

# International Comparisons: Reading, Mathematics, and Science Literacy of 15-Year-Old Students

***In 2022, there were 5 PISA-participating education systems with higher average reading literacy scores for 15-year-olds than the United States, 25 with higher mathematics literacy scores, and 9 with higher science literacy scores.***

The Program for International Student Assessment (PISA), coordinated by the Organization for Economic Cooperation and Development (OECD), has measured the performance of 15-year-old students in reading, mathematics, and science literacy every 3 years since 2000, except for a 1-year delay in the current cycle (from 2021 to 2022) due to the coronavirus pandemic. In 2022, PISA was administered in 81 countries and education systems,<sup>1</sup> including 37 member countries of the OECD.

PISA 2022 results in this indicator are reported by average scale scores, which range from 0 to 1,000.<sup>2</sup> In addition to reporting overall scores, this indicator also presents international comparisons of achievement scores by student gender.<sup>3</sup>

In 2022, there were 5 education systems with higher average reading literacy scores for 15-year-olds than the United States, 25 with higher mathematics literacy scores, and 9 with higher science literacy scores. On average in the United States, female students scored 22 points higher than male students on the reading literacy scale and male students scored 13 points higher than female students on the mathematics literacy scale. The male-female average score gaps in reading and mathematics in the United States were not measurably different from the OECD average score gaps. There was no measurable difference between the average science scores of male and female students in the United States or on average across the participating OECD education systems.

Reading Literacy

TABLE 1.

Average scores and differences from U.S. average score of 15-year-old students on the Program for International Student Assessment (PISA) reading literacy scale, by education system: 2022

Education system	Average score	Difference from U.S. average score	Education system	Average score	Difference from U.S. average score
<b>OECD average</b>	<b>476</b>	<b>-28</b> ▼	Greece	438	-65 ▼
<i>Singapore</i>	543	39 ▲	Iceland	436	-68 ▼
Ireland	516	12! ▲	<i>Uruguay</i>	430	-74 ▼
Japan	516	12! ▲	<i>Brunei Darussalam</i>	429	-75 ▼
Korea, Republic of	515	11! ▲	<i>Romania</i>	428	-75 ▼
<i>Chinese Taipei</i>	515	11! ▲	<i>Ukraine (18 of 27 Regions)<sup>1</sup></i>	428	-76 ▼
Estonia	511	◆	<i>Qatar</i>	419	-85 ▼
<i>Macau (China)</i>	510	◆	<i>United Arab Emirates</i>	417	-87 ▼
Canada	507	◆	Mexico <sup>1</sup>	415	-89 ▼
<b>United States</b>	<b>504</b>		Costa Rica	415	-89 ▼
New Zealand	501	◆	<i>Moldova, Republic of</i>	411	-93 ▼
<i>Hong Kong (China)</i>	500	◆	<i>Brazil</i>	410	-94 ▼
Australia	498	◆	<i>Jamaica<sup>1</sup></i>	410	-94 ▼
United Kingdom	494	◆	Colombia <sup>1</sup>	409	-95 ▼
Finland	490	-14! ▼	<i>Peru</i>	408	-96 ▼
Denmark	489	-15! ▼	<i>Montenegro, Republic of</i>	405	-99 ▼
Poland	489	-15! ▼	<i>Bulgaria</i>	404	-100 ▼
Czech Republic	489	-15! ▼	<i>Argentina</i>	401	-103 ▼
Sweden	487	-17 ▼	<i>Panama<sup>1</sup></i>	392	-112 ▼
Switzerland	483	-21 ▼	<i>Malaysia<sup>1</sup></i>	388	-116 ▼
Italy	482	-22 ▼	<i>Kazakhstan</i>	386	-118 ▼
Austria	480	-24 ▼	<i>Saudi Arabia</i>	383	-121 ▼
Germany	480	-24 ▼	<i>Cyprus</i>	381	-123 ▼
Belgium	479	-25 ▼	<i>Thailand<sup>1</sup></i>	379	-125 ▼
Portugal	477	-27 ▼	<i>Mongolia</i>	378	-126 ▼
Norway	477	-27 ▼	<i>Guatemala<sup>2</sup></i>	374	-130 ▼
<i>Croatia</i>	475	-28 ▼	<i>Georgia</i>	374	-130 ▼
Latvia	475	-29 ▼	<i>Paraguay<sup>1</sup></i>	373	-131 ▼
Spain	474	-30 ▼	<i>Baku (Azerbaijan)<sup>1</sup></i>	365	-139 ▼
France	474	-30 ▼	<i>El Salvador<sup>1</sup></i>	365	-139 ▼
Israel	474	-30 ▼	<i>Indonesia</i>	359	-145 ▼
Hungary	473	-31 ▼	<i>North Macedonia</i>	359	-145 ▼
Lithuania	472	-32 ▼	<i>Albania</i>	358	-146 ▼
Slovenia	469	-35 ▼	<i>Dominican Republic<sup>1</sup></i>	351	-153 ▼
<i>Vietnam<sup>1</sup></i>	462	-42 ▼	<i>Palestinian Authority</i>	349	-155 ▼
Netherlands	459	-45 ▼	<i>Philippines</i>	347	-157 ▼
<i>Türkiye<sup>1</sup></i>	456	-48 ▼	<i>Kosovo</i>	342	-162 ▼
Chile	448	-56 ▼	<i>Jordan</i>	342	-162 ▼
Slovak Republic	447	-57 ▼	<i>Morocco</i>	339	-165 ▼
<i>Malta</i>	445	-59 ▼	<i>Uzbekistan</i>	336	-168 ▼
<i>Serbia</i>	440	-64 ▼	<i>Cambodia<sup>2</sup></i>	329	-175 ▼

