

PISA 2009

Strong performers and successful reformers

Challenges for the Improvement of
Education in the Slovak Republic
7 March 2011, Bratislava

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Overview

- ❑ Quality of learning outcomes
- ❑ Equity of learning outcomes
- ❑ Factors that make a difference

PISA 2009 in brief

PISA countries in 2009

□ Over half a million students...

- representing 28 million 15-year-olds in 74* countries/economies

... took an internationally agreed 2-hour test...

- Goes beyond testing whether students can reproduce what they were taught...
- ... to assess students' capacity to extrapolate from what they know and creatively apply their knowledge in novel situations

... and responded to questions on...

- their personal background, their schools and their engagement with learning and school

□ Parents, principals and system leaders provided data on...

- school policies, practices, resources and institutional factors that help explain performance differences .

* Data for Costa Rica, Georgia, India, Malaysia, Malta, Mauritius, Venezuela and Vietnam will be published in December 2011

Example item

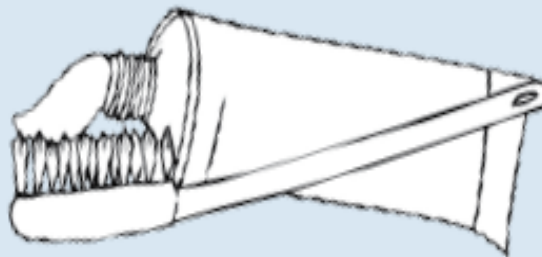
■ Figure I.2.40 ■

BRUSHING YOUR TEETH

Do our teeth become cleaner and cleaner the longer and harder we brush them?

British researchers say no. They have actually tried out many different alternatives, and ended up with the perfect way to brush your teeth. A two minute brush, without brushing too hard, gives the best result. If you brush hard, you harm your tooth enamel and your gums without loosening food remnants or plaque.

Bente Hansen, an expert on tooth brushing, says that it is a good idea to hold the toothbrush the way you hold a pen. "Start in one corner and brush your way along the whole row," she says. "Don't forget your tongue either! It can actually contain loads of bacteria that may cause bad breath."



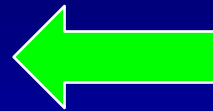
"Brushing your Teeth" is an article from a Norwegian magazine.

Use "Brushing Your Teeth" above to answer the questions that follow.

Question

□ What is this article about?

- A. The best way to brush your teeth.
- B. The best kind of toothbrush to use.
- C. The importance of good teeth.
- D. The way different people brush their teeth.



Points	Level
	Level 6
698	
	Level 5
626	
	Level 4
553	
	Level 3
480	
	Level 2
407	
	Level 1a
335	
	Level 1b
262	
	Below Level 1b

Difficulty: 358 (Level 1A item)

93.7% of students across
OECD can perform tasks at
least at this level

THE PLAY'S THE THING

Takes place in a castle by the beach in Italy.

FIRST ACT

Ornate guest room in a very nice beachside castle. Doors on the right and left. Sitting room set in the middle of the stage: couch, table, and two armchairs. Large windows at the back. Starry night. It is dark on the stage. When the curtain goes up we hear men conversing loudly behind the door on the left.

10 *The door opens and three tuxedoed gentlemen enter. One turns the light on immediately. They walk to the centre in silence and stand around the table. They sit down together, Gál in the armchair to the left, Turai in the one on the right, Ádám on the couch in the middle. Very long, almost awkward silence. Comfortable stretches. Silence. Then:*

GÁL

Why are you so deep in thought?

20 **TURAI**

I'm thinking about how difficult it is to begin a play. To introduce all the principal characters in the beginning, when it all starts.

ÁDÁM

25 I suppose it must be hard.

TURAI

It is – devilishly hard. The play starts. The audience goes quiet. The actors enter the stage and the torment begins. It's an eternity, sometimes as much as a quarter of an hour before the audience finds out who's who and what they are all up to.

GÁL

35 Quite a peculiar brain you've got. Can't you forget your profession for a single minute?

TURAI

That cannot be done.

GÁL

40 Not half an hour passes without you discussing theatre, actors, plays. There are other things in this world.

TURAI

There aren't. I am a dramatist. That is my curse.

45 **GÁL**

You shouldn't become such a slave to your profession.

60 who we are. Wouldn't it be much easier to start all this by standing up and introducing ourselves? Stands up. Good evening. The three of us are guests in this castle. We have just arrived from the

65 dining room where we had an excellent dinner and drank two bottles of champagne. My name is Sándor TURAI, I'm a playwright, I've been writing plays for thirty years, that's my profession. Full stop.

70 Your turn.

GÁL

Stands up. My name is GÁL, I'm also a playwright. I write plays as well, all of them in the company of this gentleman here. We are a famous playwright duo. All playbills of good comedies and operettas read: written by GÁL and TURAI. Naturally, this is my profession as well.

GÁL and TURAI

80 *Together.* And this young man ...

ÁDÁM

Stands up. This young man is, if you allow me, Albert ÁDÁM, twenty-five years old, composer. I wrote the music for these kind

85 gentlemen for their latest operetta. This is my first work for the stage. These two elderly angels have discovered me and now, with their help, I'd like to become famous. They got me invited to this castle. They got my dress-coat and tuxedo made. In other words, I am poor and unknown, for now. Other than that I'm an orphan and my grandmother raised me. My grandmother has passed away. I am all alone in this world. I

95 have no name, I have no money.

TURAI

But you are young.

GÁL

And gifted.

100 **ÁDÁM**

And I am in love with the soloist.

TURAI

You shouldn't have added that. Everyone in the audience would figure that out anyway.

105 *They all sit down.*

TURAI

Now wouldn't this be the easiest way to start

What were the characters in the play doing **just before** the curtain went up?

.....

Scoring

Full Credit: Refers to dinner or drinking champagne. May paraphrase or quote the text directly.

