



December 6, 2016

## **Research Findings from the OECD Programme for International Student Assessment (PISA) 2015 for Israel**

The National Authority for Measurement and Evaluation in Education (RAMA) is pleased to present preliminary research findings from the Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA) 2015 for Israel. PISA is currently the most comprehensive, important, and innovative research program in the field of education. This research is conducted triennially by the OECD.

The aim of this research is to examine to what extent 15-year old students who are "preparing for adulthood" – have acquired thinking and understanding tools that would enable them to cope well and effectively with their surroundings. Seventy-two countries and economic entities participated in the 2015 PISA cycle, including all 35 OECD countries, and over half a million students. The study in Israel was conducted in March 2015 among a representative sample of 6,598 students studying in 173 schools, mostly in the 10<sup>th</sup> grade.

The study examines the level of literacy in three areas - science, reading, and mathematics. In PISA 2015, emphasis was placed on science literacy. The tests were computer-based in most countries, including Israel, making it possible to expand the subjects and skills that PISA can evaluate. PISA scale-scores were established such that in the base-year for each area of literacy the average of the OECD countries that participated in that year was 500 points with a standard deviation of 100 points. Another area that was examined - cooperative problem solving, will be reported by the international organization at a later date.

### **Overview of PISA Study Results**

Israel's PISA achievement scores have improved over the years. In the present 2015 research cycle, there is no significant change in Israel's achievement scores as compared to those of the previous round of PISA research conducted in 2012. As with previous cycles, Israel's achievement scores are lower than the OECD average. Also the dispersion of scores in Israel is one of the largest among the countries and economic entities participating in the study, and the largest among OECD countries. The main achievement gaps arise when comparing students from the two language sectors (Hebrew and Arabic speakers), and when comparing students from different economic, social, and cultural backgrounds. The percentage of top-performing students in all three areas of literacy was altogether similar to the OECD average, while the percentage of low-performing students in all three disciplines was altogether 1.5 times greater than the OECD average.

The full report and additional materials can be found on RAMA's website at:

[http://cms.education.gov.il/EducationCMS/Units/Rama/MivchanimBenLeumiym/PISA\\_2015.htm](http://cms.education.gov.il/EducationCMS/Units/Rama/MivchanimBenLeumiym/PISA_2015.htm)

## A. Main Points

### Longitudinal Trends

Achievement scores in the three areas of literacy have shown an increase since the PISA 2006 cycle, but compared to the PISA 2012 cycle there is no significant change in Israel's achievement scores in any one area of literacy. The longitudinal increase was shown in both Hebrew and Arabic speakers, except for science literacy which showed an increase among Hebrew speakers and remained stable among Arabic speakers. In the last decade Israel's achievement scores increased in:

- **Science literacy** - a small increase of **13** points (from 454 in 2006 to 467 in 2015)
- **Reading literacy** - a large increase of **40** points (from 439 in 2006 to 479 in 2015)
- **Mathematics literacy** - a moderate increase of **28** points (from 442 in 2006 to 470 in 2015)

It should be noted that Israel is among the countries whose achievement scores improved significantly over the cycles of PISA.

### 2015 Achievement in International Perspective

Mean achievement scores for Israel are lower than the OECD average in all three areas of literacy.

- **Science literacy** - the mean for Israel is **467** compared to the OECD average of **493**  
Israel ranks 40th among the 70 countries and economic entities participating in the study
- **Reading literacy** - the mean for Israel is **479** compared to the OECD average of **493**  
Israel ranks 37th among the 70 countries and economic entities participating in the study
- **Mathematics literacy** - the mean for Israel is **470** compared to the OECD average of **490**  
Israel ranks 39th among the 70 countries and economic entities participating in the study

**In all areas of literacy the dispersion of scores in Israel are among the largest in the world, and the largest among the OECD countries.**

**The percentage of top-performing students in all three areas of literacy is altogether similar to the OECD average, while the percentage of low-performing students in all three areas of literacy is 1.5 times greater than the OECD average.**

### Achievement Gaps

In all areas of literacy, noticeable achievement gaps between Hebrew- and Arabic-speaking students were found, with Hebrew speakers outperforming Arabic speakers. The gaps in mean scores between Hebrew and Arabic speakers are 87 points in science literacy, 116 points in reading literacy, and 104 points in mathematics literacy.



**In all areas of literacy, achievement gaps were found among students from different levels of economic, social, and cultural status (ESCS): the higher the ESCS level, the higher are the achievement scores.**

The gap between students from high and low ESCS backgrounds is about 90 points among Hebrew speakers and about 25 points among Arabic speakers. Achievement gaps between Hebrew-speaking and Arabic-speaking students remain significant even when comparing students from similar ESCS backgrounds.

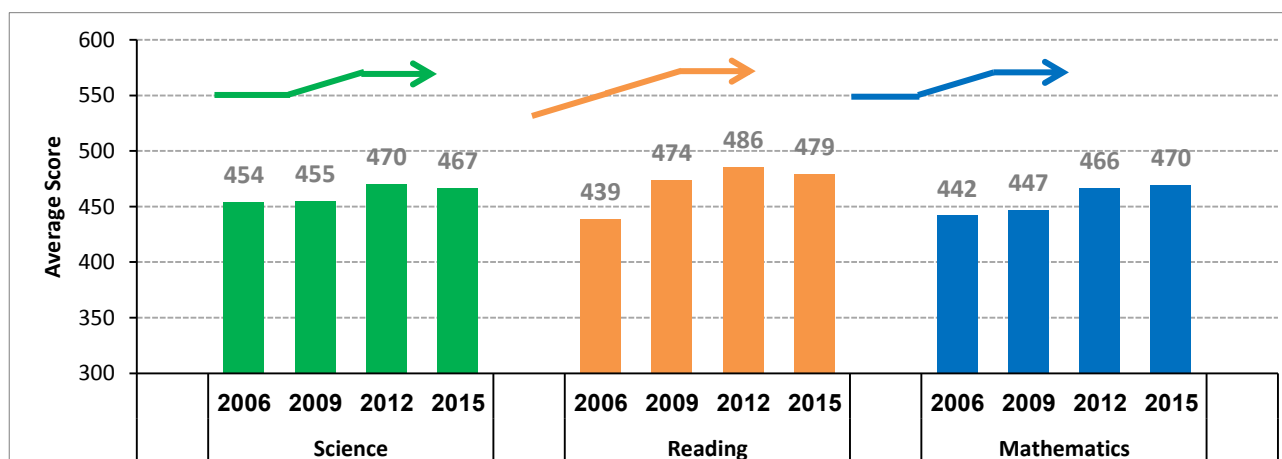
## B. Longitudinal Trends in Israel's Achievement

Israel's achievement scores in PISA studies have improved longitudinally. However, PISA 2015 achievement scores are not significantly different from those obtained in 2012 in the three areas of literacy.

