

Executive Summary

PISA's conception of reading literacy encompasses the range of situations in which people read, the different ways written texts are presented, and the variety of ways that readers approach and use texts, from the functional and finite, such as finding a particular piece of practical information, to the deep and far-reaching, such as understanding other ways of doing, thinking and being. Research shows that these kinds of reading literacy skills are more reliable predictors of economic and social well-being than the number of years spent in school or in post-formal education.

Korea and Finland are the highest performing OECD countries, with mean scores of 539 and 536 points, respectively. However, the partner economy Shanghai-China outperforms them by a significant margin, with a mean score of 556.

Top-performing countries or economies in reading literacy include Hong Kong-China (with a mean score of 533), Singapore (526), Canada (524), New Zealand (521), Japan (520) and Australia (515). The Netherlands (508), Belgium (506), Norway (503), Estonia (501), Switzerland (501), Poland (500), Iceland (500) and Liechtenstein (499) also perform above the OECD mean score of 494, while the United States, Sweden, Germany, Ireland, France, Denmark, the United Kingdom, Hungary, Portugal, and partner economy Chinese Taipei have scores close to the OECD mean.

The lowest performing OECD country, Mexico, has an average score of 425. This means that the gap between the highest and lowest performing OECD countries is 114 points – more than the equivalent of two school years. And the gap between the highest and lowest performing partner country or economy is even larger, with 242 score points – or more than six years of formal schooling – separating the mean performance of Shanghai-China and Kyrgyzstan (314).

Differences **between** countries represent, however, only a fraction of overall variation in student performance. Addressing the educational needs of such diverse populations and narrowing the gaps in student performance that have been observed remains a formidable challenge for all countries.

In 18 participating countries, including Mexico, Chile and Turkey, the highest reading proficiency level achieved by most students was the baseline Level 2.

Level 2 is considered a baseline level of proficiency, at which students begin to demonstrate the reading skills that will enable them to participate effectively and productively in life. Students who do not reach Level 2 have difficulties locating basic information that meets several conditions, making comparisons or contrasts around a single feature, working out what a well-defined part of a text means when the information is not prominent, or making connections between the text and outside knowledge by drawing on personal experience and attitudes. The proportion of 15-year-olds in this situation varies widely across countries, from fewer than one in 10 in four countries and economies to the majority of students in 10 countries. Even in the average OECD country, where nearly one student in five does not reach Level 2, tackling such low performance remains a major challenge.

At the other end of the proficiency spectrum, an average of 7.6% of students attain Level 5, and in Singapore, New Zealand and Shanghai-China the percentage is above twice the OECD average.

However, for some countries, developing even a small corps of high-performing students remains an aspiration: in 16 countries, fewer than 1% of students reach Level 5. Students at this level are able to retrieve information requiring the reader to locate and organise several pieces of deeply embedded information, inferring which information in the text is relevant. They can critically evaluate information and build hypotheses drawing on specialised knowledge, develop a full and detailed understanding of a text whose content or form is unfamiliar, and understand concepts that are contrary to expectations.



Results from the PISA 2009 assessment show that nurturing high performance and tackling low performance need not be mutually exclusive. The countries with the very highest overall reading performance in PISA 2009, Finland and Korea, as well as the partner economies Hong Kong-China and Shanghai-China, also have among the lowest variation in student scores. Equally importantly, Korea has been able to raise its already-high reading performance even further, by more than doubling the percentage of students reaching Level 5 or higher since 2000.

Korea, with a country mean of 546 score points, performed highest among OECD countries in the PISA 2009 mathematics assessment. The partner countries and economies Shanghai-China, Singapore and Hong Kong-China rank first, second and third, respectively.

In the PISA 2009 mathematics assessment, the OECD countries Finland, Switzerland, Japan, Canada, the Netherlands, New Zealand, Belgium, Australia, Germany, Estonia, Iceland, Denmark, Slovenia as well as the partner countries and economies Chinese Taipei, Liechtenstein and Macao-China also perform significantly above the OECD average in mathematics.

Shanghai-China, Finland, Hong Kong-China and Singapore are the four highest performers in the PISA 2009 science assessment.

In science, New Zealand, Canada, Estonia, Australia, the Netherlands, Germany, Switzerland, the United Kingdom, Slovenia, Poland, Ireland and Belgium as well as the partner countries and economies Chinese Taipei, Liechtenstein and Macao-China also perform significantly above the OECD average.

Some 14.6% of students in Shanghai-China and 12.3% of students in Singapore attain the highest levels of proficiency in all three assessment subjects.

High-level skills are critical for innovation and, as such, are key to economic growth and social development. On average, across OECD countries, 16.3% of students are top performers in at least one of the subject areas of science, mathematics or reading. However, only 4.1% of 15-year-old students are top performers in all three assessment subject areas.

Girls outperform boys in reading skills in every participating country.

Throughout much of the 20th century, concern about gender differences in education focused on girls' underachievement. More recently, however, the scrutiny has shifted to boys' underachievement in reading. In the PISA 2009 reading assessment, girls outperform boys in every participating country by an average, among OECD countries, of 39 PISA score points – equivalent to more than half a proficiency level or one year of schooling.

On average across OECD countries, boys outperform girls in mathematics by 12 score points while gender differences in science performance tend to be small, both in absolute terms and when compared with the large gender gap in reading performance and the more moderate gender gap in mathematics. The ranks of top-performing students are filled nearly equally with girls and boys. On average across OECD countries, 4.4% of girls and 3.8% of boys are top performers in all three subjects, and 15.6% of girls and 17.0% of boys are top performers in at least one subject area. While the gender gap among top-performing students is small in science (1% of girls and 1.5% of boys), it is significant in reading (2.8% of girls and 0.5% of boys) and in mathematics (3.4% of girls and 6.6% of boys).