- They have just had dinner and champagne.
- "We have just arrived from the dining room where we had an excellent dinner." *[direct quotation]*
- "An excellent dinner and drank two bottles of champagne." *[direct quotation]*
- Dinner and drinks.
- Dinner.
- Drank champagne.
- Had dinner and drank.
- They were in the dining room.

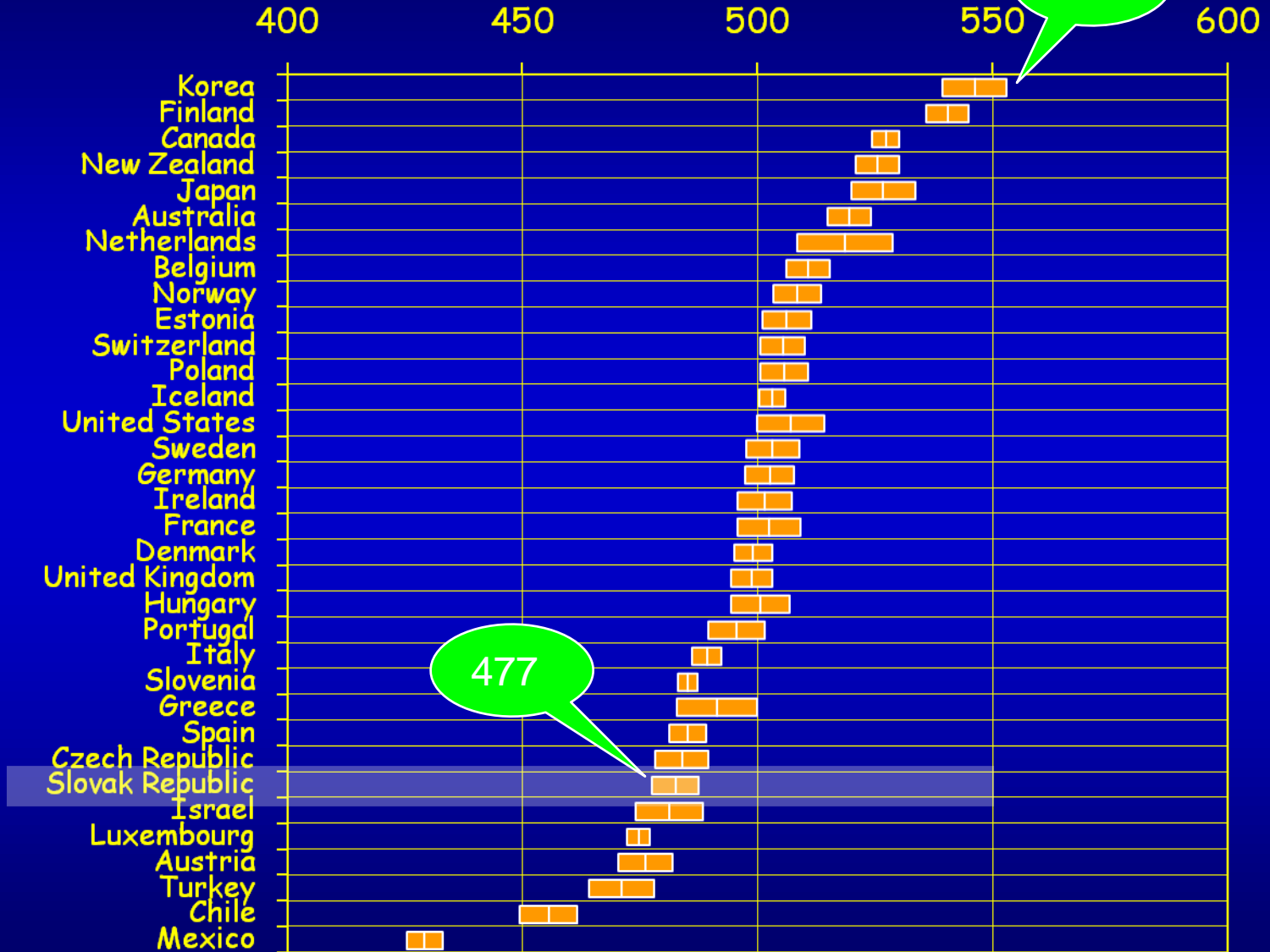
Difficulty: 730 points (Level 6 item)