Between 2006 and 2015 there was a small improvement in science literacy of 13 points (from 454 in 2006 to 467 in 2015), a large improvement of 40 points in reading literacy (from 439 in 2006 to 479 in 2015), and a moderate improvement of 28 points in mathematics literacy (from 442 in 2006 to 470 in 2015). By contrast, between 2012 and 2015 there was no statistically significant change in the three areas of literacy: science literacy (non-significant decrease of 3 points, from 470 in 2012 to 467 in 2015), reading literacy (non-significant drop of 7 points, from 486 in 2012 to 479 in 2015), and mathematics literacy (non-significant increase of 4 points, from 466 in 2012 to 470 in 2015).

The longitudinal improvement trend in Israel is reflected in the estimated average three-year trend, calculated by the OECD. The calculation of the average three-year trend is done by a regression procedure that takes into account all of the means in the range of relevant years. In science literacy, the estimated average three-year trend, calculated with data from 2006 to 2015, witnessed an improvement for Israel of 5.4 points every three years, on average. In reading literacy, the estimated three-year average trend, calculated with data from 2009 to 2015, witnessed a non-significant improvement for Israel of 2.5 points. However, the long-term change in reading that is also calculated by OECD with data from 2000-2015 is significant and stands above 9.2 points improvement every three years, on average. In mathematics the estimated average three-year trend is calculated with data from 2003-2015 (in Israel the data start from 2006) and shows in Israel an improvement of 10.1 points every three years, on average. For details, see Figures 4 and 5 in the appendices.

Figure 1: PISA-mean scores for Israel in the three literacy areas (2006-2015)



When examining the trends in each language sector separately, it comes out that trends among Hebrew-speaking students are similar to those of the general population, whereas those among Arabic-speaking students are slightly different.

**Among Hebrew speakers** there was an increase in achievement scores between the 2006 and 2012 cycles of PISA, but this increase did not extend to the 2015 PISA cycle. It should be noted that already in 2012 the mean scores for the Hebrew-speaking population exceeded the OECD average in reading literacy (510 for Israel compared to 496 for the OECD), and this advantage remained in 2015 (507 for Israel compared to 493 points for the OECD).

**Among Arabic speakers** there is no consistent trend between 2006 and 2015 – in the two areas of literacy, reading and mathematics, there was a moderate increase of 19 points (from 372 to 391 points), and in science there was no indication of appreciable change (from 403 to 401, a non-significant decrease of 2 points).

Figure 2: PISA—mean scores for Hebrew speakers in the three literacy areas (2006-2015)

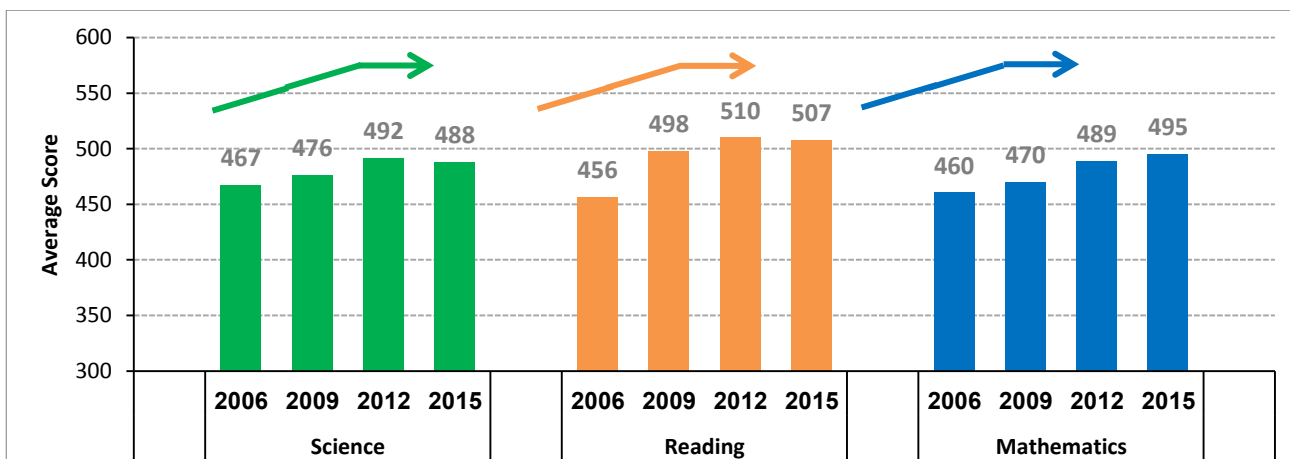
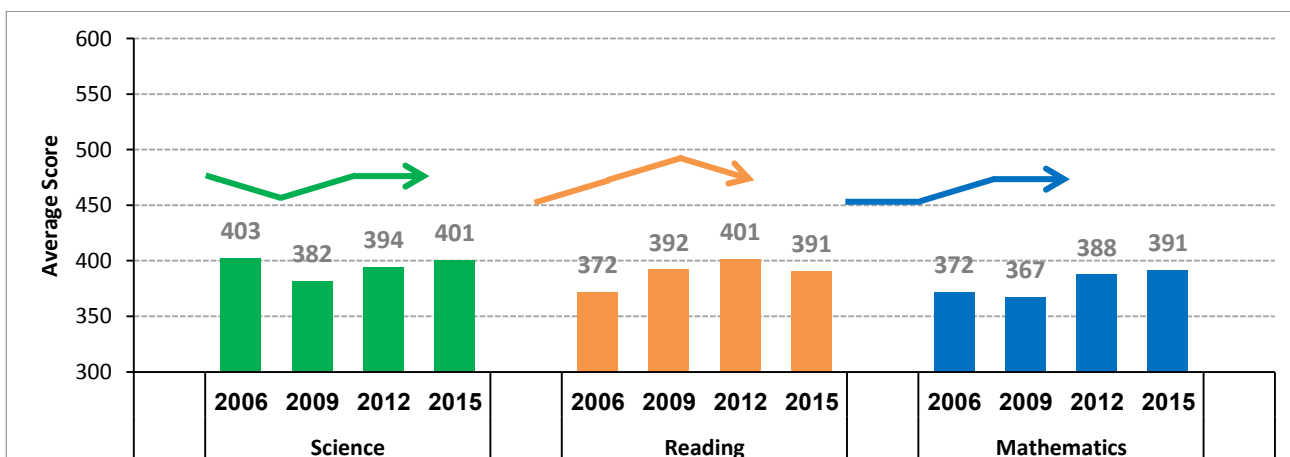


Figure 3: PISA—mean scores for Arabic speakers in the three literacy areas (2006-2015)





Between 2006 and 2015 there was **an increase in the percentage of top-performing students** (proficiency levels 5 and 6) – in reading literacy the percentage increased by 4% (5% to 9%) and in mathematics literacy the percentage increased by 3% (6% to 9%). In science literacy there was a slight increase of one percent (5% to 6%). The percentage of top-performing students in all three areas combined increased as well during that period (2% to 3%). In addition, **there was a decrease in the percentage of low-performing students** (below proficiency level 2) in all three areas of literacy. The percentage of low-performing students decreased 5% in science literacy (36% to 31%), 12% in reading literacy (39% to 27%), and 10% in mathematics literacy (42% to 32%). The percentage of low-performing students in the three areas also decreased 6% (26% to 20%).

