Chapter 4.
Innovation in practices to develop reading and language art skills

This chapter presents the change in teaching and learning practices in reading and text understanding. Practices covered go from strategies to decode words and sound or the systematic learning of vocabulary to writing, text understanding or text summarising. The change within countries is presented as an increase or decrease in the share of students exposed to the practice. The percentage point change is also expressed as a standardised effect size in the final table.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

14. Teaching strategies for decoding sounds and words

Why it matters

Decoding letter-word-sound relationships is a key dimension of learning to read. Understanding these relationships helps children to recognise familiar words quickly and to figure out words they have not seen before. While some children have an intuitive grasp of those relationships, phonics, air writing, associating images to letters and sounds are some of the explicit teaching strategies for decoding sounds and words.

Change at the OECD level: small

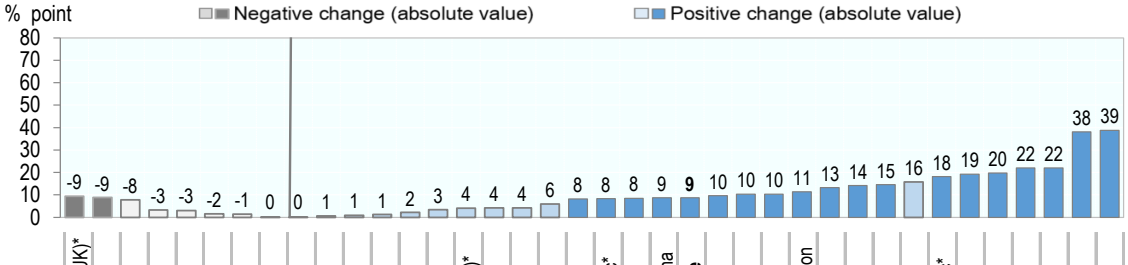
On average, the share of students frequently taught with these strategies increased by 9 percentage points between 2006 and 2016. Taking both directions of change into account, the average absolute change between 2006 and 2016 amounted to 10 percentage points, corresponding to a small effect size of 0.22. The share of 4th grade students exposed to this exercise on a regular basis varies a lot across OECD countries, going from 31% in Finland to 95% in Hungary in 2016.

Countries where there has been the most change

In most countries this practice has spread. Among the few contractions, Northern Ireland (United Kingdom) and Canada stand out, with decreases by 9 percentage points, although the prevalence of the practice remains above average. On the other hand, the spread of this practice has been a big innovation in the Netherlands (+39 percentage points) and Lithuania (+38).

Figure 4.1. 4th grade students in reading being taught strategies to decode sounds and words

Change in and share of students whose teachers teach them strategies for decoding sounds at least once a week, 2006-2016, teachers report



		Northern Ireland (UK)*	Canada*	Hungary	Norway	Ontario (CAN)	Poland	Australia*	United States	England (UK)	Israel	Ireland*	South Africa*	New Zealand	Singapore	Andalusia (ESP)*	Denmark	Indonesia*	Finland*	Portugal*	Slovak Republic*	Slovenia	Hong Kong, China	**OECD average**	Sweden	France	Italy	Russian Federation	Austria	Latvia	Belgium Fl.	Alberta (CAN)*	Czech Republic*	Belgium Fr.	Germany	Spain	Quebec (CAN)	Lithuania	Netherlands
% of students	2016	85	65	55	40	66	82	91	79	73	68	85	m	84	60	56	40	m	31	90	61	34	95	**57**	25	32	80	84	51	59	34	m	43	40	49	61	54	89	74
	2011	94	74	61	57	73	86	92	82	77	72	84	58	86	57	52	39	79	25	82	52	36	91	**59**	28	26	76	83	44	m	m	83	25	26	48	58	67	84	73
	2006	m	m	63	43	69	84	m	79	73	68	m	57	82	57	m	35	75	m	m	m	25	86	**49**	15	21	70	72	37	45	19	68	m	21	30	39	32	51	35

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904068

15. Teaching new vocabulary systematically

Why it matters

When they enter school, the gap in vocabulary between children from a lower and higher socio-economic background is huge: for many children, school must be the place where they expand their vocabulary. This is also essential to reading, not just for better understanding, but also to have the ability to quickly decipher and recognise words.