0.8% of students across OECD can perform tasks
at this level

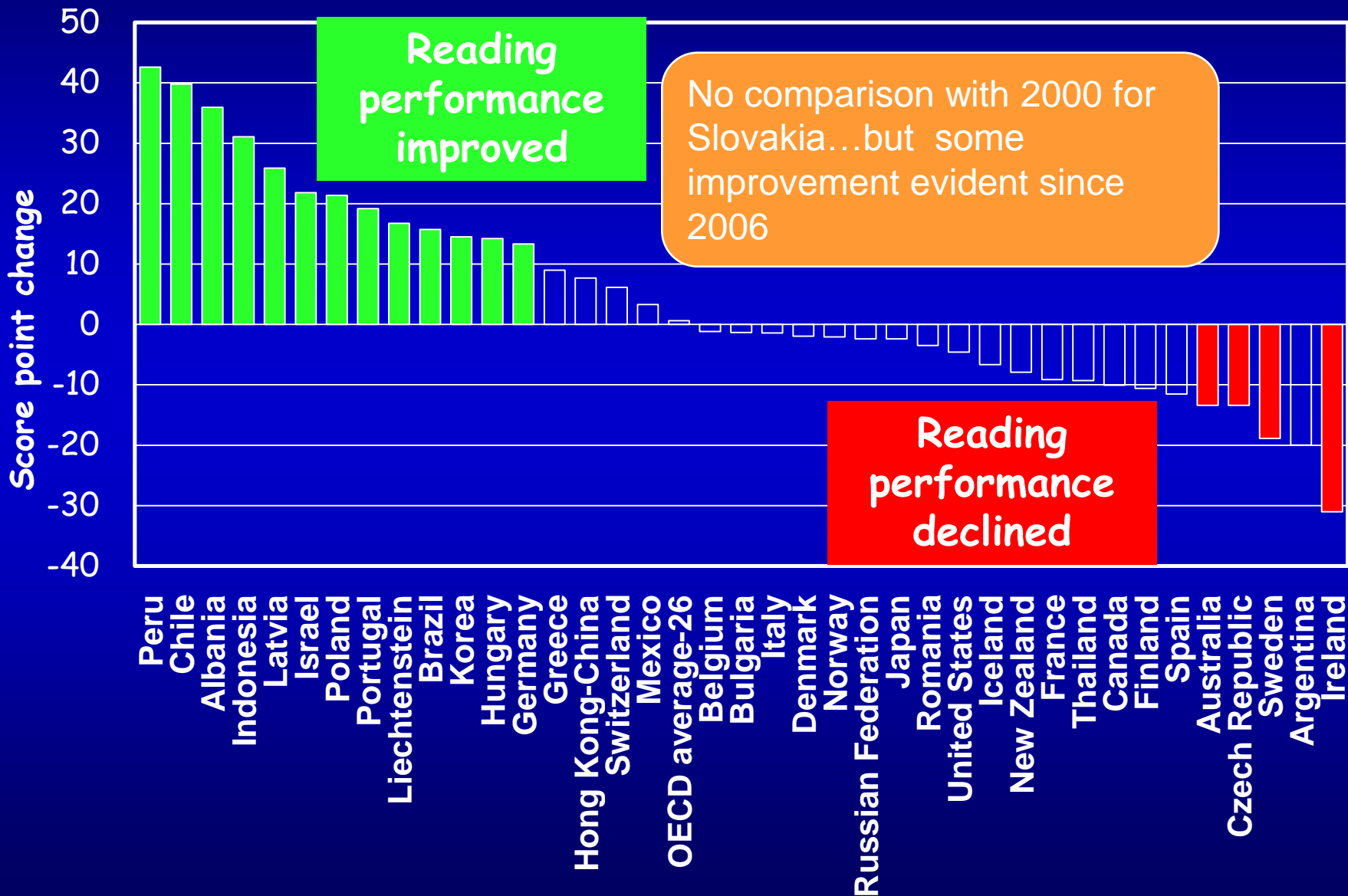
Quality of learning outcomes

- ❑ In the Slovak Republic average performance of 15-year-olds is:
 - Below the OECD average in Reading and Science
 - Similar to the OECD average in Mathematics
- ❑ with some evidence of improvement in Reading in the latest figures

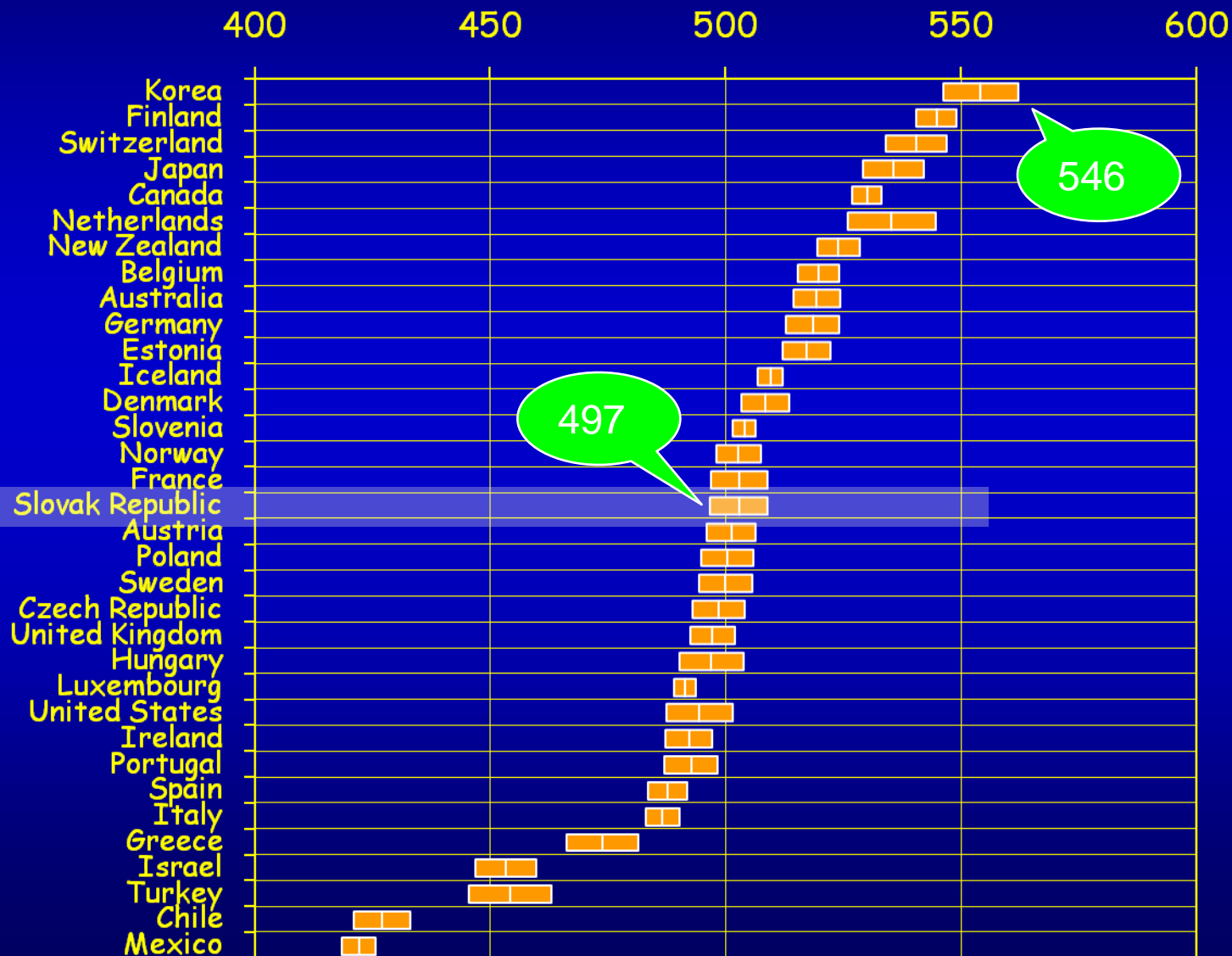
Performance in reading (2009)