When examining the percentages of top-performing and low-performing students longitudinally for each language sector separately, it can be seen that **among Hebrew speakers there was an improvement** – growth in the percentage of top-performing students coupled with a reduction in the percentage of low-performing students. In science literacy there was a 2% increase in the percentage of top-performing students and a decrease of 8% in low-performing students; in reading literacy there was an increase of 6% in top-performing students and a decrease of 16% in low-performing students; and in mathematics literacy there was an increase of 5% in the top-performing student and decrease of 13% in the percentage of low-performing students.

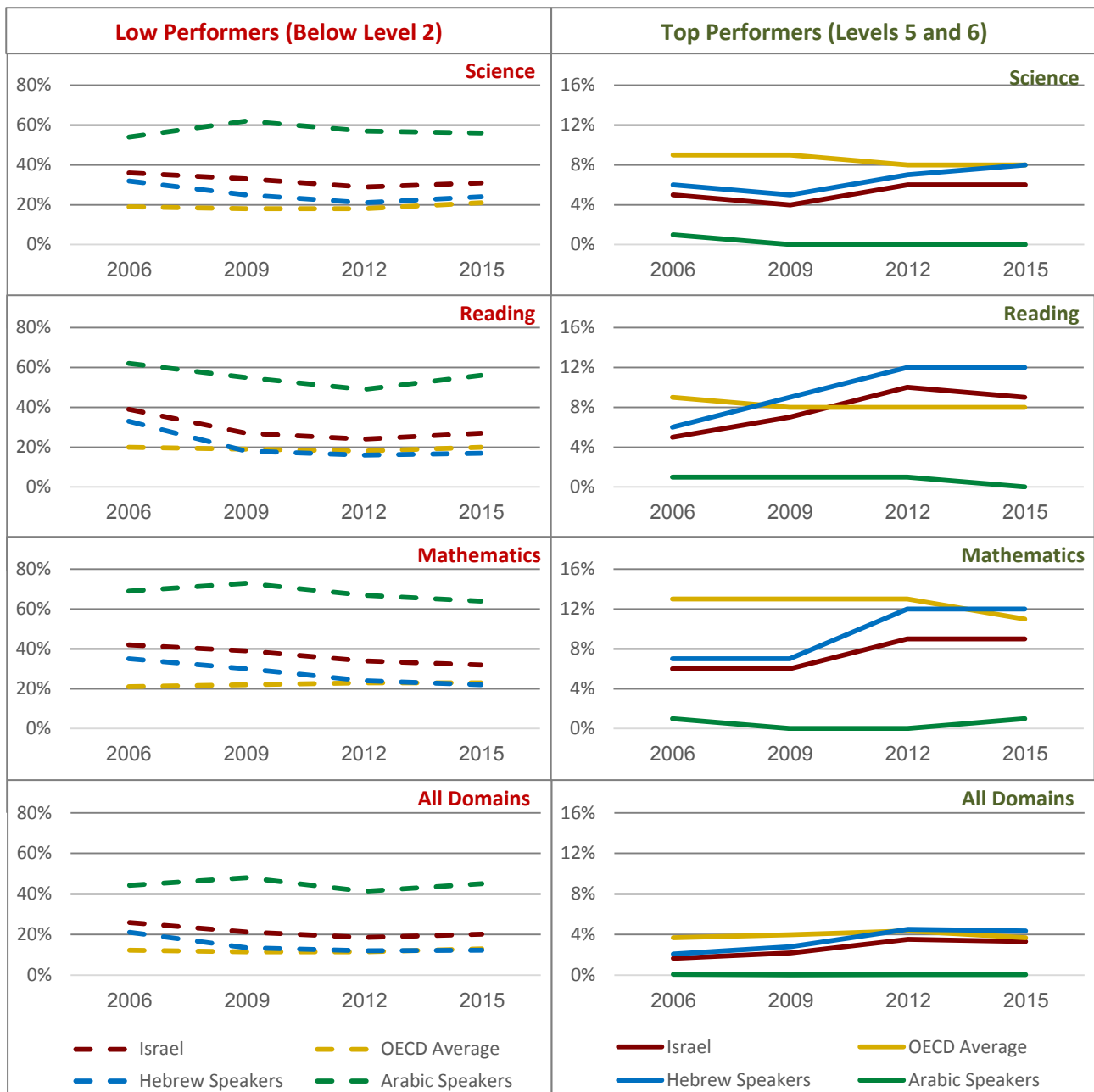
**Arabic speakers**, however, did not see similar improvements. With the exception of a slight decrease of 5% in the percentage of low-performing students in mathematics and reading literacy, there was no real change between the 2006 and 2015 PISA cycles in the percentages of top- and low-performing students. Among Arabic speakers the percentages of top-performing students are near-zero in all years.

When comparing the percentages of top- and low-performing students in the current PISA cycle with the previous PISA 2012 cycle, it appears that there was no significant change in the percentages of top- and low-performing students, in Israel, in general, as well as in both language sectors, except for a 7% increase in low-performing students among Arabic speakers in reading literacy.

The next page presents a chart showing the percentages of top- and low-performing students across the years, and these data are described in detail at the end of this document in Appendix 3.



Figure 4: Trends in the percentages of top- and low-performing students (2006-2015)





### **C. Israel's Achievement in International Perspective**

In the PISA 2015 cycle, mean scores for Israel were 467 in science literacy, 479 in reading literacy, and 470 in mathematics literacy. In all areas of literacy, the mean score for Israel was lower than the OECD average (493 in science literacy, 493 in reading literacy, and 490 in mathematics literacy). Figure 5 and the table in Appendix 1 present the overall achievement scores in the three literacy areas in the 70 countries and economic entities that participated in PISA 2015 and whose data are reported in the international report (problems were revealed with the data for two other participating countries that were not reported). Results are presented by countries in descending order according to their average achievement scores. Scores for Israel are marked in red and countries whose average scores are not statistically different from those of Israel are marked with asterisks.