Change at the OECD level: small

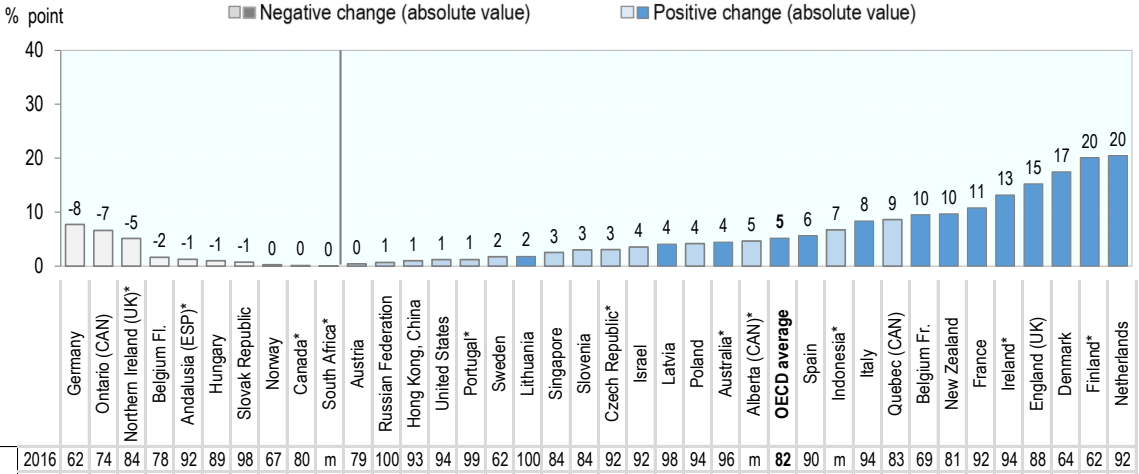
Positive and negative changes in the systematic teaching of new vocabulary were small or modest for most OECD systems. On average, the share of 4th grade students exposed to the practice every week increased by 5 percentage points between 2006 and 2016. The overall innovation in this domain represented an absolute change of 7 percentage points in the use of this practice, corresponding to a small effect size of 0.17. This is already a widespread practice in most OECD education systems, concerning 82% pupils on average. In 2016, virtually all students learnt new vocabulary systematically on a regular basis in Lithuania, Portugal and the Slovak Republic.

Countries where there has been the most change

There were only few small contractions, all below 10 percentage points. The spread of the practice was also generally small or modest. The increases by 20 percentage points in the Netherlands and Finland stand out, the change being measured between 2011 and 2016 only for Finland.

Figure 4.2. 4th grade students in reading being taught new vocabulary systematically

Change in and share of students whose teachers teach them new vocabulary systematically at least once a week, 2006-2016, teachers report



		Germany	Ontario (CAN)	Northern Ireland (UK)*	Belgium Fl.	Andalusia (ESP)*	Hungary	Slovak Republic	Norway	Canada*	South Africa*	Austria	Russian Federation	Hong Kong, China	United States	Portugal*	Sweden	Lithuania	Singapore	Slovenia	Czech Republic*	Israel	Latvia	Poland	Australia*	Alberta (CAN)*	**OECD average**	Spain	Indonesia*	Italy	Quebec (CAN)	Belgium Fr.	New Zealand	France	Ireland*	England (UK)	Denmark	Finland*	Netherlands
% of students	2016	62	74	84	78	92	89	98	67	80	m	79	100	93	94	99	62	100	84	84	92	92	98	94	96	m	**82**	90	m	94	83	69	81	92	94	88	64	62	92
	2011	72	73	89	m	94	82	97	63	80	83	77	100	94	95	98	65	99	80	82	89	96	m	95	92	88	**81**	91	76	89	83	53	89	91	81	84	53	41	87
	2006	70	80	m	79	m	90	99	67	m	83	79	99	92	93	m	61	98	81	81	m	88	94	90	m	83	**77**	85	69	86	75	59	71	81	m	73	46	m	71

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904087

16. Students explaining their understanding of a text

Why it matters

Reading without understanding what one reads is not really reading. It is good teaching practice to check rather than assume that students actually understand what they read. Asking students to explain their understanding of a text is one straightforward practice among other possible ones to make students' learning visible.