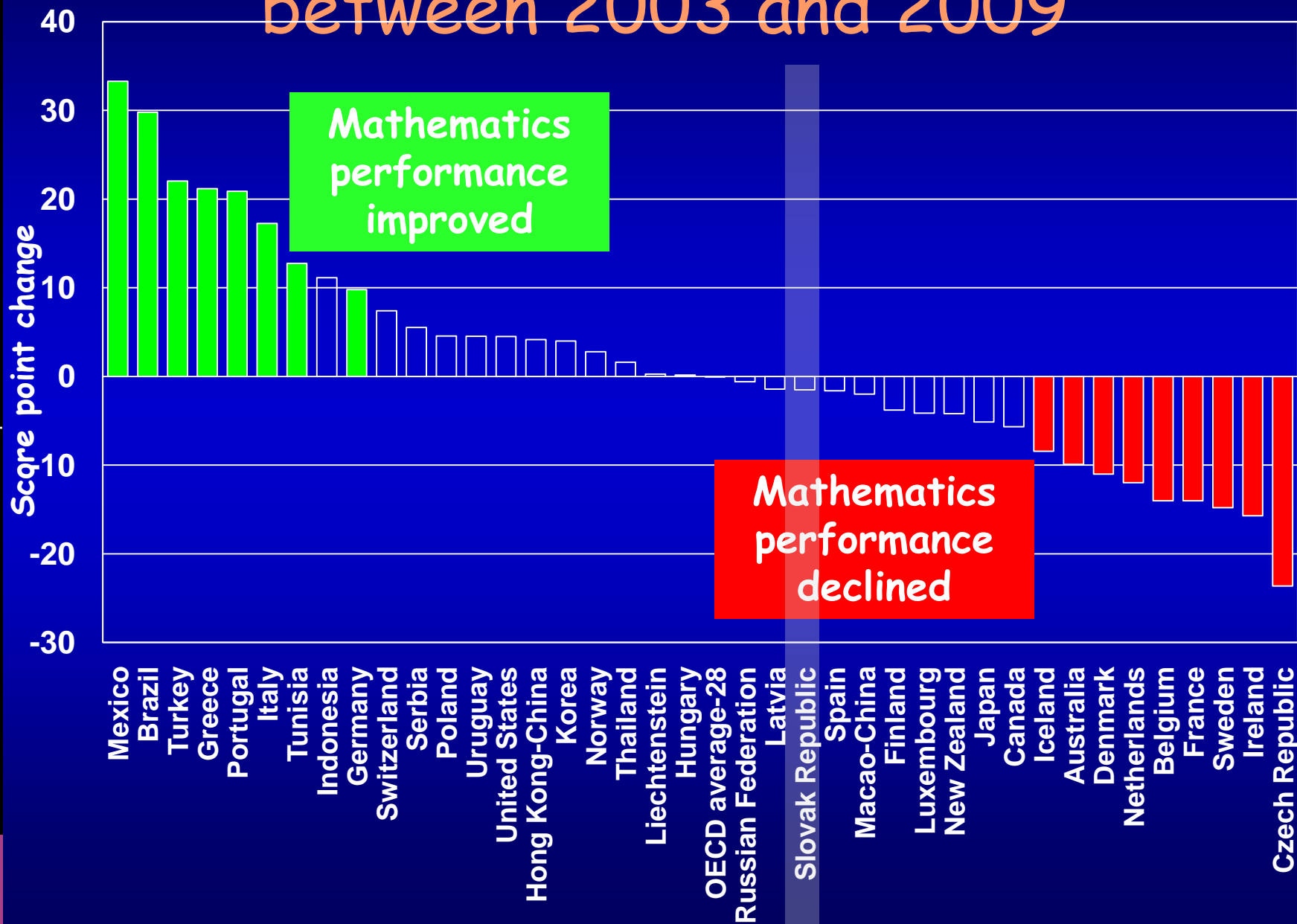
Change in reading performance between 2000 and 2009