▲ Average score is higher than U.S. average score at the .05 level of statistical significance.  
 ▼ Average score is lower than U.S. average score at the .05 level of statistical significance.  
 ◆ Average score is not measurably different from U.S. average score at the .05 level of statistical significance.  
 ! Interpret with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.  
<sup>1</sup> At least 50 percent but less than 75 percent of the 15-year-old population is covered by the PISA sample.  
<sup>2</sup> Less than 50 percent of the 15-year-old population is covered by the PISA sample.

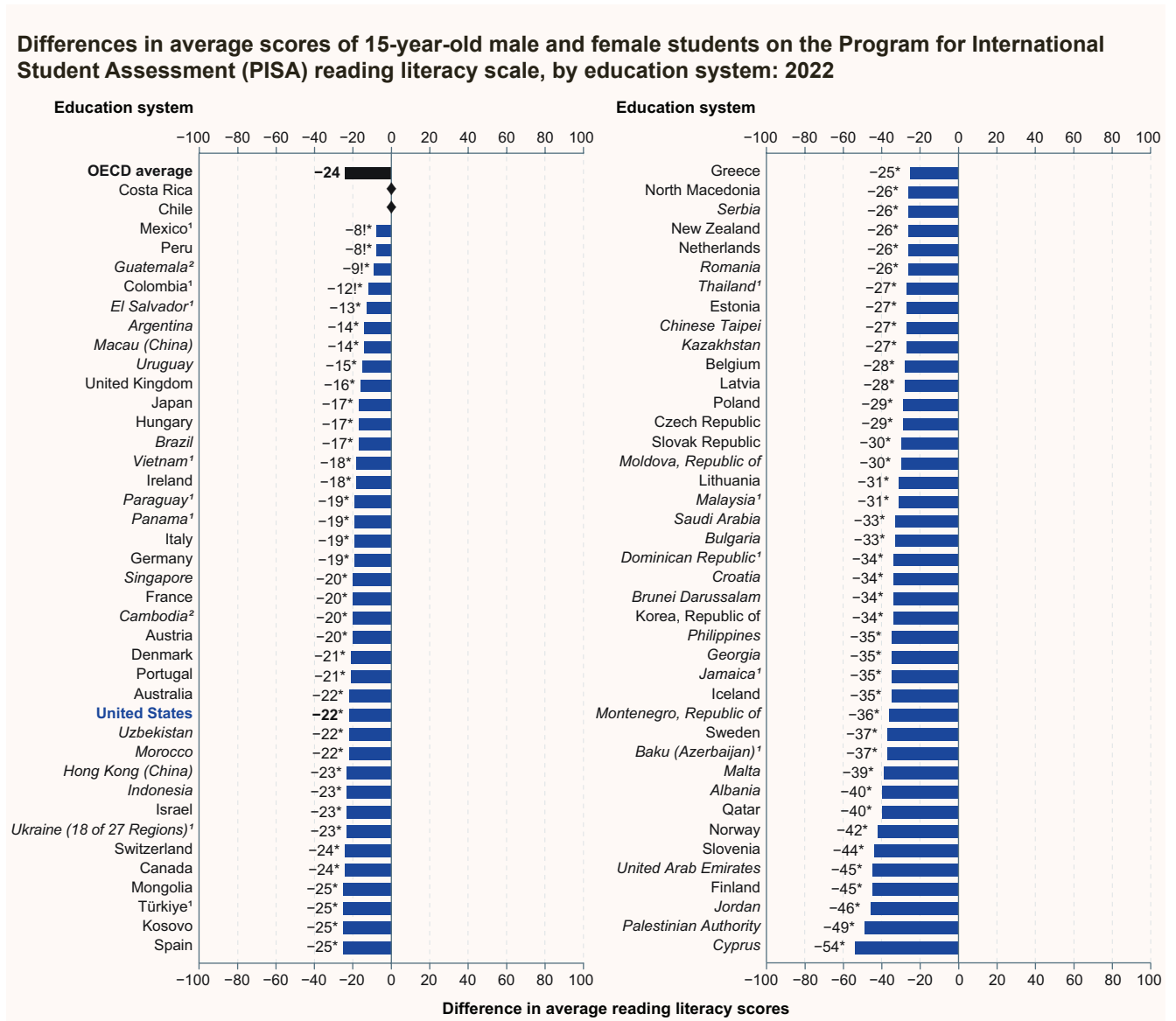
NOTE: Scores are reported on a scale from 0 to 1,000. Differences were computed using unrounded numbers. Education systems are ordered by their average scores in 2022. Italics indicate non-OECD countries and education systems. Education systems are marked as OECD countries if they were OECD members in 2022. All OECD members except for Luxembourg participated in the PISA 2022 cycle. The OECD average is the average of the national averages of the participating OECD member countries, with each country weighted equally. One or more PISA sampling standards were not met in the following countries: Australia, Canada, Denmark, Hong Kong (China), Ireland, Jamaica, Latvia, Netherlands, New Zealand, Panama, United Kingdom, and United States. Caution is required when comparing estimates for Vietnam based on PISA 2022 with other jurisdictions as a strong linkage to the international PISA reading scale could not be established. Some apparent differences between estimates may not be statistically significant.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2022. Retrieved December 31, 2023, from *Highlights of PISA 2022 U.S. Results*, table R1.