Change at the OECD level: small

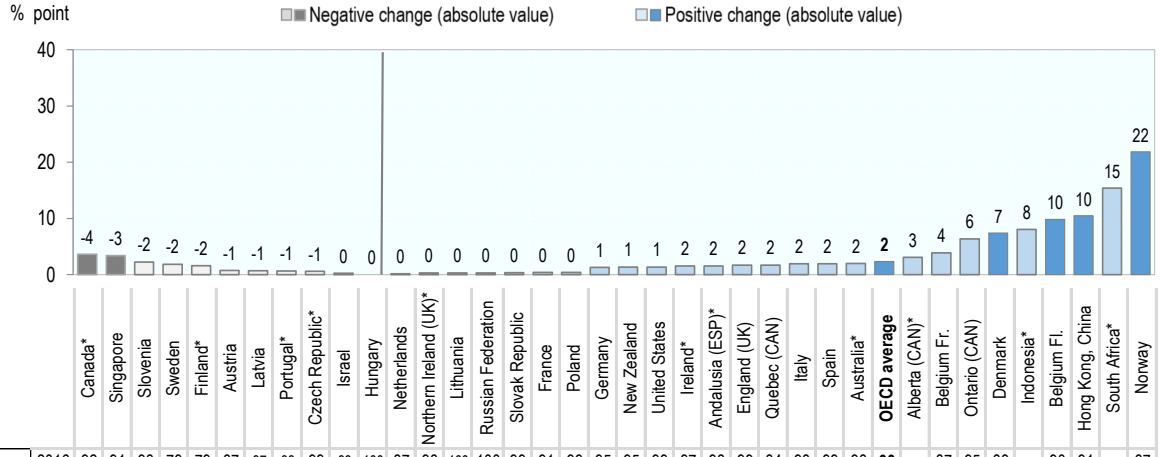
Most countries in the sample saw very little change in the use of this nearly universal practice between 2006 and 2016. At the OECD level, the share of 4th grade students who had a teacher asking them to explain their understanding of a text at least once a week increased by 2 percentage points on average to reach 93%. The mean absolute change taking into account increases and decreases was 3 percentage points, corresponding to a very small effect size of 0.1.

Countries where there has been the most change

The few changes worth noting are a 22 percentage point increase in Norway and increases above 10 percentage points in South Africa and Honk Kong, China, albeit the change in South Africa was only measured between 2006 and 2011. All decreases in the use of this practice were less than 5 percentage points.

Figure 4.3. 4th grade students explaining their understanding of a text in reading lessons

Change in and share of students whose teachers ask them to explain or support their understanding of a text at least once a week, 2006-2016, teachers report



		Canada*	Singapore	Slovenia	Sweden	Finland*	Austria	Latvia	Portugal*	Czech Republic*	Israel	Hungary	Netherlands	Northern Ireland (UK)*	Lithuania	Russian Federation	Slovak Republic	France	Poland	Germany	New Zealand	United States	Ireland*	Andalusia (ESP)*	England (UK)	Quebec (CAN)	Italy	Spain	Australia*	**OECD average**	Alberta (CAN)*	Belgium Fr.	Ontario (CAN)	Denmark	Indonesia*	Belgium Fl.	Hong Kong, China	South Africa*	Norway
% of students	2016	92	91	93	79	79	87	97	99	99	99	100	87	98	100	100	99	91	99	95	95	99	97	98	99	84	98	99	98	**93**	m	87	95	88	m	90	91	m	87
	2011	96	95	98	77	80	95	m	100	99	100	100	90	98	100	99	99	92	97	95	97	99	96	97	95	92	99	97	96	**94**	96	83	99	86	95	m	96	94	91
	2006	m	95	95	81	m	88	98	m	m	99	100	87	m	100	100	99	91	99	94	94	97	m	m	97	82	96	97	m	**91**	93	83	89	80	87	81	80	79	66

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904106

17. Students explaining the style and structure of a text

Why it matters

Understanding and being able to explain the style and structure of a text is a key element of language art. While this contributes to the joys of reading literature and other kinds of text, and prepares to creative writing, there is a more basic function to it as well. Research evidence shows that understanding the style and structure of a text benefits reading comprehension. This is why many curricula make it a key reading competency.

Change at the OECD level: moderate

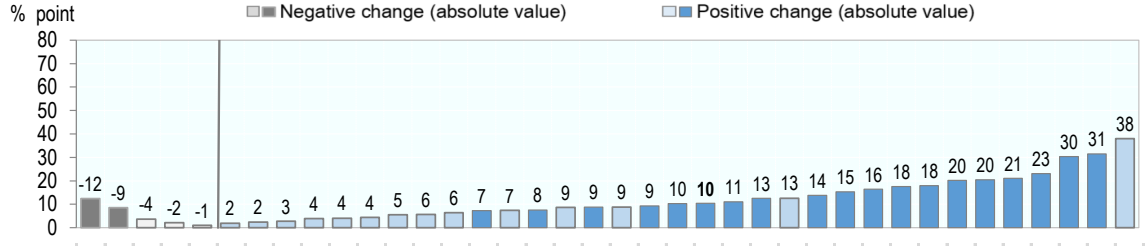
Most OECD education systems experienced an increase in the use of this practice (10 percentage points on average). Downward and upward changes taken into account, the absolute change between 2006 and 2016 amounted to 13 percentage points on average, corresponding to a moderate effect size of 0.29. The share of students being asked to explain the style and structure of a text at least once a week remains very disparate across countries, going from 20% in Finland to 98% in Portugal in 2016.