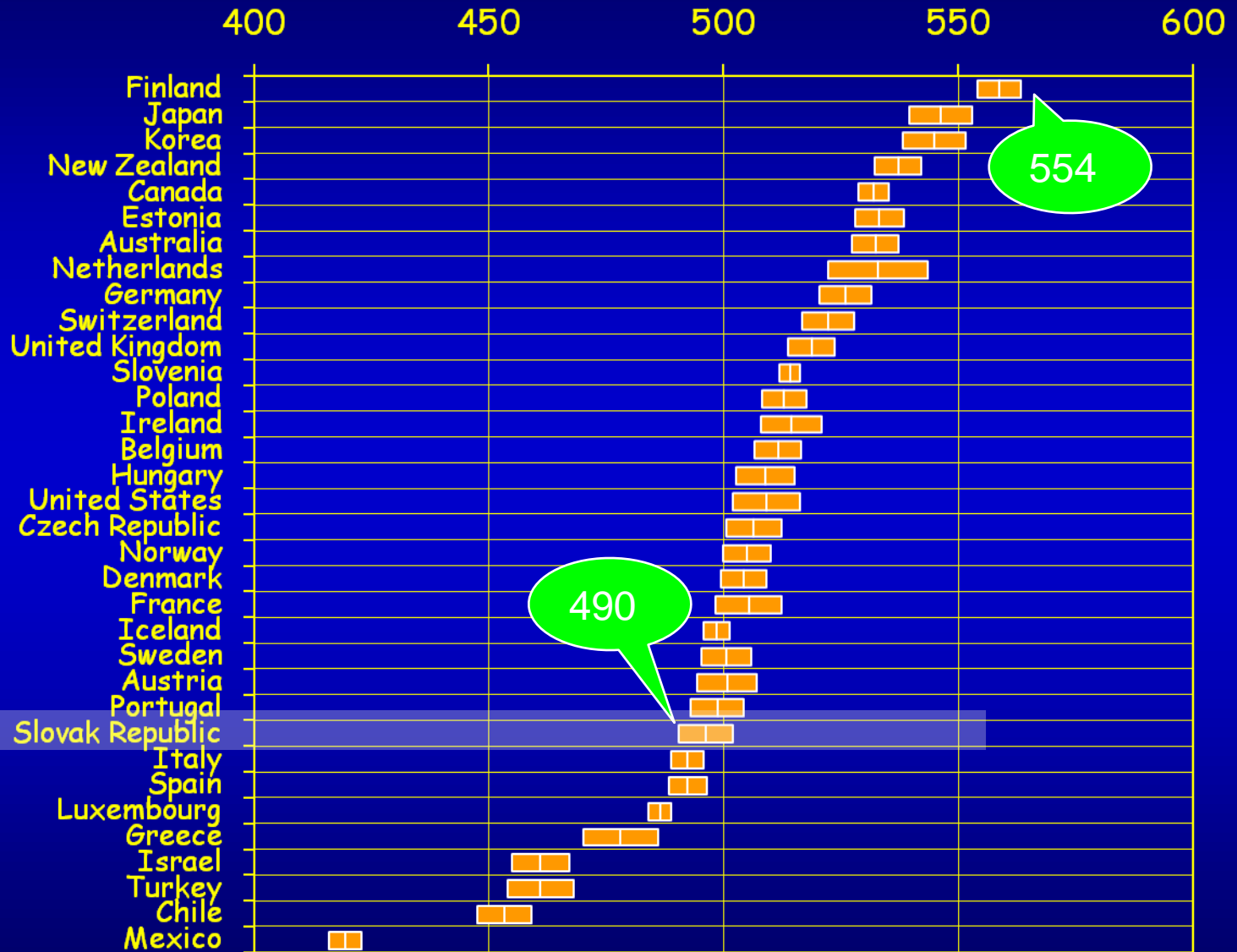
Performance in mathematics (2009)



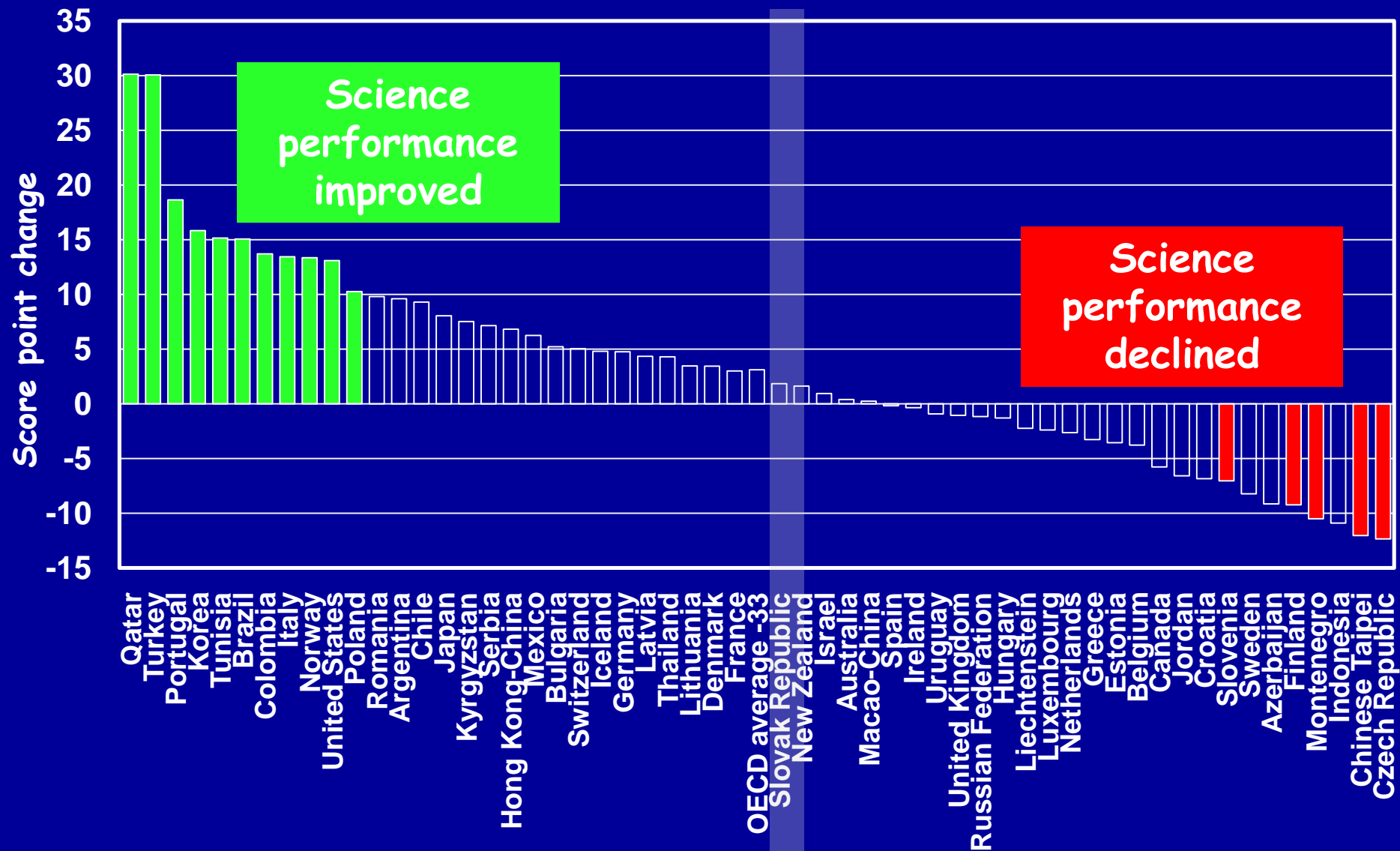
Change in mathematics performance between 2003 and 2009