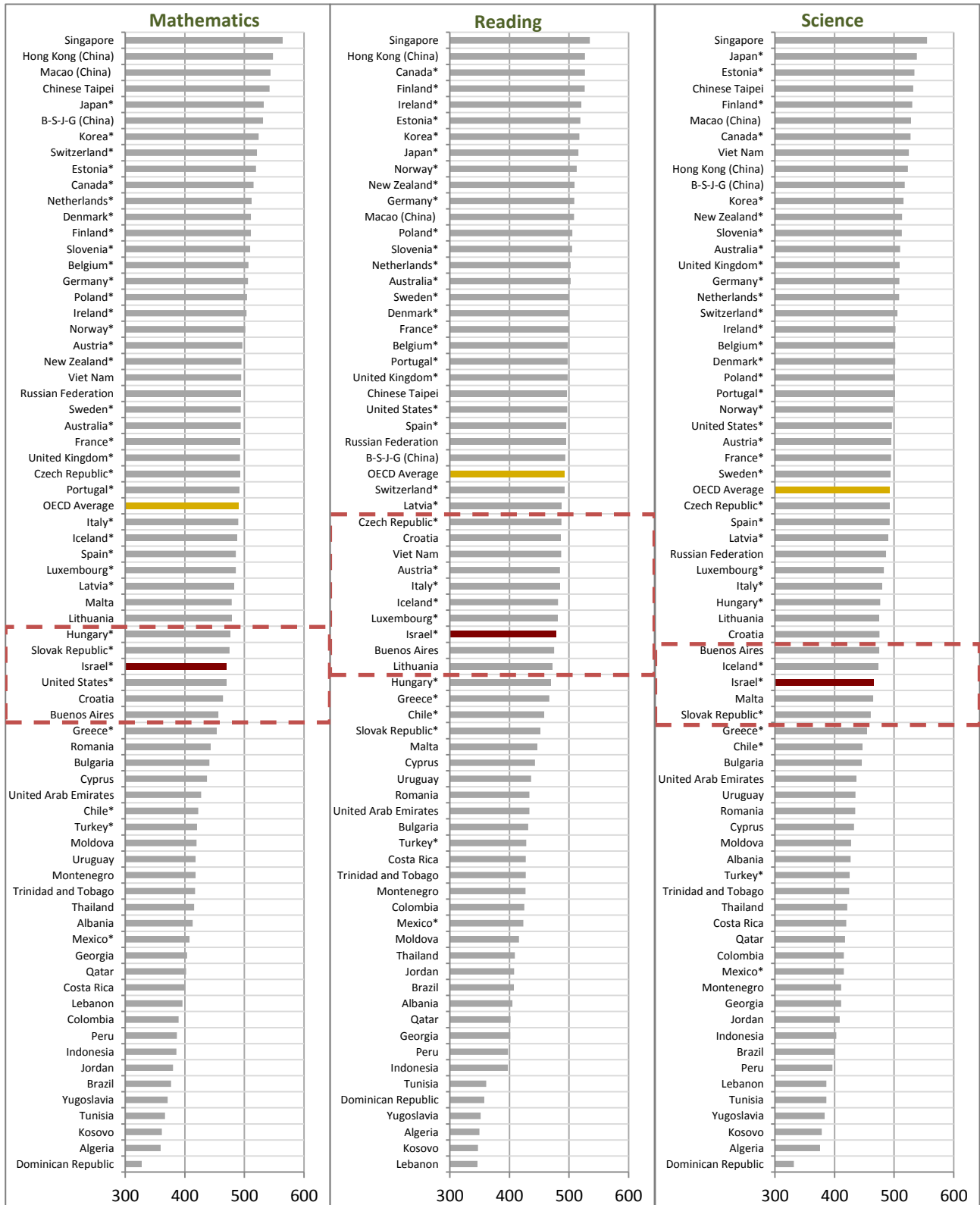
OECD countries whose achievement scores are not significantly different from those of Israel in **science literacy** include: Iceland (473) and Slovakia (461); **reading literacy**: Czech Republic (487), Austria (485) and Italy (485), Iceland (482) and Luxembourg (481); **mathematics literacy**: Hungary (477), Slovakia (475) and the U.S. (470).

Of all the countries and economic entities, Israel is ranked 40<sup>th</sup> in **science literacy** (30<sup>th</sup> among OECD countries); 37<sup>th</sup> in **reading literacy** (29<sup>th</sup> among OECD countries); and 39<sup>th</sup> in **mathematics literacy** (30<sup>th</sup> among OECD countries). The mean for Israel is not significantly different from the means of countries and economic entities ranked 38-42 in science, 30-39 in reading, and 37-42 in mathematics.





Figure 5: PISA 2015—mean scores for participating countries and economic entities