Countries where there has been the most change

Only a handful of countries witnessed a decrease in this practice, particularly Hungary (12 percentage points) and Slovenia (9 percentage points). On the other hand, it expanded in Poland, Sweden and Indonesia (by over 30 percentage points). The 38-percentage point increase in Indonesia was measured between 2006 and 2011 and does not fully compare with other systems.

Figure 4.4. 4th grade students explaining the style and structure of a text in reading lessons

Change in and share of students whose teachers ask them to explain the style and structure of a text at least once a week, 2006-2016, teachers report



% of students																																						
2016	75	47	20	24	83	66	98	37	61	92	70	61	m	62	90	41	25	66	83	73	41	49	**58**	82	83	m	48	45	69	29	90	55	71	61	62	86	36	m
2011	74	61	24	30	84	78	96	48	57	98	72	56	51	64	83	41	27	58	82	64	32	41	**57**	81	83	59	m	32	71	29	91	m	77	58	48	74	19	82
2006	88	55	m	26	m	64	m	34	m	88	65	m	45	56	82	34	17	m	74	m	m	39	**48**	71	70	46	34	30	53	11	73	35	51	39	39	56	5	44

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904125

18. Students drawing inferences and generalisations from a text

Why it matters

Drawing inferences and making generalisations from a text represents one of the key dimensions of reading comprehension, one that should be practiced and taught explicitly. This allows students to make conclusions and go beyond what is written, either because some elements remain implicit rather than explicit, or because further connections can be made. This practice also strengthens higher order skills, including creative and critical thinking skills.

Change at the OECD level: moderate

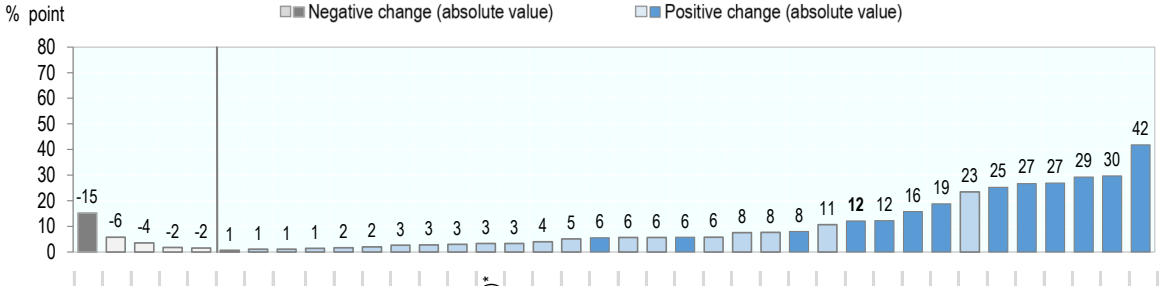
Between 2006 and 2016, this practice spread by 12 percentage points on average in the OECD area. The average absolute change, grouping positive and negative variations, was 13 percentage points, translating into a moderate effect size of 0.3. Over half of the students were asked to draw inferences and generalisations from a text at least once a week in all covered systems, with a relatively high average of 77% students concerned in the OECD area in 2016.

Countries where there has been the most change

Contractions of the practice were not really notable, except in Finland where it declined by 15 percentage points between 2011 and 2016. This was a large innovation in Sweden where it gained ground by 42 percentage points, but also in Belgium (Fr.) and France where it expanded by about 30 percentage points.

Figure 4.5. 4th grade students in reading drawing inferences and generalisations from a text

Change and share of students whose teachers ask them to draw inferences and generalisations from a text at least once a week, 2006-2016, teachers report



		Finland*	Germany	Slovenia	Canada*	Hungary	Lithuania	Australia*	Russian Federation	Austria	Andalusia (ESP)*	Israel	United States	New Zealand	Alberta (CAN)*	Northern Ireland (UK)*	Portugal*	Singapore	Czech Republic*	Latvia	Ireland*	England (UK)	Poland	Slovak Republic	Netherlands	Belgium Fl.	Ontario (CAN)	South Africa*	**OECD average**	Denmark	Hong Kong, China	Italy	Indonesia*	Spain	Quebec (CAN)	Norway	France	Belgium Fr.	Sweden
% of students	2016	51	63	71	86	94	97	93	100	50	76	95	96	90	m	86	92	87	72	94	88	94	98	85	73	59	90	m	**77**	64	80	78	m	71	82	54	64	56	71
	2011	66	64	81	88	96	99	92	98	56	74	96	98	94	89	82	89	90	67	m	83	93	98	88	79	m	94	65	**76**	54	84	69	81	73	76	52	55	45	53
	2006	m	69	74	m	96	97	m	99	49	m	93	93	87	86	m	m	83	m	89	m	89	92	79	66	51	82	54	**65**	52	64	59	57	46	55	28	35	27	29