Performance in science (2009)



Change in science performance between 2006 and 2009

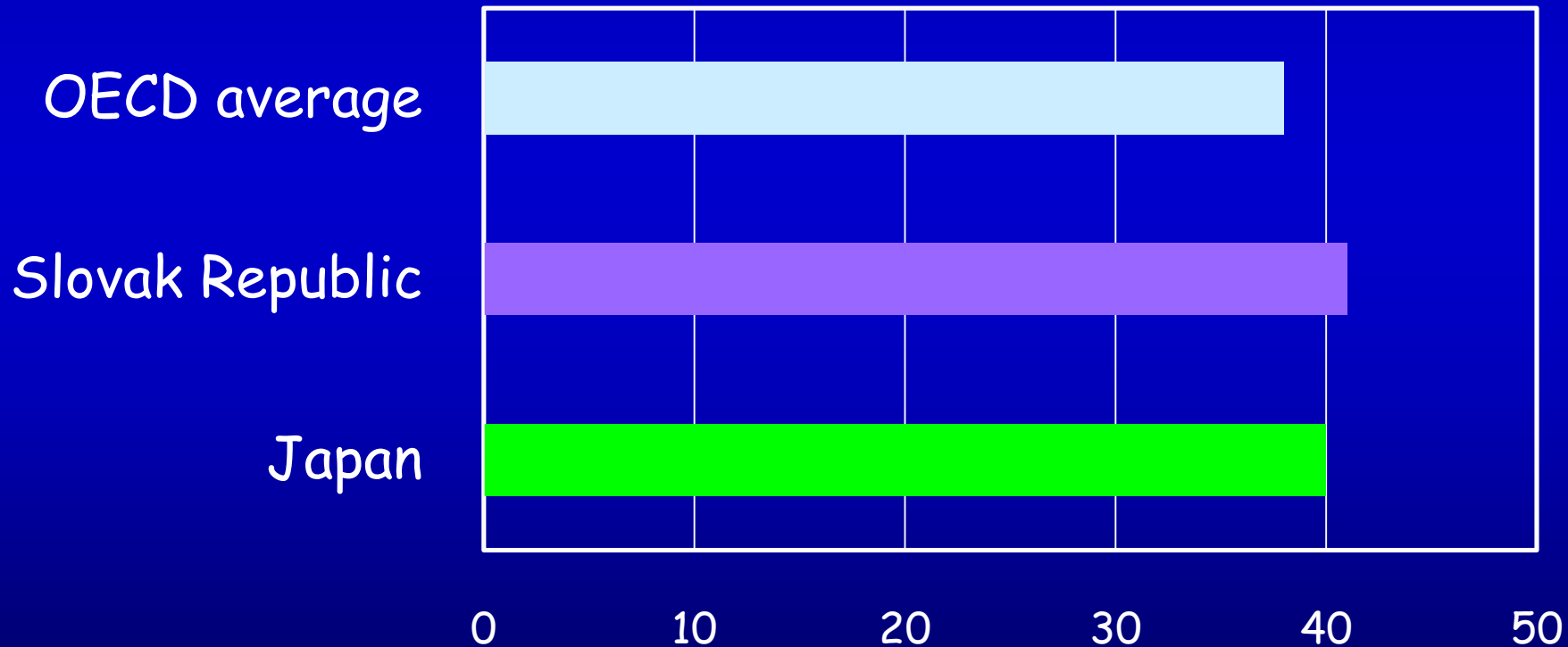


Equity of learning outcomes

- ❑ In Slovakia, the degree of variation in performance is around the OECD average
- ❑ and there is relatively low variation in performance between schools than within schools
- ❑ But over one in five students perform below Level 2 in reading
- ❑ Gender differences
 - Relatively large gap in favour of girls for reading
 - Boys and girls perform similarly in both mathematics and science
- ❑ Performance is fairly strongly related to socio-economic background of the students