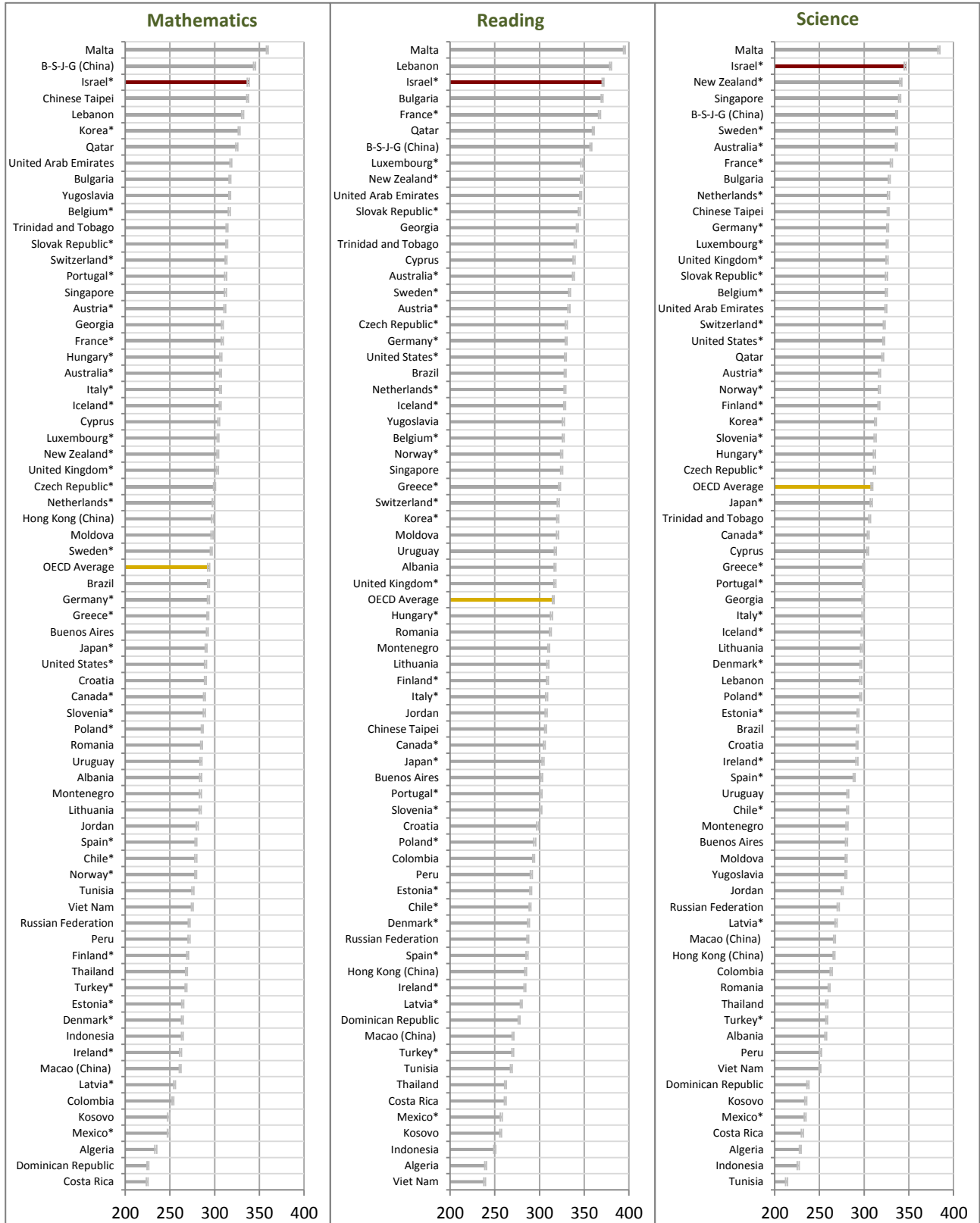




**The dispersion of scores in Israel is very large - one of the highest among the countries and economic entities that participated in the study, and the highest among OECD countries.** Figure 6 presents an index of the dispersion of scores from countries and economic entities that participated in PISA 2015. The indices of countries are presented in descending order according to the size of the score dispersion index and OECD countries are marked by an asterisk. The measure used is the gap in scores between the score representing the fifth percentile (score at or below which 5% of the country's weakest students performed), and the score representing the 95th percentile (score at or above which 5% of the students in a given country's strongest students performed). In all areas of literacy Israel was ranked in the top three in size of score dispersion.



Figure 6: PISA 2015—dispersion scores among participating countries and economic entities (gap between 95<sup>th</sup> and 5<sup>th</sup> percentiles)



## D. Achievement by Language Sector

The achievement scores of the Hebrew-speaking students are higher than those of Arabic speakers in the three areas of literacy. The figure below presents the mean scores of students from both language sectors alongside the means for Israel in general and the OECD average. The average gap in mean scores between the Hebrew and Arabic speakers stands above **87 points in science literacy, 116 points in reading literacy, and 104 points in mathematics literacy**. When examining students from each of the individual language sectors separately, the mean scores for Hebrew speakers is similar to the OECD average and mean scores for Arabic speakers is lower than the OECD average and similar to the mean scores of developing countries such as Indonesia.

In comparison to previous research cycles, there has been an increasing gap between Hebrew and Arabic speakers (for details see table in Appendix 2).

Figure 7: PISA 2015—mean scores by language sector

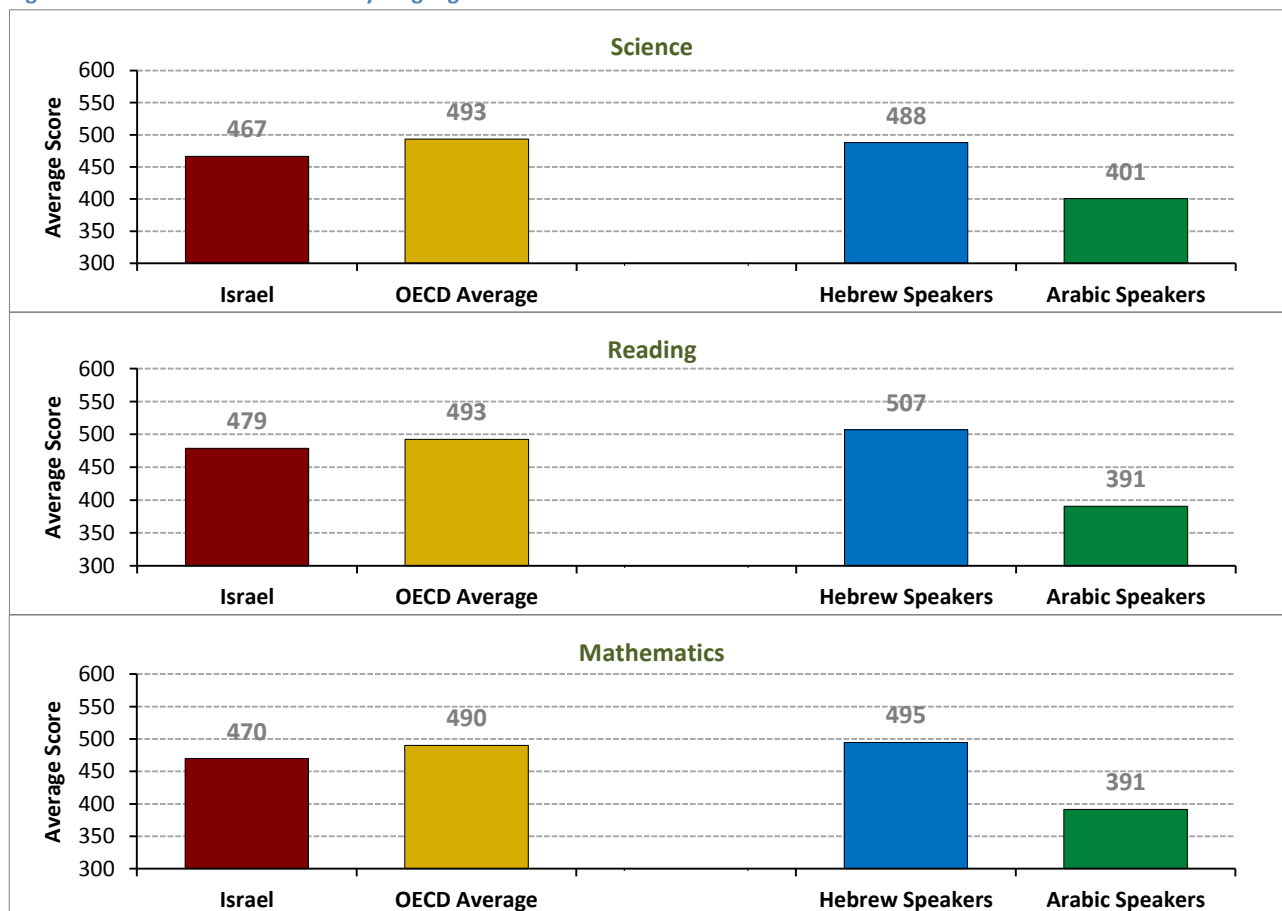




Table 1 below presents the percentage of top-performing and low-performing students among all Israeli students, the OECD average, and among Hebrew and Arabic speakers, in each of the areas of literacy in the 2015 cycle. The percentage of top-performing student in Israel in reading literacy is similar to the OECD average (9% in Israel and 8% for OECD average) but lower than OECD in the other two areas of literacy (6% in Israel compared to 8% for the OECD average in science literacy, and 9% in Israel compared to 11% for the OECD average in mathematics literacy). The percentages of low-performing students in Israel are considerably higher than those of the OECD average in all three areas of literacy (31% in Israel as compared to 21% for the OECD average in science, 27% in Israel as compared to 20% for the OECD average in reading, and 32% in Israel as compared to 23% for the OECD average in mathematics).