In reading literacy, average scores in 2022 ranged from 329 in Cambodia to 543 in Singapore. The U.S. average reading literacy score (504) was higher than the OECD average score (476). Compared with the 80 other education systems in PISA 2022, the U.S. average reading literacy score was

- higher than the average in 68 education systems;
- lower than the average in 5 education systems; and
- not measurably different from the average in 7 education systems.

FIGURE 1.



◆ The difference in average scores of 15-year-old male and female students is not measurably different ( $p < .05$ ) at the .05 level of statistical significance.

! Interpret data with caution. Estimate is unstable due to high coefficient of variation ( $> 30$  percent and  $\leq 50$  percent).

\* The difference in average scores of 15-year-old male and female students is measurably different ( $p < .05$ ) at the .05 level of statistical significance.

<sup>1</sup> At least 50 percent but less than 75 percent of the 15-year-old population is covered by the PISA sample.

<sup>2</sup> Less than 50 percent of the 15-year-old population is covered by the PISA sample.

NOTE: Scores are reported on a scale from 0 to 1,000. Differences were computed using unrounded numbers. The graphic shows education systems ordered by the absolute male–female difference in 2022 average scores. Italics indicate non-OECD countries and education systems. Education systems are marked as OECD countries if they were OECD members in 2022. All OECD members except for Luxembourg participated in the PISA 2022 cycle. The OECD average is the average of the national averages of the participating OECD member countries, with each country weighted equally. One or more PISA sampling standards were not met in the following countries: Australia, Canada, Denmark, Hong Kong (China), Ireland, Jamaica, Latvia, Netherlands, New Zealand, Panama, United Kingdom, and United States. Caution is required when comparing estimates for Vietnam based on PISA 2022 with other jurisdictions as a strong linkage to the international PISA reading scale could not be established. Some apparent differences between estimates may not be statistically significant. Figures are plotted based on unrounded data.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2022. Retrieved January 4, 2024, from *Highlights of PISA 2022 U.S. Results*, figure R6.

In the United States, the average reading literacy scores were 515 for female students and 493 for male students. The U.S. female-male score difference (22 points) was not measurably different from the OECD average score difference. Among the 81 education systems participating in PISA,

- female students scored higher, on average, in 79 education systems, with score gaps ranging from 8 points in Mexico and Peru to 54 points in Cyprus; and
- there was no measurable difference in the average scores between male and female students in 2 education systems (Costa Rica and Chile).

## Mathematics Literacy

TABLE 2.

### Average scores and differences from U.S. average score of 15-year-old students on the Program for International Student Assessment (PISA) mathematics literacy scale, by education system: 2022

