

Chapter 7.

Innovation in personalised, collaborative and teacher-directed learning practices in reading

This chapter presents the change in teaching and learning practices in reading that take different types of formats: personalised (for example, individualised instruction), collaborative (for example, students' peer discussion) or teacher-directed (for example, teacher reading to the whole class). 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.

37. Making students read items of their choice

Why it matters

Personalisation of learning does not necessarily imply student choice, but it is one component. The possibility to choose may reinforce interest, while mandated reading may trigger curiosity. Too often, students lack opportunity to read items of their choice just because it makes teachers' life easier. Are most teachers striking the right balance between texts chosen by students or by themselves? Not sure.

Change at the OECD level: moderate

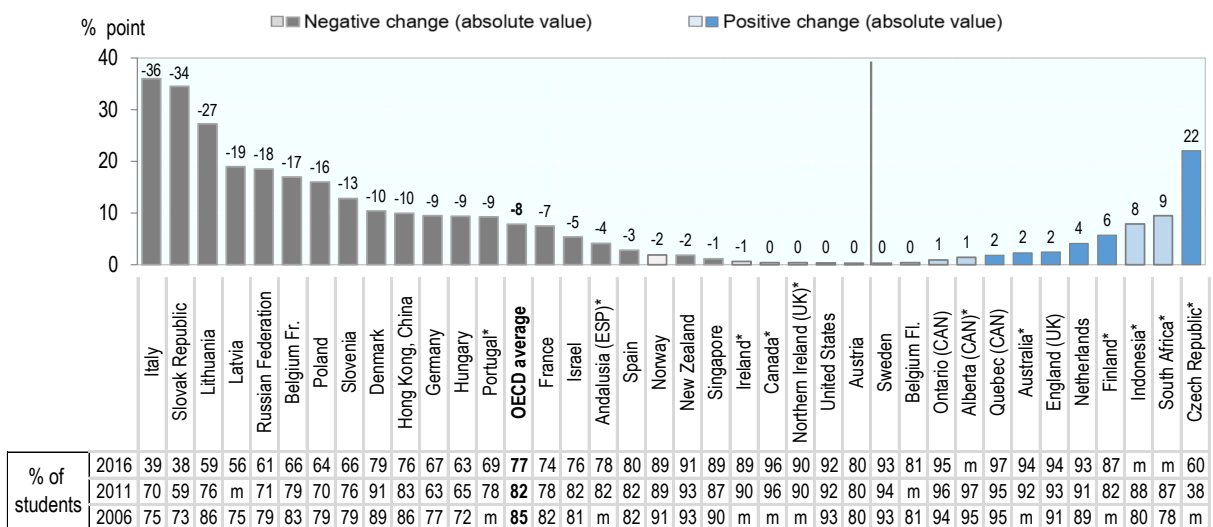
At the OECD level, the contraction of this practice strongly outweighs its spreading, leading to an average net decrease of 8 percentage points between 2006 and 2016. Accounting for changes in both directions, the absolute change was 9 percentage points on average, corresponding to a modest effect size of 0.2. This practice was widely used across OECD education systems in 2016, touching 77% of primary students, although large disparities prevail, with a span going from less than 40% in Italy and the Slovak Republic against 97% in Quebec (Canada).

Countries where there has been the most change

Italy, the Slovak Republic and Lithuania experienced strong innovation in this area, with falls by 36, 34 and 27 percentage points respectively of the share of students concerned, followed by Lithuania with a decline of 27 percentage points between 2006 and 2016. Most negative changes were considerable in magnitude. The only substantial expansion occurred in the Czech Republic (22 percentage points) between 2011 and 2016.

Figure 7.1. 4th grade students reading items of their own choice in reading lessons

Change in and share of students who read items of their own choice during school lessons at least once a week, 2006-2016, students report



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/10.1787/888933904657>

38. Giving students time to read books of their own choice

Why it matters

To incentivise students to read for pleasure, reading must be somewhat decoupled from teacher-assigned work, and one teaching strategy is to leave students some time to read a book of their choosing. While teachers should also assign some common reading to allow discussion between students or to ensure they read a diversity of texts, letting students time and choice supports their agency and autonomy in the learning process.