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904144

19. Students identifying the main ideas of a text

Why it matters

Identifying the main ideas of a text is a key strategy for text comprehension and reading. Making students notice where those main ideas are placed (often at the beginning or end of a paragraph) and then move from going from the explicit main ideas to the implied ones are the main teaching strategies of this competency that remains essential at all levels of reading proficiency.

Change at the OECD level: small

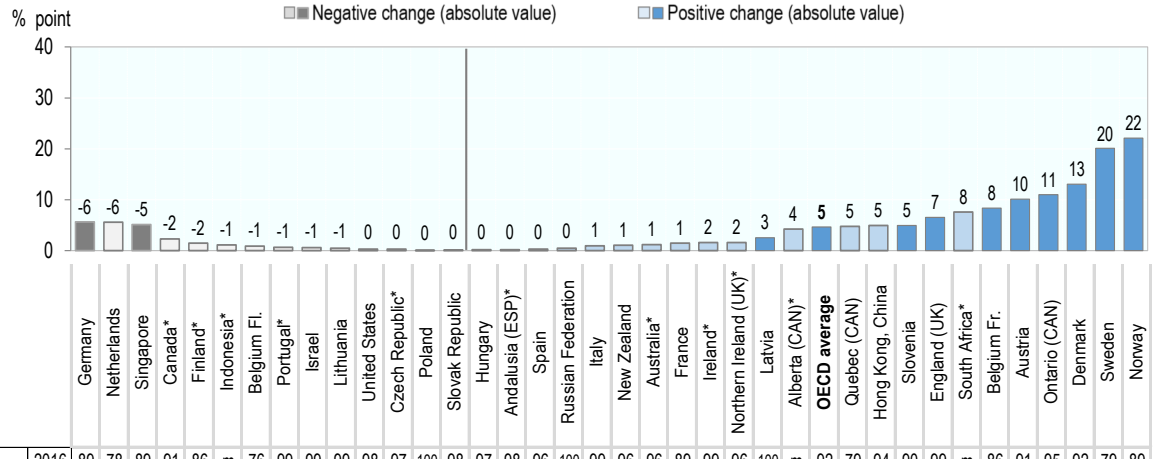
Most education systems saw little changes in the use of this nearly universal practice, on average it had a small net increase of 5 percentage points between 2006 and 2016. The overall change (including expansions and contractions) was 6 percentage points, equating a small effect size of 0.17. In 2016, 92% of 4th grade students were asked to identify the main ideas of a text at least once a week on average in an OECD system – and it was true for all students in Latvia and Poland.

Countries where there has been the most change

This practice spread in most systems, and was an innovation in three Nordic European countries with an expansion by 22 percentage points in Norway, 20 percentage points in Sweden and 13 percentage points in Denmark. Germany, the Netherlands and Singapore registered negative changes of around 5 percentage points.

Figure 4.6. 4th grade students identifying the main ideas of a text in reading lessons

Change in and share of students whose teachers ask them to identify the main ideas of a text at least once a week, 2006-2016, teachers report



% of students																																			
	2016	89	78	89	91	86	m	76	99	99	99	98	97	100	98	97	98	96	100	99	96	96	89	99	96	100	m	92	79	94	90	99	m	86	91	95	92	79	89
	2011	90	88	95	94	88	85	m	100	100	100	99	97	99	99	99	98	97	99	100	98	95	91	97	94	m	94	**93**	89	96	91	97	86	78	92	97	86	78	90
	2006	95	84	95	m	m	86	77	m	99	100	98	m	100	97	97	m	95	100	98	95	m	87	m	m	97	90	**87**	74	89	85	92	79	77	80	84	79	59	67

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904163

20. Students using computers to write stories and texts during reading lessons

Why it matters

Whether students should still learn to write (as opposed to type) is a hot debate, and perhaps the next one is whether they should just orally dictate text to computers. Students still learn to write with pens. Writing stories is a good way to take advantage of computers, as the ease of improving and polishing a text makes the drafting process easier – as adults spending time writing for work or fun know well.