Education system	Average score	Difference from U.S. average score	Education system	Average score	Difference from U.S. average score
<b>OECD average</b>	<b>472</b>	◆	<i>Ukraine (18 of 27 Regions)<sup>1</sup></i>	441	-24 ▼
<i>Singapore</i>	575	110 ▲	<i>Serbia</i>	440	-25 ▼
<i>Macau (China)</i>	552	87 ▲	<i>United Arab Emirates</i>	431	-34 ▼
<i>Chinese Taipei</i>	547	82 ▲	<i>Greece</i>	430	-35 ▼
<i>Hong Kong (China)</i>	540	75 ▲	<i>Romania</i>	428	-37 ▼
<i>Japan</i>	536	71 ▲	<i>Kazakhstan</i>	425	-39 ▼
<i>Korea, Republic of</i>	527	62 ▲	<i>Mongolia</i>	425	-40 ▼
<i>Estonia</i>	510	45 ▲	<i>Cyprus</i>	418	-47 ▼
<i>Switzerland</i>	508	43 ▲	<i>Bulgaria</i>	417	-48 ▼
<i>Canada</i>	497	32 ▲	<i>Moldova, Republic of</i>	414	-51 ▼
<i>Netherlands</i>	493	28 ▲	<i>Qatar</i>	414	-51 ▼
<i>Ireland</i>	492	27 ▲	<i>Chile</i>	412	-53 ▼
<i>Belgium</i>	489	25 ▲	<i>Uruguay</i>	409	-56 ▼
<i>Denmark</i>	489	24 ▲	<i>Malaysia</i>	409	-56 ▼
<i>United Kingdom</i>	489	24 ▲	<i>Montenegro, Republic of</i>	406	-59 ▼
<i>Poland</i>	489	24 ▲	<i>Baku (Azerbaijan)<sup>1</sup></i>	397	-68 ▼
<i>Austria</i>	487	22 ▲	<i>Mexico<sup>1</sup></i>	395	-70 ▼
<i>Australia</i>	487	22 ▲	<i>Thailand<sup>1</sup></i>	394	-71 ▼
<i>Czech Republic</i>	487	22 ▲	<i>Peru</i>	391	-74 ▼
<i>Slovenia</i>	485	20 ▲	<i>Georgia</i>	390	-75 ▼
<i>Finland</i>	484	19 ▲	<i>Saudi Arabia</i>	389	-76 ▼
<i>Latvia</i>	483	18 ▲	<i>North Macedonia</i>	389	-76 ▼
<i>Sweden</i>	482	17 ▲	<i>Costa Rica</i>	385	-80 ▼
<i>New Zealand</i>	479	14! ▲	<i>Colombia<sup>1</sup></i>	383	-82 ▼
<i>Lithuania</i>	475	10! ▲	<i>Brazil</i>	379	-86 ▼
<i>Germany</i>	475	10!! ▲	<i>Argentina</i>	378	-87 ▼
<i>France</i>	474	◆	<i>Jamaica<sup>1</sup></i>	377	-87 ▼
<i>Spain</i>	473	◆	<i>Albania</i>	368	-97 ▼
<i>Hungary</i>	473	◆	<i>Palestinian Authority</i>	366	-99 ▼
<i>Portugal</i>	472	◆	<i>Indonesia</i>	366	-99 ▼
<i>Italy</i>	471	◆	<i>Morocco</i>	365	-100 ▼
<i>Vietnam<sup>1</sup></i>	469	◆	<i>Uzbekistan</i>	364	-101 ▼
<i>Norway</i>	468	◆	<i>Jordan</i>	361	-104 ▼
<i>Malta</i>	466	◆	<i>Panama<sup>1</sup></i>	357	-108 ▼
<b>United States</b>	<b>465</b>		<i>Kosovo</i>	355	-110 ▼
<i>Slovak Republic</i>	464	◆	<i>Philippines</i>	355	-110 ▼
<i>Croatia</i>	463	◆	<i>Guatemala<sup>2</sup></i>	344	-121 ▼
<i>Iceland</i>	459	◆	<i>El Salvador<sup>1</sup></i>	343	-121 ▼
<i>Israel</i>	458	◆	<i>Dominican Republic<sup>1</sup></i>	339	-126 ▼
<i>Türkiye<sup>1</sup></i>	453	-12! ▼	<i>Paraguay<sup>1</sup></i>	338	-127 ▼
<i>Brunei Darussalam</i>	442	-23 ▼	<i>Cambodia<sup>2</sup></i>	336	-128 ▼

▲ Average score is higher than U.S. average score at the .05 level of statistical significance.

▼ Average score is lower than U.S. average score at the .05 level of statistical significance.

◆ Average score is not significantly different from U.S. average score at the .05 level of statistical significance.

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

!! Interpret data with caution. Estimate is unstable because the standard error represents more than 50 percent of the estimate.

<sup>1</sup> At least 50 percent but less than 75 percent of the 15-year-old population is covered by the PISA sample.

<sup>2</sup> Less than 50 percent of the 15-year-old population is covered by the PISA sample.

NOTE: Scores are reported on a scale from 0 to 1,000. Differences were computed using unrounded numbers. Education systems are ordered by their average scores in 2022. Italics indicate non-OECD countries and education systems. Education systems are marked as OECD countries if they were OECD members in 2022. All OECD members except for Luxembourg participated in the PISA 2022 cycle. The OECD average is the average of the national averages of the participating OECD member countries, with each country weighted equally. One or more PISA sampling standards were not met in the following countries: Australia, Canada, Denmark, Hong Kong (China), Ireland, Jamaica, Latvia, Netherlands, New Zealand, Panama, United Kingdom, and United States. Some apparent differences between estimates may not be statistically significant.

