content and Cognitive Domains at the Fourth and Eighth Grades**

Fourth Grade		
Content Domains		Percentages
Number		50%
Measurement and Geometry		30%
Data		20%
Eighth Grade		
Content Domains		Percentages
Number		30%
Algebra		30%
Geometry		20%
Data and Probability		20%
Cognitive Domains		Percentages
	Fourth Grade	Eighth Grade
Knowing	40%	35%
Applying	40%	40%
Reasoning	20%	25%

**Exhibit 2.1: Target Percentages of the TIMSS 2019 Science Assessment Devoted to Content and Cognitive Domains at the Fourth and Eighth Grades**

Fourth Grade		
Content Domains		Percentages
Life Science		45%
Physical Science		35%
Earth Science		20%
Eighth Grade		
Content Domains		Percentages
Biology		35%
Chemistry		20%
Physics		25%
Earth Science		20%
Cognitive Domains		Percentages
	Fourth Grade	Eighth Grade
Knowing	40%	35%
Applying	40%	35%
Reasoning	20%	30%

# There is more in ILSAs datasets, publications...

TIMSS collects data from different stakeholders and provides views into different aspects and contexts of education

Students

Parents

Teachers

School Principals

Researchers

Professionals

All are involved, contribute and provides their input and opinions.

# Instruments

	TIMSS	PIRLS	ICCS	ICILS
Achievement test	Math & science at G4 & G8	Reading at G4	Civics & Citizenship knowledge, G8	Computer & Information literacy, G8
<b>Questionnaires</b>				
Students	X	X	X	X
Home	X (G4)	X		
Teachers	X	X	X	X
Schools	X	X	X	X
Curriculum	X	X	X	X

No separate target population, feature of students

Separate target population

# Complex information about complex systems

Viewed from our single (and simple) perspectives that differs in:

family and education background

life and work experiences and the lessons we learned over time

# Lonely heroes in the field of education

We tend to face our challenges alone...

one teacher in a classroom

one director in a school

one NRC in a country

... and we managing, but with limited time and limited perspective

# We can achieve more together

We have colleagues and together we have a bit more time and different perspectives.

The story of Dinaric Perspectives is a story of colleagues across different educational systems that teamed up to explore the TIMSS 2019 data more, but you understand that you can do the same with your colleagues in your school or another school.



# Dinaric Perspectives on TIMSS 2019

We have colleagues and together we have a bit more time and different perspectives.

The story of Dinaric Perspectives is a story of colleagues across different educational systems that **teamed up** to explore the TIMSS 2019 data more, but you understand that you can do the same with your colleagues in your school or another school.

# Dinaric Perspectives on TIMSS 2019

1. Branding (the title challenge)
2. Content
3. Workflow/Workshare
4. Support
5. Achievement



- app. borders of the Dinaric Alps  
..... app. borders of mountain belts in Dinaric Alps
- ① Southwestern belt (Maritime Dinaric Alps)
  - ② Central belt (High Dinaric Alps)
  - ③ North-Eastern Belt

Thank you

[www.iea.nl](http://www.iea.nl)

Paula Korsnakova; [p.korsnakova@iea.nl](mailto:p.korsnakova@iea.nl)



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