The percentage of top-performing students among **Hebrew speakers** is similar to or higher than those of the OECD average in the three areas of literacy. The percentage of top-performing students among **Arabic speakers** is near zero in the three areas of literacy. The percentage of low-performing students among **Hebrew speakers** is higher than the OECD average in science literacy; lower than the OECD average in reading literacy; and similar to the OECD average in mathematics literacy. The percentage of low-performing students among **Arabic speakers** is very high in the three areas of literacy - **more than half of Arabic speakers are designated as low-performing in each of the areas of literacy.**

When we examine the percentages top-performing students in all three areas of literacy together, it seems that percentage in **Israel** is similar to that of the OECD average (3% in Israel versus 4% for the OECD average). The percentage of top-performing students among Hebrew speakers is similar to the OECD average (4%) but among Arabic speakers the percentage is zero. On the other hand, the percentage of low-performing students in all three areas of literacy together is larger than the OECD average (20% in Israel compared to 13% for the OECD average), but the percentage among Hebrew speakers (12%) is slightly lower than the OECD average, and the percentage among Arabic speakers (45%) is much higher than the OECD average.

**Table 1: PISA 2015—percentages of top- and low-performing students**

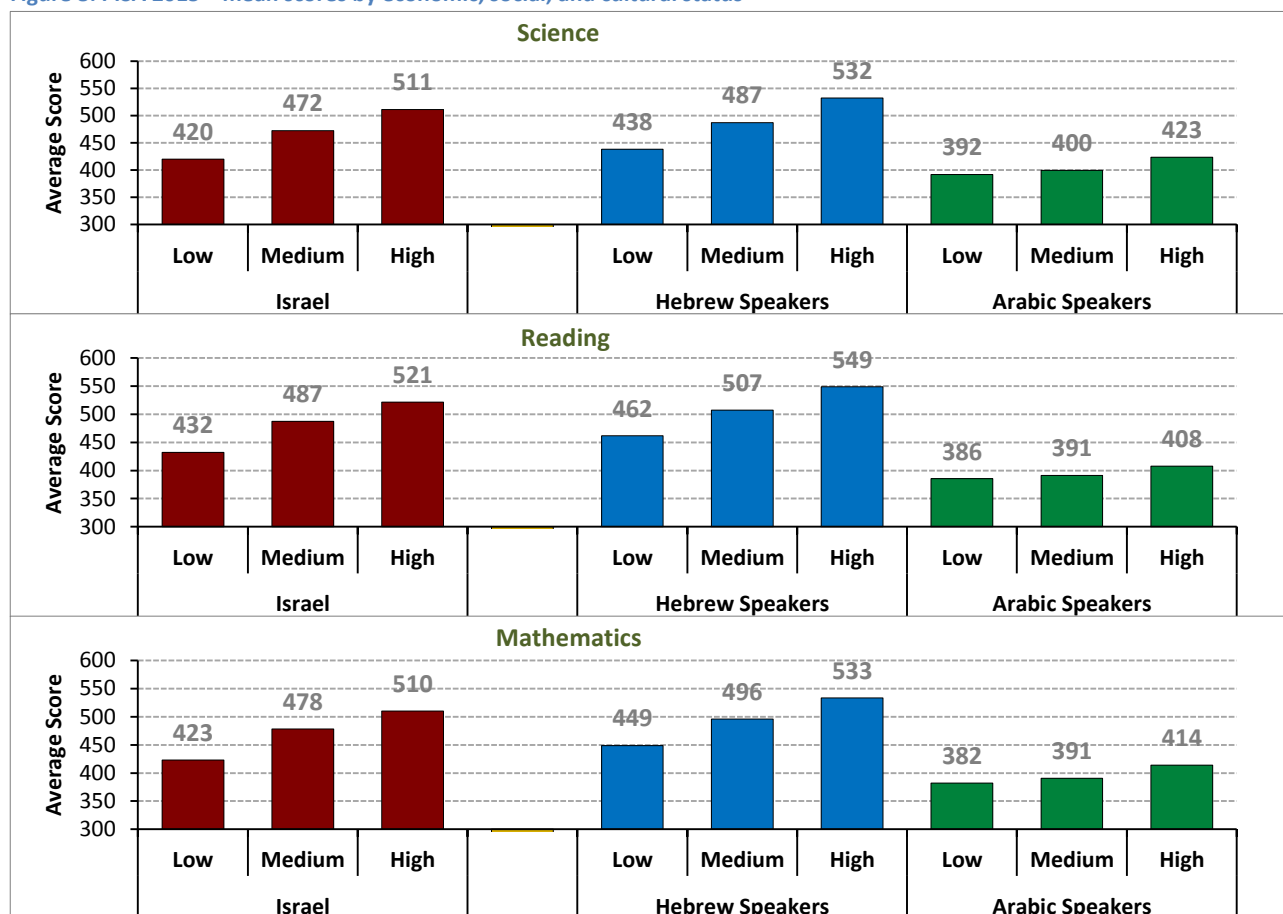
		Science	Reading	Mathematics	All Domains
Israel	Top Performers (Levels 5 and 6)	6%	9%	9%	3%
	Low Performers (Below Level 2)	31%	27%	32%	20%
OECD Average	Top Performers (Levels 5 and 6)	8%	8%	11%	4%
	Low Performers (Below Level 2)	21%	20%	23%	13%
Hebrew Speakers	Top Performers (Levels 5 and 6)	8%	12%	12%	4%
	Low Performers (Below Level 2)	24%	17%	22%	12%
Arabic Speakers	Top Performers (Levels 5 and 6)	0%	0%	0%	0%
	Low Performers (Below Level 2)	56%	56%	64%	45%

## E. Achievement by Socio-Economic Status

In all areas of literacy, achievement gaps were found among students of different economic, social, and cultural status (ESCS<sup>1</sup>): the higher the level of students' ESCS, the higher are their achievement scores. In the 2015 cycle, achievement gaps between students from high and low socio-economic status stands above 91 points in science, 89 points in reading, and 87 points in mathematics. In general, these gaps remain virtually unchanged over the years.

The achievement gaps among Hebrew-speaking students between students from high and low ESCE levels are similar to those of the general population - 94 points in science, 87 points in reading, and 84 points in mathematics. The achievement gaps among Arabic-speaking students are smaller and stand above 31 points in science, 22 points in reading, and 32 points in mathematics. It should be emphasized that in PISA, unlike other studies, achievement gaps between Hebrew and Arabic-speaking students remain significant even when comparing students from similar backgrounds.