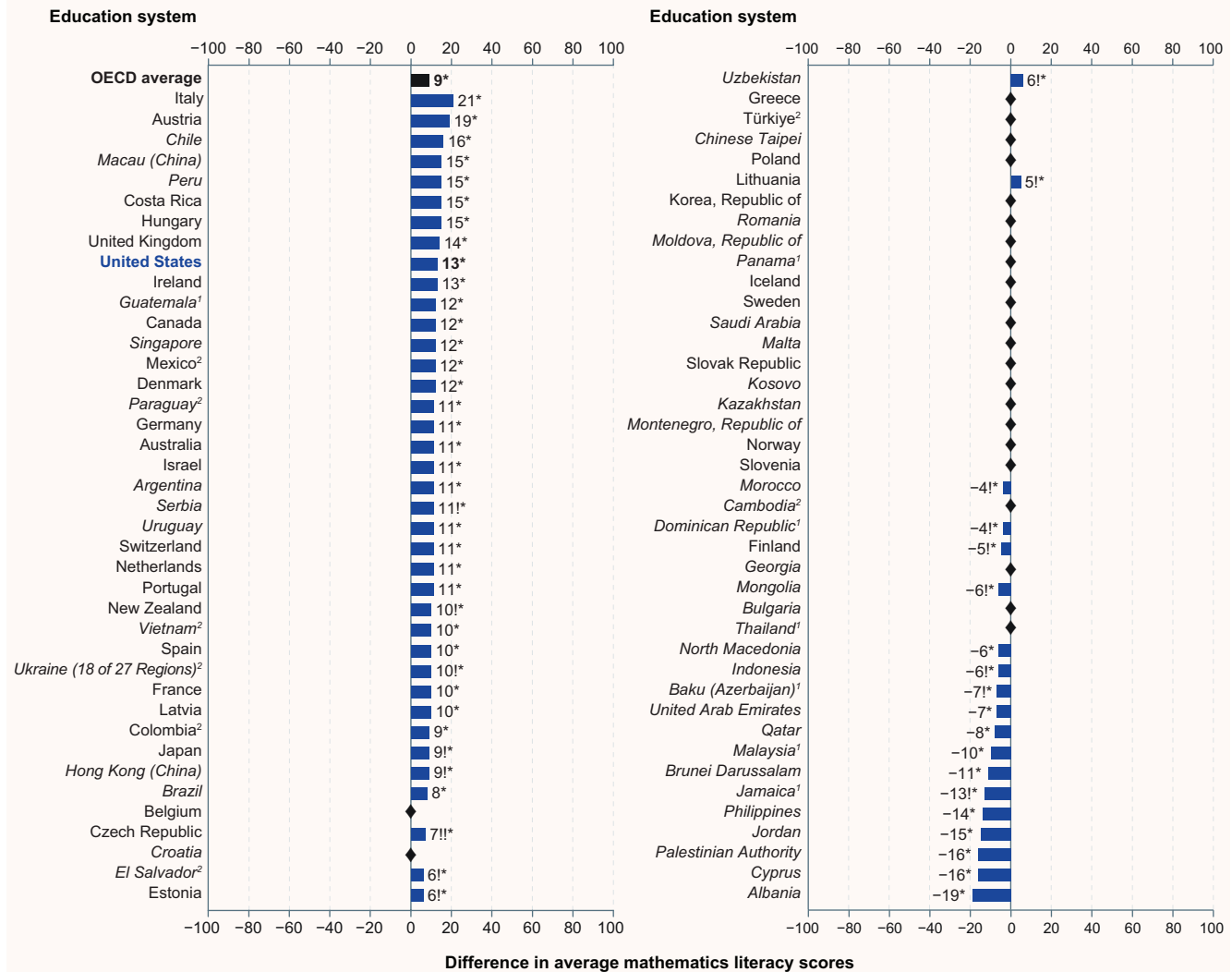
SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2022. Retrieved December 31, 2023, from *Highlights of PISA 2022 U.S. Results*, table M1.

In mathematics literacy, average scores in 2022 ranged from 336 in Cambodia to 575 in Singapore. The U.S. average mathematics literacy score (465) was not measurably different from the OECD average score. Compared with the 80 other education systems in PISA 2022, the U.S. average mathematics literacy score was

- higher than the average in 43 education systems;
- lower than the average in 25 education systems; and
- not measurably different from the average in 12 education systems.

FIGURE 2.

**Differences in average scores of 15-year-old male and female students on the Program for International Student Assessment (PISA) mathematics literacy scale, by education system: 2022**



◆ The difference in average scores of 15-year-old male and female students is not measurably different ( $p < .05$ ) at the .05 level of statistical significance.

! Interpret data with caution. Estimate is unstable due to high coefficient of variation ( $> 30$  percent and  $\leq 50$  percent).

!! Interpret data with caution. Estimate is unstable because the standard error represents more than 50 percent of the estimate.

\* The difference in average scores of 15-year-old male and female students is measurably different ( $p < .05$ ) at the .05 level of statistical significance.

<sup>1</sup> Less than 50 percent of the 15-year-old population is covered by the PISA sample.

<sup>2</sup> At least 50 percent but less than 75 percent of the 15-year-old population is covered by the PISA sample.