Change at the OECD level: moderate

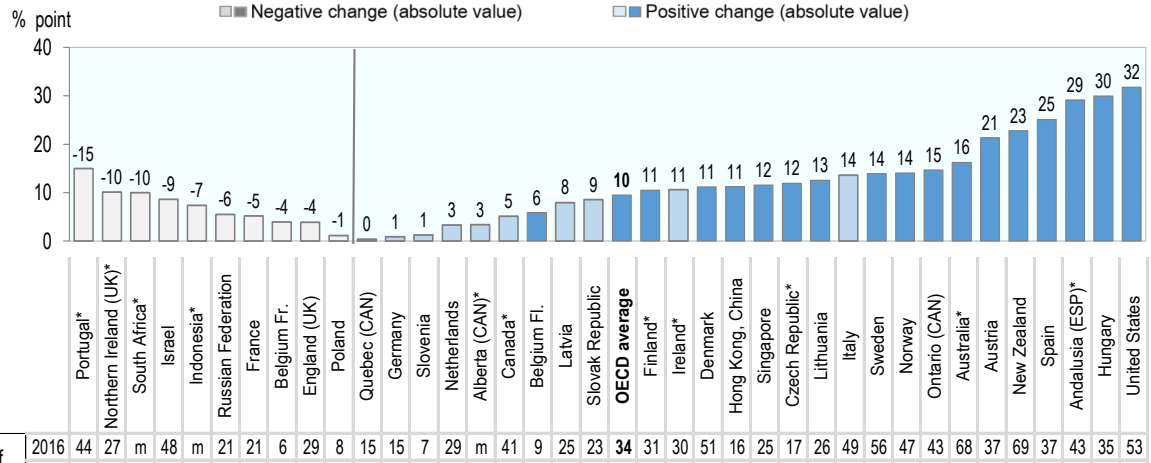
This relatively uncommon practice has spread more often than it has receded and expanded by 10 percentage points on average in the OECD area. The absolute change was a little less than 12 percentage points between 2006 and 2016, corresponding to a moderate effect size of 0.27. In 2016, on average, only 34% of 4th grade students used computers to write stories and texts at least once a week during their reading lessons. In Belgium (Fr.) and Poland, less than 8% of the students are concerned.

Countries where there has been the most change

Students in Hungary and the United States experienced the most innovation between 2006 and 2016, with an expansion by 30 and 32 percentage points of students concerned respectively. Andalusia (Spain) also showed an increase of about 30 percentage points between 2011 and 2016 – while the practice decreased by 15 percentage points in Portugal.

Figure 4.7. 4th grade students using computers to write stories and texts in reading lessons

Change in and share of students who use computers to write stories and texts at least once a week, 2006-2016, teachers report



		Portugal*	Northern Ireland (UK)*	South Africa*	Israel	Indonesia*	Russian Federation	France	Belgium Fr.	England (UK)	Poland	Quebec (CAN)	Germany	Slovenia	Netherlands	Alberta (CAN)*	Canada*	Belgium Fl.	Latvia	Slovak Republic	**OECD average**	Finland*	Ireland*	Denmark	Hong Kong, China	Singapore	Czech Republic*	Lithuania	Italy	Sweden	Norway	Ontario (CAN)	Australia*	Austria	New Zealand	Spain	Andalusia (ESP)*	Hungary	United States
% of students	2016	44	27	m	48	m	21	21	6	29	8	15	15	7	29	m	41	9	25	23	**34**	31	30	51	16	25	17	26	49	56	47	43	68	37	69	37	43	35	53
	2011	59	37	17	41	13	23	27	m	34	21	22	10	12	23	40	36	m	m	17	**26**	21	19	43	13	20	5	18	27	58	27	38	52	13	57	29	14	5	26
	2006	m	m	27	57	21	27	26	10	33	9	15	15	6	25	36	m	3	17	15	**24**	m	m	40	5	14	m	14	36	42	33	29	m	16	46	12	m	5	21

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904182

21. Oral explanation and summarisation of a text

Why it matters

Asking students to answer oral questions on a text or to summarise it is an old and effective practice to assess formatively (or summatively) their understanding. It is a key practice to make learning visible to the teachers and students. Other good teaching practices may achieve the same, but this practice is an economical one time wise in a teacher-directed classroom.