Figure 8: PISA 2015—mean scores by economic, social, and cultural status



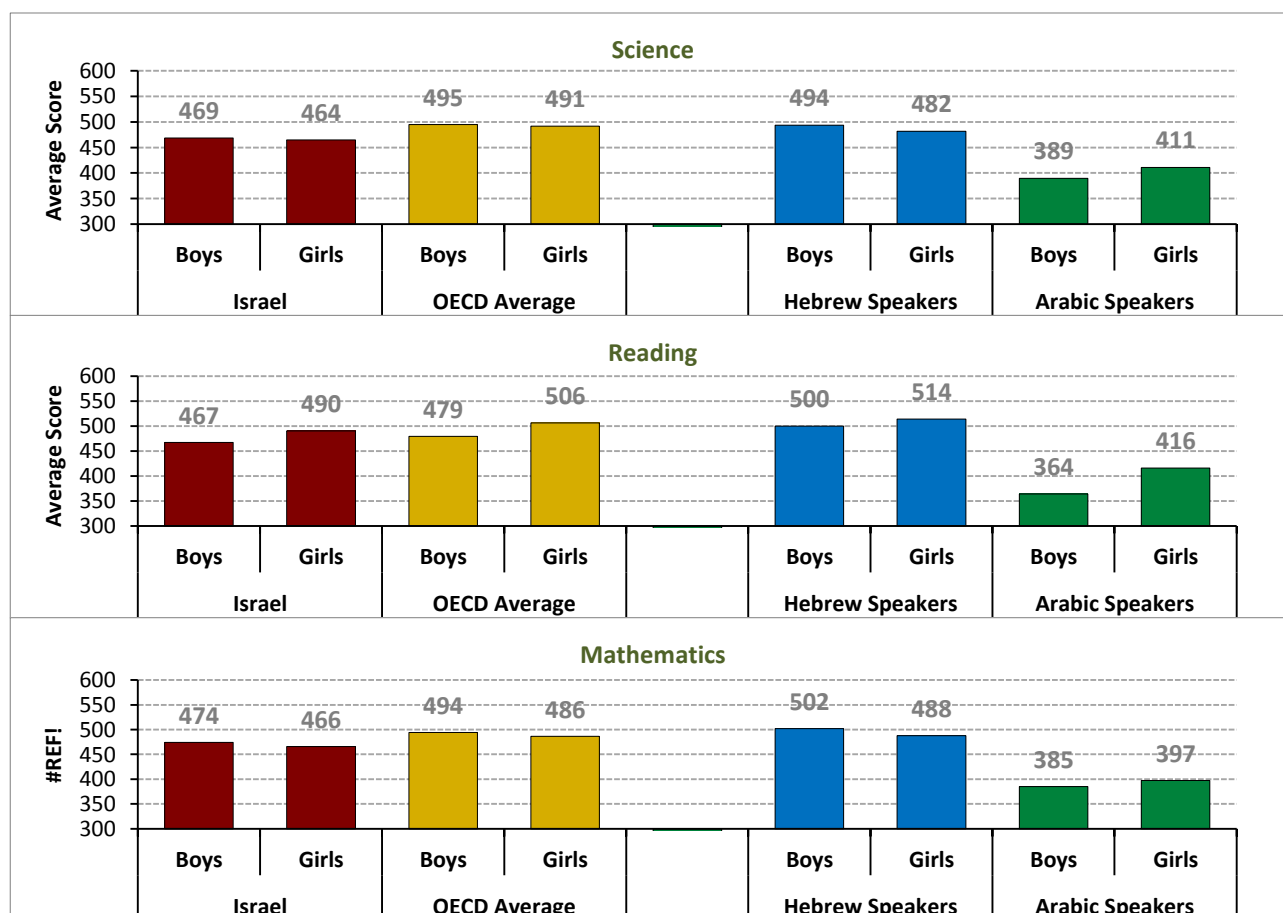
<sup>1</sup> The PISA index of economic, social, and cultural status (ESCS) is calculated on the basis of self-report student questionnaires. The information collected includes, among other things, details related to: the occupations and educational levels of students' parents, accessibility of educational resources, culture and finances in the home, and other indicators of students' general economic situation.

## F. Achievement by Gender

Achievement gaps between boys and girls are different among Hebrew and Arabic speakers. Gender gaps among Hebrew speakers are found to be small (but not significant) in the three areas of literacy. An achievement gap in favor of girls is found among Arabic speakers, especially in reading, and to a lesser extent, in science.

Mean scores among Hebrew speakers are slightly higher for boys than girls in science literacy (a non-significant difference of 12 points in favor of boys); slightly lower for boys than girls in reading literacy (a non-significant difference of 14 points in favor of girls); and slightly higher for boys than girls in mathematics literacy (a non-significant difference of 14 points in favor of boys). In contrast, there are significant differences between the genders among Arabic speakers. The mean scores for boys are 22 points lower than girls in science literacy, 52 points lower in reading literacy, and slightly lower than girls in mathematics literacy (a non-significant gap of 12 points in favor of girls). Girls enrolled in ultra-Orthodox schools also took part in the PISA 2015 study. In the three areas of literacy it is found that the achievement scores of ultra-Orthodox girls are not significantly different from the achievement scores of girls enrolled in religious schools and they are lower than the achievement scores of girls enrolled in secular schools.

Figure 9: PISA 2015—mean scores by gender (Israel, OECD average, Hebrew and Arabic speakers)