NOTE: Scores are reported on a scale from 0 to 1,000. Differences were computed using unrounded numbers. The graphic shows education systems ordered by the absolute male–female difference in 2022 average scores. Italics indicate non-OECD countries and education systems. Education systems are marked as OECD countries if they were OECD members in 2022. All OECD members except for Luxembourg participated in the PISA 2022 cycle. The OECD average is the average of the national averages of the participating OECD member countries, with each country weighted equally. One or more PISA sampling standards were not met in the following countries: Australia, Canada, Denmark, Hong Kong (China), Ireland, Jamaica, Latvia, Lithuania, New Zealand, Panama, United Kingdom, and United States. Some apparent differences between estimates may not be statistically significant. Figures are plotted based on unrounded data.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2022. Retrieved January 4, 2024, from *Highlights of PISA 2022 U.S. Results*, figure M6.

In the United States, the average mathematics literacy scores were 471 for male students and 458 for female students. The U.S. male-female score difference (13 points) was not measurably different from the OECD average score difference. Among the 81 education systems participating in PISA,

- male students scored higher, on average, in 40 education systems, with score gaps ranging from 5 points in Lithuania to 21 points in Italy;
- female students scored higher, on average, in 17 education systems, with score gaps ranging from 4 points in the Dominican Republic and Morocco to 19 points in Albania; and
- there was no measurable difference in the average scores between male and female students in 24 education systems.

### Science Literacy

TABLE 3.

**Average scores and differences from U.S. average score of 15-year-old students on the Program for International Student Assessment (PISA) science literacy scale, by education system: 2022**

Education system	Average score	Difference from U.S. average score	Education system	Average score	Difference from U.S. average score
<b>OECD average</b>	<b>485</b>	<b>-15</b> ▼	Iceland	447	-52 ▼
<i>Singapore</i>	561	62 ▲	<i>Brunei Darussalam</i>	446	-54 ▼
Japan	547	47 ▲	Chile	444	-56 ▼
<i>Macau (China)</i>	543	44 ▲	Greece	441	-59 ▼
<i>Chinese Taipei</i>	537	38 ▲	<i>Uruguay</i>	435	-64 ▼
Korea, Republic of	528	28 ▲	<i>Qatar</i>	432	-67 ▼
Estonia	526	26 ▲	<i>United Arab Emirates</i>	432	-67 ▼
<i>Hong Kong (China)</i>	520	21 ▲	<i>Romania</i>	428	-72 ▼
Canada	515	16! ▲	<i>Kazakhstan</i>	423	-76 ▼
Finland	511	12! ▲	<i>Bulgaria</i>	421	-78 ▼
Australia	507	◆	<i>Moldova, Republic of</i>	417	-83 ▼
New Zealand	504	◆	<i>Malaysia</i> <sup>1</sup>	416	-83 ▼
Ireland	504	◆	<i>Mongolia</i>	412	-87 ▼
Switzerland	503	◆	<i>Colombia</i> <sup>1</sup>	411	-88 ▼
Slovenia	500	◆	<i>Costa Rica</i>	411	-88 ▼
United Kingdom	500	◆	<i>Cyprus</i>	411	-89 ▼
<b>United States</b>	<b>499</b>		<i>Mexico</i> <sup>1</sup>	410	-90 ▼
Poland	499	◆	<i>Thailand</i> <sup>1</sup>	409	-90 ▼
Czech Republic	498	◆	<i>Peru</i>	408	-92 ▼
Latvia	494	◆	<i>Argentina</i>	406	-93 ▼
Denmark	494	◆	<i>Montenegro, Republic of</i>	403	-96 ▼
Sweden	494	◆	<i>Brazil</i>	403	-96 ▼
Germany	492	◆	<i>Jamaica</i> <sup>1</sup>	403	-96 ▼
Austria	491	◆	<i>Saudi Arabia</i>	390	-109 ▼
Belgium	491	◆	<i>Panama</i> <sup>1</sup>	388	-112 ▼
Netherlands	488	◆	<i>Georgia</i>	384	-115 ▼
France	487	-12! ▼	<i>Indonesia</i>	383	-117 ▼
Hungary	486	-14! ▼	<i>Baku (Azerbaijan)</i> <sup>1</sup>	380	-119 ▼
Spain	485	-15! ▼	<i>North Macedonia</i>	380	-120 ▼
Lithuania	484	-15! ▼	<i>Albania</i>	376	-123 ▼
Portugal	484	-15! ▼	<i>Jordan</i>	375	-125 ▼
<i>Croatia</i>	483	-17 ▼	<i>El Salvador</i> <sup>1</sup>	373	-126 ▼
Norway	478	-21 ▼	<i>Guatemala</i> <sup>2</sup>	373	-126 ▼
Italy	477	-22 ▼	<i>Palestinian Authority</i>	369	-131 ▼
<i>Türkiye</i> <sup>1</sup>	476	-23 ▼	<i>Paraguay</i> <sup>1</sup>	368	-131 ▼
<i>Vietnam</i> <sup>1</sup>	472	-27 ▼	<i>Morocco</i>	365	-134 ▼
<i>Malta</i>	466	-34 ▼	<i>Dominican Republic</i> <sup>1</sup>	360	-139 ▼
Israel	465	-35 ▼	<i>Kosovo</i>	357	-142 ▼
Slovak Republic	462	-37 ▼	<i>Philippines</i>	356	-143 ▼
<i>Ukraine (18 of 27 Regions)</i> <sup>1</sup>	450	-49 ▼	<i>Uzbekistan</i>	355	-145 ▼
<i>Serbia</i>	447	-52 ▼	<i>Cambodia</i> <sup>2</sup>	347	-152 ▼

▲ Average score is higher than U.S. average score at the .05 level of statistical significance.