Change at the OECD level: small

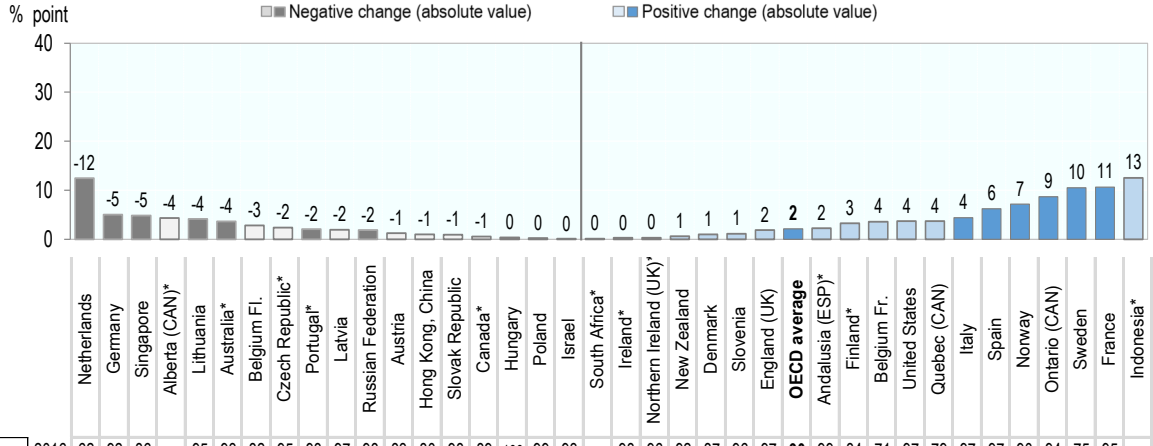
This practice has remained stable between 2006 and 2016, with a slight increase by 2 percentage points. Ignoring change direction, the absolute change has amounted to 4 percentage points, associated to a small effect size of 0.14. Orally explaining or summarising a text at least once a week in 2016 concerned 9 out of 10 4th grade students in the OECD area: this is a widespread practice. In Hungary, Poland and Andalusia (Spain), almost all 4th grade students were exposed to this teaching method in 2016.

Countries where there has been the most change

Changes did not exceed 10 percentage points in either direction, with just a few exceptions. In the Netherlands there was a 12-percentage point contraction, while students in Sweden and France experienced a spread around 10 percentage points between 2006 and 2016. In Indonesia students experienced a 13-percentage point increase between 2006 and 2011.

Figure 4.8. 4th grade students in reading orally examined about a text

Change in and share of students whose teacher ask them to answer oral questions about or orally summarise a text at least once a week, 2006-2016, teachers report.



% of students		Netherlands	Germany	Singapore	Alberta (CAN)*	Lithuania	Australia*	Belgium Fl.	Czech Republic*	Portugal*	Latvia	Russian Federation	Austria	Hong Kong, China	Slovak Republic	Canada*	Hungary	Poland	Israel	South Africa*	Ireland*	Northern Ireland (UK)*	New Zealand	Denmark	Slovenia	England (UK)	**OECD average**	Andalusia (ESP)*	Finland*	Belgium Fr.	United States	Quebec (CAN)	Italy	Spain	Norway	Ontario (CAN)	Sweden	France	Indonesia*
	2016	62	92	86	m	95	93	82	95	98	97	98	83	80	98	89	100	99	93	m	98	96	92	87	96	97	**90**	99	84	71	97	79	97	97	90	94	75	95	m
	2011	79	96	89	87	92	96	m	98	100	m	99	87	88	98	89	98	99	97	85	98	96	95	87	94	89	**91**	96	80	73	96	80	96	96	90	94	77	89	98
	2006	75	97	90	91	99	m	85	m	m	99	100	84	81	99	m	100	99	93	85	m	m	91	86	95	95	**88**	m	m	67	93	75	92	91	83	86	65	85	85

Note: Darker tones correspond to statistically significant values.
* refers to calculations based on other years, based on data availability.
The OECD average is based on OECD countries with available data in 2006, 2011 and 2016.
Source: Authors' calculations based on PIRLS Databases.