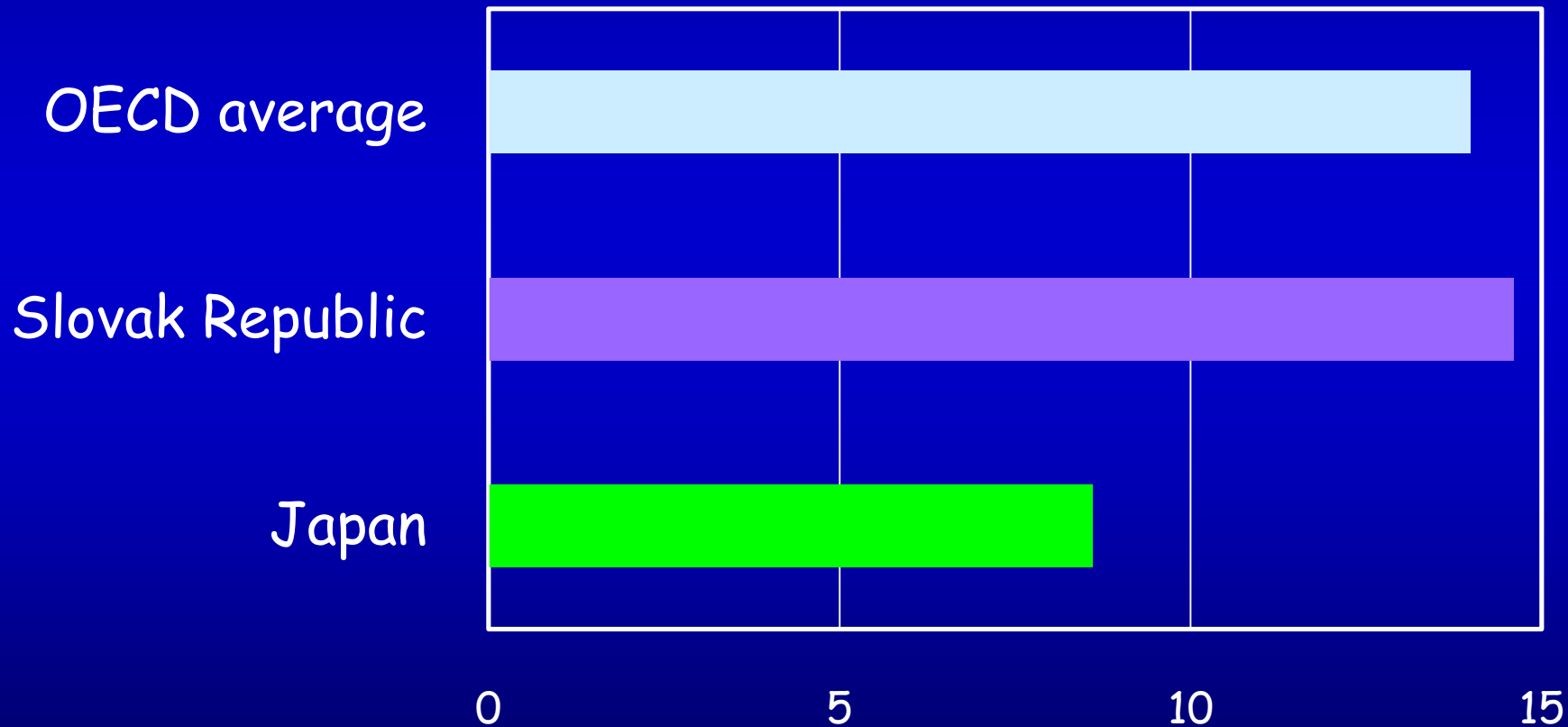
Measures of the relationship between socio-economic background and reading performance

Slope of the gradient
(score point difference associated with one unit increase in ESCS)



Measures of the relationship between socio-economic background and reading performance

Strength of the gradient
(% of variance explained by ESCS)



Percentage of resilient students among disadvantaged students

of
%

80

70

60

50

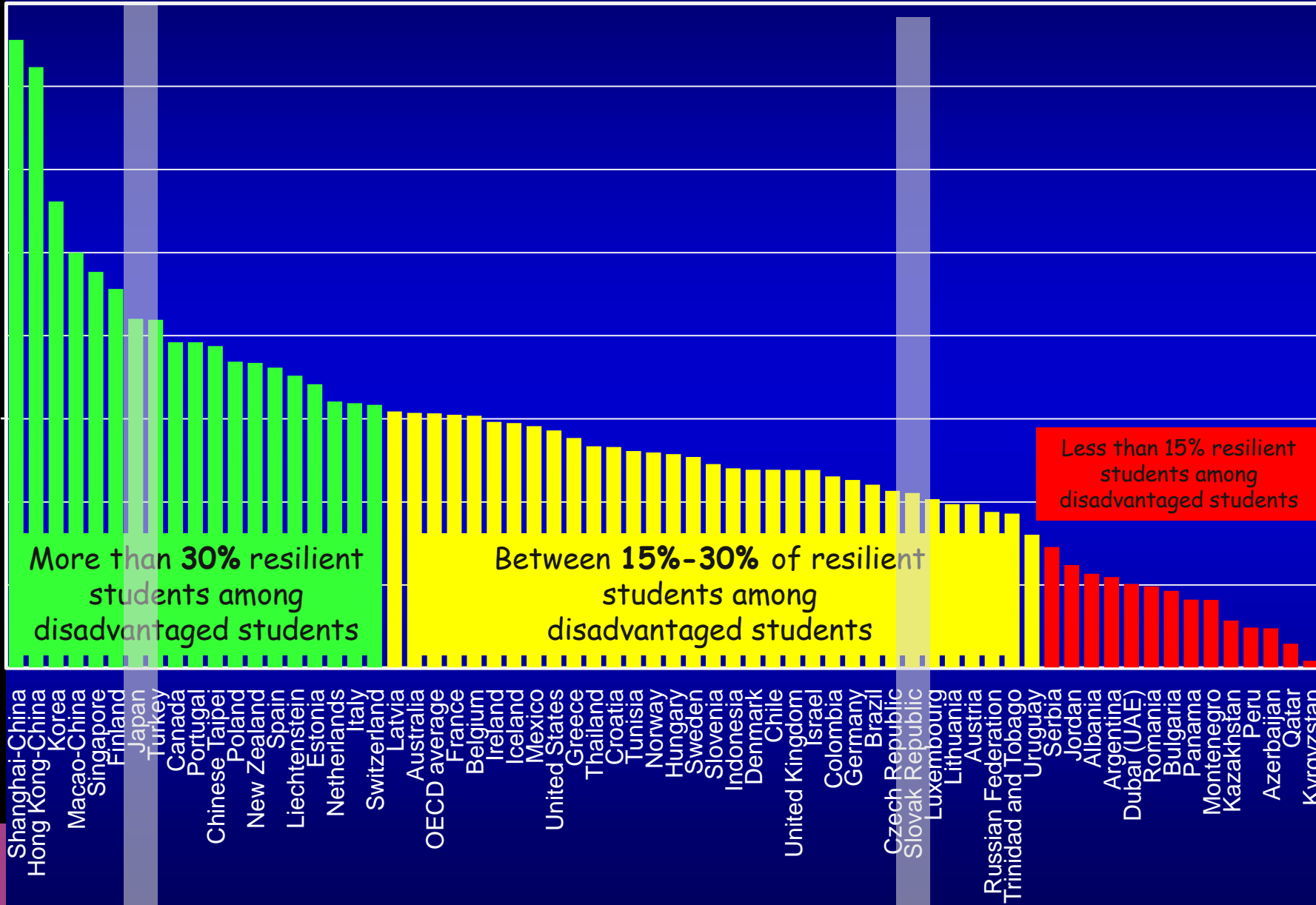
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What factors make a difference?