▼ Average score is lower than U.S. average score at the .05 level of statistical significance.

◆ Average score is not significantly different from U.S. average score at the .05 level of statistical significance.

! Interpret data with caution. Estimate is unstable because the standard error is between 30 and 50 percent of the estimate.

<sup>1</sup> At least 50 percent but less than 75 percent of the 15-year-old population is covered by the PISA sample.

<sup>2</sup> Less than 50 percent of the 15-year-old population is covered by the PISA sample.

NOTE: Scores are reported on a scale from 0 to 1,000. Differences were computed using unrounded numbers. Education systems are ordered by their average scores in 2022. Italics indicate non-OECD countries and education systems. Education systems are marked as OECD countries if they were OECD members in 2022. All OECD members except for Luxembourg participated in the PISA 2022 cycle. The OECD average is the average of the national averages of the participating OECD member countries, with each country weighted equally. One or more PISA sampling standards were not met in the following countries: Australia, Canada, Denmark, Hong Kong (China), Ireland, Jamaica, Latvia, Netherlands, New Zealand, Panama, United Kingdom, and United States. Some apparent differences between estimates may not be statistically significant.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2022. Retrieved December 31, 2023, from *Highlights of PISA 2022 U.S. Results*, table S1.

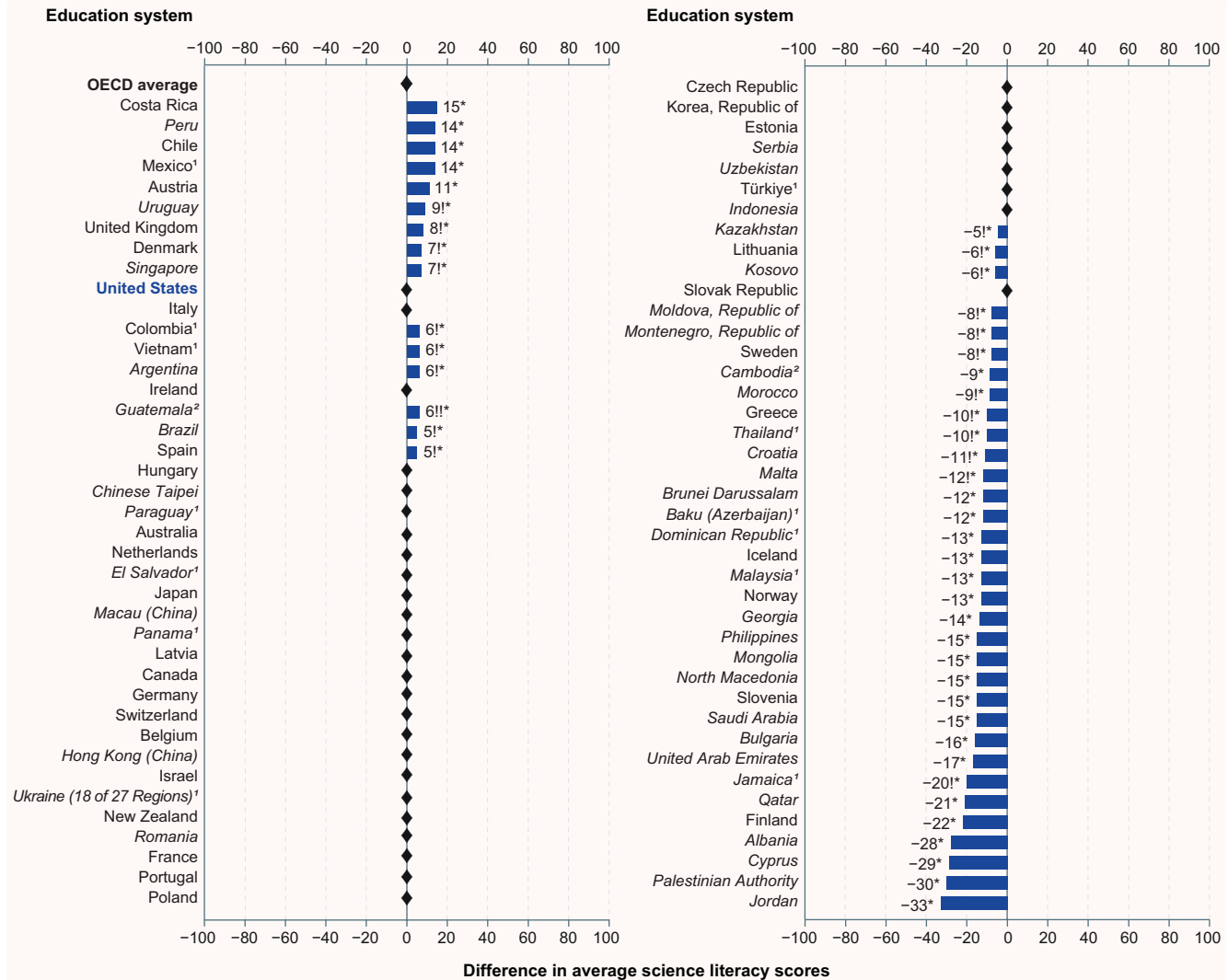


In science literacy, average scores in 2022 ranged from 347 in Cambodia to 561 in Singapore. The U.S. average science literacy score (499) was higher than the OECD average score (485). Compared with the 80 other education systems in PISA 2022, the U.S. average science literacy score was

- higher than the average in 56 education systems;
- lower than the average in 9 education systems; and
- not measurably different from the average in 15 education systems.

FIGURE 3.

**Differences in average scores of 15-year-old male and female students on the Program for International Student Assessment (PISA) science literacy scale, by education system: 2022**



◆ The difference in average scores of 15-year-old male and female students is not measurably different ( $p < .05$ ) at the .05 level of statistical significance.

! Interpret data with caution. Estimate is unstable due to high coefficient of variation ( $> 30$  percent and  $\leq 50$  percent)

!! Interpret data with caution. Estimate is unstable because the standard error represents more than 50 percent of the estimate.

\* The difference in average scores of 15-year-old male and female students is measurably different ( $p < .05$ ) at the .05 level of statistical significance.

<sup>1</sup> At least 50 percent but less than 75 percent of the 15-year-old population is covered by the PISA sample.

<sup>2</sup> Less than 50 percent of the 15-year-old population is covered by the PISA sample.