## G. Appendices

Appendix 1: Rankings of participating countries and economic entities

Science			Reading			Mathematics		
Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	Singapore	556	1	Singapore	535	1	Singapore	564
2	Japan*	538	2	Hong Kong (China)	527	2	Hong Kong (China)	548
3	Estonia*	534	3	Canada*	527	3	Macao (China)	544
4	Chinese Taipei	532	4	Finland*	526	4	Chinese Taipei	542
5	Finland*	531	5	Ireland*	521	5	Japan*	532
6	Macao (China)	529	6	Estonia*	519	6	B-S-J-G (China)	531
7	Canada*	528	7	Korea*	517	7	Korea*	524
8	Viet Nam	525	8	Japan*	516	8	Switzerland*	521
9	Hong Kong (China)	523	9	Norway*	513	9	Estonia*	520
10	B-S-J-G (China)	518	10	New Zealand*	509	10	Canada*	516
11	Korea*	516	11	Germany*	509	11	Netherlands*	512
12	New Zealand*	513	12	Macao (China)	509	12	Denmark*	511
13	Slovenia*	513		Hebrew Speakers	507	13	Finland*	511
14	Australia*	510	13	Poland*	506	14	Slovenia*	510
15	United Kingdom*	509	14	Slovenia*	505	15	Belgium*	507
16	Germany*	509	15	Netherlands*	503	16	Germany*	506
17	Netherlands*	509	16	Australia*	503	17	Poland*	504
18	Switzerland*	506	17	Sweden*	500	18	Ireland*	504
19	Ireland*	503	18	Denmark*	500	19	Norway*	502
20	Belgium*	502	19	France*	499	20	Austria*	497
21	Denmark*	502	20	Belgium*	499		Hebrew Speakers	495
22	Poland*	501	21	Portugal*	498	21	New Zealand*	495
23	Portugal*	501	22	United Kingdom*	498	22	Viet Nam	495
24	Norway*	498	23	Chinese Taipei	497	23	Russian Federation	494
25	United States*	496	24	United States*	497	24	Sweden*	494
26	Austria*	495	25	Spain*	496	25	Australia*	494
27	France*	495	26	Russian Federation	495	26	France*	493
28	Sweden*	493	27	B-S-J-G (China)	494	27	United Kingdom*	492
29	Czech Republic*	493	28	Switzerland*	492	28	Czech Republic*	492
30	Spain*	493	29	Latvia*	488	29	Portugal*	492
31	Latvia*	490	30	Czech Republic*	487	30	Italy*	490
	Hebrew Speakers	488	31	Croatia	487	31	Iceland*	488
32	Russian Federation	487	32	Viet Nam	487	32	Spain*	486
33	Luxembourg*	483	33	Austria*	485	33	Luxembourg*	486
34	Italy*	481	34	Italy*	485	34	Latvia*	482
35	Hungary*	477	35	Iceland*	482	35	Malta	479
36	Lithuania	475	36	Luxembourg*	481	36	Lithuania	478
37	Croatia	475	37	Israel*	479	37	Hungary*	477
38	Buenos Aires	475	38	Buenos Aires	475	38	Slovak Republic*	475
39	Iceland*	473	39	Lithuania	472	39	Israel*	470
40	Israel*	467	40	Hungary*	470	40	United States*	470
41	Malta	465	41	Greece*	467	41	Croatia	464
42	Slovak Republic*	461	42	Chile*	459	42	Buenos Aires	456
43	Greece*	455	43	Slovak Republic*	453	43	Greece*	454
44	Chile*	447	44	Malta	447	44	Romania	444
45	Bulgaria	446	45	Cyprus	443	45	Bulgaria	441
46	United Arab Emirates	437	46	Uruguay	437	46	Cyprus	427
47	Uruguay	435	47	Romania	434	47	United Arab Emirates	423
48	Romania	435	48	United Arab Emirates	434	48	Chile*	420
49	Cyprus	433	49	Bulgaria	432	49	Turkey*	420
50	Moldova	428	50	Turkey*	428	50	Moldova	418
51	Albania	427	51	Costa Rica	427	51	Uruguay	418
52	Turkey*	425	52	Trinidad and Tobago	427	52	Montenegro	417
53	Trinidad and Tobago	425	53	Montenegro	427	53	Trinidad and Tobago	415
54	Thailand	421	54	Colombia	425	54	Thailand	413
55	Costa Rica	420	55	Mexico*	423	55	Albania	408
56	Qatar	418	56	Moldova	416	56	Mexico*	404
57	Colombia	416	57	Thailand	409	57	Georgia	402
58	Mexico*	416	58	Jordan	408	58	Qatar	400
59	Montenegro	411	59	Brazil	407	59	Costa Rica	396
60	Georgia	411	60	Albania	405		Arabic Speakers	391
61	Jordan	409	61	Qatar	402	60	Lebanon	390
62	Indonesia	403	62	Georgia	401	61	Colombia	387
	Arabic Speakers	401	63	Peru	398	62	Peru	386
63	Brazil	401	64	Indonesia	397	63	Indonesia	380
64	Peru	397		Arabic Speakers	391	64	Jordan	377
65	Lebanon	386	65	Tunisia	361	65	Brazil	371
66	Tunisia	386	66	Dominican Republic	358	66	Yugoslavia	367
67	Yugoslavia	384	67	Yugoslavia	352	67	Tunisia	362
68	Kosovo	378	68	Algeria	350	68	Kosovo	360
69	Algeria	376	69	Kosovo	347	69	Algeria	328
70	Dominican Republic	332	70	Lebanon	347	70	Dominican Republic	437





Appendix 2: Mean scores (2006-2015)

		2006	2009	2012	2015
<b>Science</b>	<b>Israel</b>	454	455	470	467
	<b>OECD Average</b>	500	501	501	493
	<b>Hebrew Speakers</b>	467	476	492	488
	<b>Arabic Speakers</b>	403	382	394	401
<b>Reading</b>	<b>Israel</b>	439	474	486	479
	<b>OECD Average</b>	492	493	496	493
	<b>Hebrew Speakers</b>	456	498	510	507
	<b>Arabic Speakers</b>	372	392	401	391
<b>Mathematics</b>	<b>Israel</b>	442	447	466	470
	<b>OECD Average</b>	498	496	494	490
	<b>Hebrew Speakers</b>	460	470	489	495
	<b>Arabic Speakers</b>	372	367	388	391



Appendix 3: Percentages of top- and low-performing students (2006-2015)

		2006	2009	2012	2015
<b>Science</b>					
Israel	Top Performers (Levels 5 and 6)	5%	4%	6%	6%
	Low Performers (Below Level 2)	36%	33%	29%	31%
OECD Average	Top Performers (Levels 5 and 6)	9%	9%	8%	8%
	Low Performers (Below Level 2)	19%	18%	18%	21%
Hebrew Speakers	Top Performers (Levels 5 and 6)	6%	5%	7%	8%
	Low Performers (Below Level 2)	32%	25%	21%	24%
Arabic Speakers	Top Performers (Levels 5 and 6)	1%	0%	0%	0%
	Low Performers (Below Level 2)	54%	62%	57%	56%
<b>Reading</b>					
Israel	Top Performers (Levels 5 and 6)	5%	7%	10%	9%
	Low Performers (Below Level 2)	39%	27%	24%	27%
OECD Average	Top Performers (Levels 5 and 6)	9%	8%	8%	8%
	Low Performers (Below Level 2)	20%	19%	18%	20%
Hebrew Speakers	Top Performers (Levels 5 and 6)	6%	9%	12%	12%
	Low Performers (Below Level 2)	33%	18%	16%	17%
Arabic Speakers	Top Performers (Levels 5 and 6)	1%	1%	1%	0%
	Low Performers (Below Level 2)	62%	55%	49%	56%
<b>Mathematics</b>					
Israel	Top Performers (Levels 5 and 6)	6%	6%	9%	9%
	Low Performers (Below Level 2)	42%	39%	34%	32%
OECD Average	Top Performers (Levels 5 and 6)	13%	13%	13%	11%
	Low Performers (Below Level 2)	21%	22%	23%	23%
Hebrew Speakers	Top Performers (Levels 5 and 6)	7%	7%	12%	12%
	Low Performers (Below Level 2)	35%	30%	24%	22%
Arabic Speakers	Top Performers (Levels 5 and 6)	1%	0%	0%	1%
	Low Performers (Below Level 2)	69%	73%	67%	64%
<b>All Domains</b>					
Israel	Top Performers (Levels 5 and 6)	2%	2%	4%	3%
	Low Performers (Below Level 2)	26%	21%	19%	20%
OECD Average	Top Performers (Levels 5 and 6)	4%	4%	4%	4%
	Low Performers (Below Level 2)	12%	11%	12%	13%
Hebrew Speakers	Top Performers (Levels 5 and 6)	2%	3%	5%	4%
	Low Performers (Below Level 2)	21%	14%	12%	12%
Arabic Speakers	Top Performers (Levels 5 and 6)	0%	0%	0%	0%
	Low Performers (Below Level 2)	44%	48%	41%	45%

Appendix 4: three-year average trend in science literacy (starting from PISA 2006) and in mathematics literacy (starting from PISA 2003)





**Appendix 5: Rate of change in reading literacy (starting from PISA 2000)**