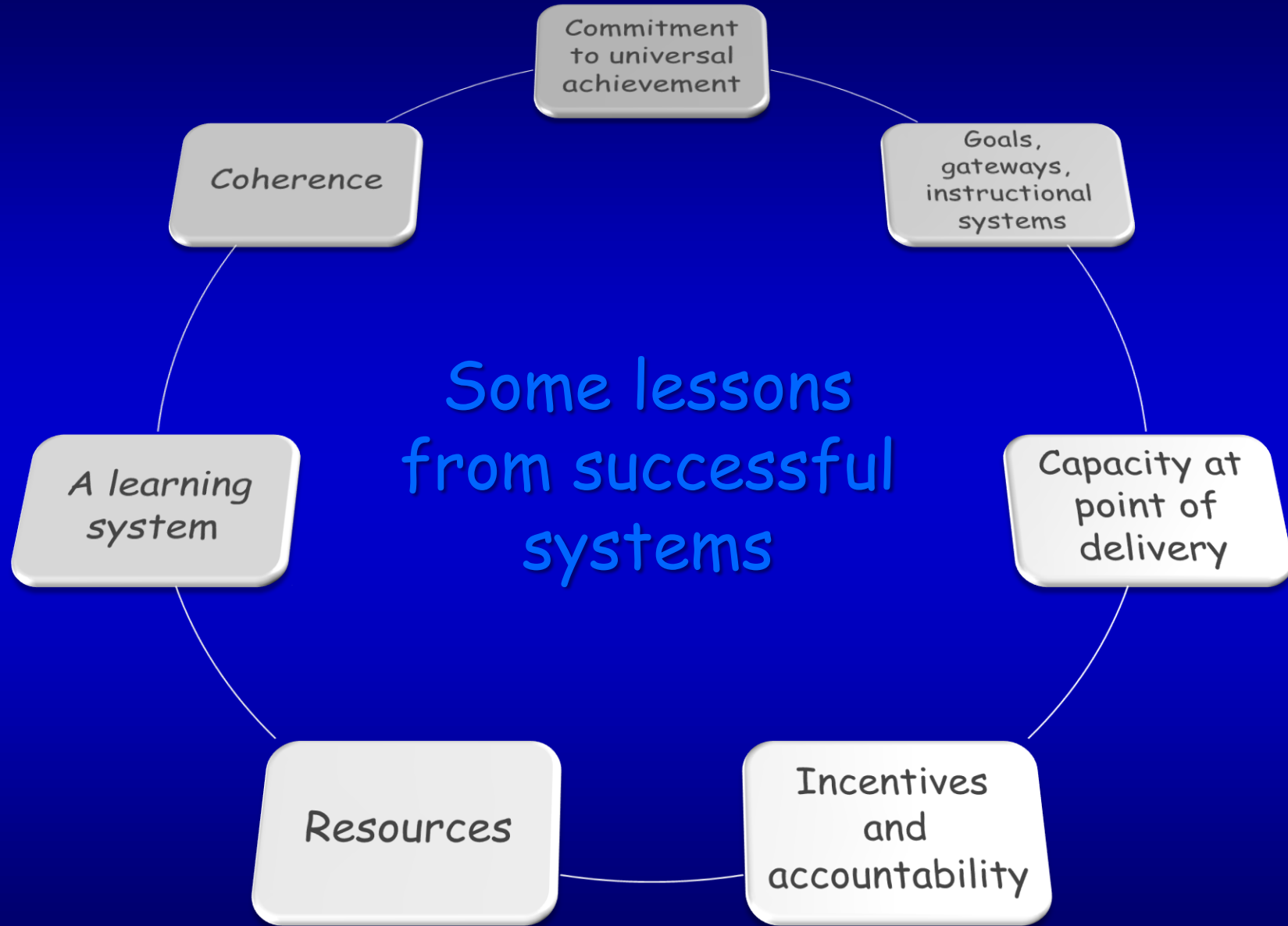
❑ For the individual student

- Reading for enjoyment
 - 41% of students in Slovak Republic do not read for enjoyment...
- Diversity of reading materials
 - Students in Slovak Republic are around the OECD average
- Knowledge of strategies to summarise information
 - Students in Slovak Republic are below the OECD average

❑ And for system and school policies.....

Policy		R	R	E
Policies and practices		System	School	Equity
Learning climate				
	Discipline		😊	
	Teacher behaviour		😊	
	Parental pressure		😊	
	Teacher-student relationships		😊	
Dealing with heterogeneity				
	Grade repetition	😞	😞	😞
	Prevalence of tracking			😞
	Expulsions	😞	😞	😞
	Ability grouping (all subjects)	😞	😞	😞
Standards /accountability				
	Nat. examination	😊		

What does it all mean?



Find out more about PISA at...

- OECD www.pisa.oecd.org
 - All national and international publications
 - The complete micro-level database

- Email: Michael.davidson@OECD.org

Thank you !