NOTE: Scores are reported on a scale from 0 to 1,000. Differences were computed using unrounded numbers. The graphic shows education systems ordered by the absolute male–female difference in 2022 average scores. Italics indicate non-OECD countries and education systems. Education systems are marked as OECD countries if they were OECD members in 2022. All OECD members except for Luxembourg participated in the PISA 2022 cycle. The OECD average is the average of the national averages of the participating OECD member countries, with each country weighted equally. One or more PISA sampling standards were not met in the following countries: Australia, Canada, Denmark, Hong Kong (China), Ireland, Jamaica, Latvia, Netherlands, New Zealand, Panama, United Kingdom, and United States. Some apparent differences between estimates may not be statistically significant. Figures are plotted based on unrounded data.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2022. Retrieved January 4, 2024, from *Highlights of PISA 2022 U.S. Results*, figure S6.

In the United States, the average science literacy scores did not differ measurably between male and female students. There was also no measurable difference in science literacy scores between male and female students in OECD countries, on average. Among the 81 education systems participating in PISA,

- female students scored higher, on average, in 33 education systems, with score gaps ranging from 5 points in Kazakhstan to 33 points in Jordan;
- male students scored higher, on average, in 15 education systems, with score gaps ranging from 5 points in Spain and Brazil to 15 points in Costa Rica; and
- there was no measurable difference in the average scores between male and female students in 33 education systems, including the United States.

#### Endnotes:

<sup>1</sup> In this indicator, “education systems” refer to all entities participating in PISA, including countries as well as subnational entities (e.g., cities or provinces).

<sup>2</sup> PISA results are also reported by the percentage of students reaching particular proficiency levels. For more information, see [Highlights of PISA 2022 U.S. Results](#).

<sup>3</sup> For general technical notes related to data analysis, data interpretation, rounding, and other considerations, please refer to the [Reader’s Guide](#).

**Reference tables:** [Table M1. \(PISA 2022 First Look Report table\):](#)

Average scores of 15-year-old students on the PISA mathematics literacy scale, by education system: 2022;

[Table M6. \(PISA 2022 First Look Report table\):](#) Average scores of 15-year-old male and female students on the PISA mathematics literacy scale, by education system: 2022;

[Table R1. \(PISA 2022 First Look Report table\):](#) Average scores of 15-year-old students on the PISA reading literacy scale, by education system: 2022;

[Table R6. \(PISA 2022 First Look Report table\):](#) Average scores of 15-year-old male and female students on the PISA reading literacy scale, by education system: 2022;

[Table S1. \(PISA 2022 First Look Report table\):](#) Average scores of 15-year-old students on the PISA science literacy scale, by education system: 2022;

[Table S6. \(PISA 2022 First Look Report table\):](#) Average scores of 15-year-old male and female students on the PISA science literacy scale, by education system: 2022

**Related indicators and resources:** [International Comparisons: Mathematics and Science Achievement at Grades 4 and 8](#); [International Comparisons: Reading Literacy at Grade 4](#); [Mathematics Performance](#); [Reading Performance](#); [Science Performance](#)

**Glossary:** [Organization for Economic Cooperation and Development \(OECD\)](#)