StatLink https://doi.org/10.1787/888933904201

Table 4.1. Effect sizes for changes in practices to develop language art skills

	Teaching strategies for decoding sounds and words	Teaching new vocabulary systematically	Students explaining their understanding of text	Students explaining style and structure of text	Students drawing inferences and generalisations from text	Students identifying main ideas of text	Students using computers to write stories and texts	Oral examination and summarising of text
	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade
Australia	-0.05	0.19	0.12	-0.03	0.04	0.06	0.33	-0.16
Austria	0.27	0.01	-0.02	0.18	0.03	0.29	0.50	-0.03
Belgium (Fl.)	0.33	-0.04	0.28	0.28	0.15	-0.02	0.26	-0.08
Belgium (Fr.)	0.42	0.20	0.11	0.32	0.61	0.22	-0.15	0.08
Canada	-0.19	0.00	-0.15	0.08	-0.05	-0.09	0.10	-0.02
Canada (Alberta)	0.37	0.13	0.14	0.11	0.09	0.16	0.07	-0.14
Canada (Ontario)	-0.07	-0.16	0.24	0.34	0.24	0.36	0.31	0.29
Canada (Quebec)	0.45	0.21	0.05	0.47	0.59	0.11	0.01	0.09
Czech Republic	0.39	0.11	-0.06	0.19	0.11	-0.02	0.40	-0.13
Denmark	0.09	0.35	0.20	0.21	0.25	0.38	0.23	0.03
Finland	0.13	0.41	-0.04	-0.09	-0.31	-0.04	0.24	0.09
France	0.23	0.32	0.01	0.15	0.59	0.05	-0.12	0.37
Germany	0.41	-0.16	0.06	-0.05	-0.12	-0.21	0.03	-0.22
Hungary	-0.16	-0.03	0.00	-0.32	-0.07	0.01	0.81	-0.11
Ireland	0.02	0.42	0.08	0.18	0.16	0.11	0.25	0.02
Israel	0.01	0.12	-0.02	0.14	0.08	-0.06	-0.17	0.00
Italy	0.24	0.28	0.12	0.30	0.41	0.08	0.28	0.20
Latvia	0.29	0.23	-0.04	0.41	0.20	0.22	0.20	-0.14
Lithuania	0.87	0.27	0.07	0.47	0.04	-0.14	0.32	-0.27
Netherlands	0.80	0.54	0.00	0.06	0.16	-0.14	0.08	-0.27
New Zealand	0.06	0.23	0.06	0.09	0.09	0.05	0.47	0.02
Norway	-0.07	-0.01	0.53	0.45	0.55	0.55	0.29	0.21
Poland	-0.04	0.15	0.05	0.69	0.28	-0.01	-0.04	-0.02
Portugal	0.24	0.12	-0.08	0.14	0.11	-0.08	-0.30	-0.19
Slovak Republic	0.17	-0.06	0.04	0.13	0.15	0.01	0.22	-0.07
Slovenia	0.19	0.08	-0.09	-0.17	-0.08	0.15	0.05	0.06
Spain	0.44	0.17	0.13	0.43	0.52	0.02	0.60	0.27
Spain (Andalusia)	0.08	-0.05	0.10	0.11	0.04	0.02	0.67	0.15
Sweden	0.24	0.04	-0.05	0.85	0.86	0.44	0.28	0.23
UK (England)	0.00	0.39	0.13	0.22	0.21	0.34	-0.08	0.10
UK (Northern Ireland)	-0.31	-0.15	0.02	0.19	0.09	0.07	-0.22	0.02
United States	0.00	0.05	0.10	0.26	0.11	-0.02	0.67	0.18
OECD (average)	**0.17**	**0.13**	**0.09**	**0.21**	**0.27**	**0.15**	**0.21**	**0.07**
OECD (av. absolute)	**0.22**	**0.18**	**0.10**	**0.29**	**0.30**	**0.18**	**0.27**	**0.14**
Hong Kong, China	0.30	0.04	0.30	0.42	0.35	0.18	0.39	-0.02
Indonesia	0.10	0.15	0.30	0.81	0.51	-0.03	-0.20	0.49
Russian Federation	0.28	0.16	0.11	0.21	0.21	0.14	-0.13	-0.27
Singapore	0.07	0.07	-0.14	0.04	0.11	-0.19	0.30	-0.15
South Africa	0.03	0.00	0.47	0.25	0.22	0.20	-0.24	0.00

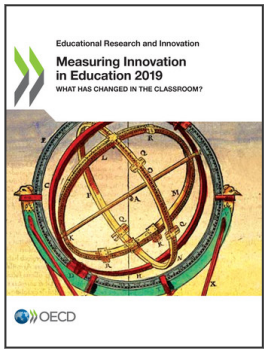
Effect size from -0.5 to -0.2 and from 0.2 and 0.5

Effect size from -0.8 to -0.5 and from 0.5 and 0.8

Effect size equals or less than -0.8 and equals or greater than 0.8

Source: Authors' calculations based on PIRLS (2006, 2011 and 2016).

StatLink https://doi.org/10.1787/888933904220



From:

Measuring Innovation in Education 2019

What Has Changed in the Classroom?

Access the complete publication at:
https://doi.org/10.1787/9789264311671-en

Please cite this chapter as:

Vincent-Lancrin, Stéphan*, et al.* (2019), "Innovation in practices to develop reading and language art skills", in Stéphan Vincent-Lancrin*, et al.*, *Measuring Innovation in Education 2019: What Has Changed in the Classroom?*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/d64cbd2e-en