Countries of similar prosperity can produce very different educational results.

The balance of proficiency in some of the richer countries in PISA looks very different from that of some of the poorer countries. In reading, for example, the ten countries in which the majority of students are at Level 1 or below, all in poorer parts of the world, contrast starkly in profile with the 34 OECD countries, where on average a majority attains at least Level 3. However, the fact that the best-performing country or economy in the 2009 assessment is Shanghai-China, with a GDP per capita well below the OECD average, underlines that low national income is not incompatible with strong educational performance. Korea, which is the best-performing OECD country, also has a GDP per capita below the OECD average. Indeed, while there is a correlation between GDP per capita and educational performance, this only predicts 6% of the differences in average student performance across countries. The other 94% of differences reflect the fact that two countries of similar prosperity can produce very different educational results. Results also vary when substituting spending per student, relative poverty or the share of students with an immigrant background for GDP per capita.

The following table summarises the key data of this volume. For each country, it shows the average score of 15-yearolds in reading, mathematics and science as well as on the subscales that were used to measure reading skills in greater detail. Cells shaded in light blue indicate values above the OECD average. Cells shaded in medium blue indicate values below the OECD average. Cells shaded in dark blue indicate values that are not statistically different from the OECD average.



Table I.A **COMPARING COUNTRIES' PERFORMANCE**

Statistically significantly **above** the OECD average Not statistically significantly different from the OECD average Statistically significantly below the OECD average

		On the reading subscales						
	On the overall reading scale	Access and retrieve	Integrate and interpret	Reflect and evaluate	Continuous texts	Non-continuous texts	On the mathematics scale	On the science scale
Shanghai-China	556	549	558	557	564	539	600	575
Korea	539	542	541	542	538	542	546	538
Finland	536	532	538	536	535	535	541	554
Hong Kong-China	533	530	530	540	538	522	555	549
Singapore	526	526	525	529	522	539	562	542
Canada	524	517	522	535	524	527	527	529
New Zealand	521	521	517	531	518	532	519	532
Japan	520	530	520	521	520	518	529	539
Australia	515	513	513	523	513	524	514	527
Rolaium	506	519	504	510	506	514	526	522
Norway	503	512	502	505	505	498	498	500
Estonia	501	503	502	503	497	512	512	528
Switzerland	501	505	502	497	498	505	534	517
Poland	500	500	503	498	502	496	495	508
Iceland	500	507	503	496	501	499	507	496
United States	500	492	495	512	500	503	487	502
Liechtenstein	499	508	498	498	495	506	536	520
Sweden	497	505	494	502	499	498	494	495
Germany	497	501	501	491	496	497	513	520
Ireland	496	498	494	502	497	496	487	508
France	496	492	497	495	492	498	497	498
Chinese Taipei	495	496	499	493	496	500	543	520
Denmark	495	502	492	493	496	493	503	499
United Kingdom	494	491	491	503	492	506	492	514
Hungary	494	501	496	489	49/	48/	490	503
Portugal	489	488	48/	496	492	488	48/	493
Macao-China	48/	493	488	481	488	481	525	511
Latvia	400	402	490	402	409	4/0	403	409
Slovenia	483	489	489	470	484	476	501	512
Greece	483	468	484	489	487	472	466	470
Spain	481	480	481	483	484	473	483	488
Czech Republic	478	479	488	462	479	474	493	500
Slovak Republic	477	491	481	466	479	471	497	490
Croatia	476	492	472	471	478	472	460	486
Israel	474	463	473	483	477	467	447	455
Luxembourg	472	471	475	471	471	472	489	484
Austria	470	477	471	463	470	472	496	494
Lithuania	468	476	469	463	470	462	477	491
Turkey	464	467	459	473	466	461	445	454
Dubai (UAE)	459	458	457	466	461	460	453	466
Russian Federation	459	469	46/	441	461	452	468	4/8
Sarbia	449	444	452	452	453	444	421	44/
Bulgaria	442	449	445	430	444	430	478	445
Uruguav	426	424	423	436	429	421	427	427
Mexico	425	433	418	432	426	424	419	416
Romania	424	423	425	426	423	424	427	428
Thailand	421	431	416	420	423	423	419	425
Trinidad and Tobago	416	413	419	413	418	417	414	410
Colombia	413	404	411	422	415	409	381	402
Brazil	412	407	406	424	414	408	386	405
Montenegro	408	408	420	383	411	398	403	401
Jordan	405	394	410	407	417	387	387	415
Tunisia	404	393	393	427	408	393	371	401
Indonesia	402	399	397	409	405	399	371	383
Argentina	398	394	398	402	400	391	388	401
Kazakhstan	390	397	397	373	399	371	405	400
	365	360	393	3/6	392	300	3//	391
Panama	3/2	354	3/9	376	3/5	301	360	379
Peru	370	364	371	368	373	356	365	369
Azerbaijan	362	361	373	335	362	351	431	373
Kyrgyzstan	314	299	327	300	319	293	331	330

Source: OECD, *PISA 2009 Database*. **StatLink @@** http://dx.doi.org/10.1787/888932343342



From: PISA 2009 Results: What Students Know and Can Do

Student Performance in Reading, Mathematics and Science (Volume I)

Access the complete publication at: https://doi.org/10.1787/9789264091450-en

Please cite this chapter as:

OECD (2010), "Executive Summary", in *PISA 2009 Results: What Students Know and Can Do: Student Performance in Reading, Mathematics and Science (Volume I)*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/9789264091450-2-en

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