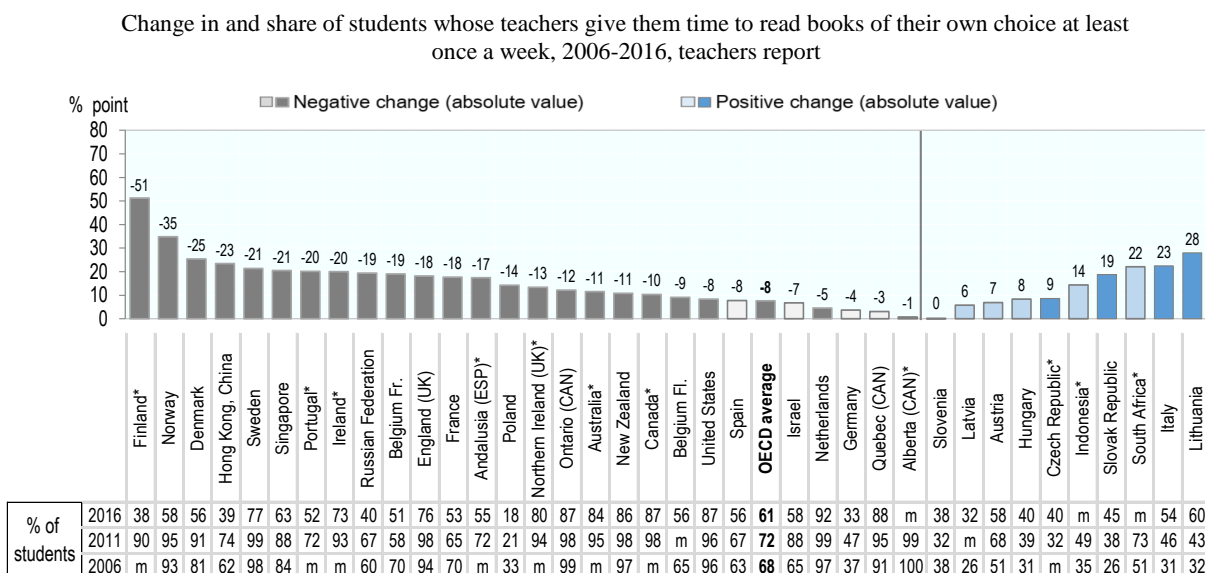
Change at the OECD level: moderate

In OECD systems, 61% of 4th grade students were given time to read books of their own choice at least once a week on average in 2016, against 68% in 2006, a net decline by 7 percentage points. The average absolute change of 13 percentage points, including increases and reductions, corresponds to a moderate effect size of 0.34. While particularly widespread in the Netherlands, touching 92% of 4th grade students, this practice was used for 61% of primary students on average in 2016. With only 18% of students concerned, Poland makes the least use of it.

Countries where there has been the most change

With an outstanding decline of 51 percentage points between 2011 and 2016, this was a strong domain of innovation in Finland. Between 2006 and 2016, Norway and Denmark also experienced significant contractions by over 25 percentage points of the practice. Almost all the downward changes in this practice were large in magnitude. Conversely, it expanded by 28 and 23 percentage points respectively in Lithuania and Italy.

Figure 7.2. 4th grade students given time to read books of their own choice for reading lessons



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/10.1787/888933904676>

39. Individualised instruction for reading

Why it matters

Depending on their social backgrounds, special needs, interest or abilities, students learn to read at a different pace. Giving each student reading material that corresponds to their right learning level or focusing on their specific difficulties is the most effective instruction for reading. Easier said than done though. Teachers’ attempts to individualise reading instruction are thus welcome and should be systematic.

Change at the OECD level: moderate

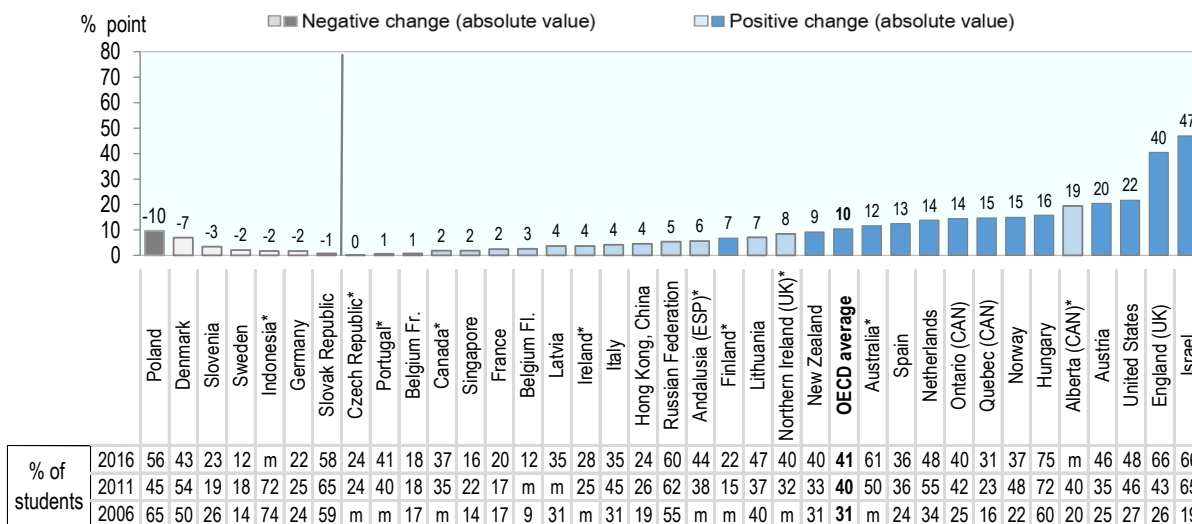
This practice has mostly spread across OECD systems. Between 2006 and 2016, the share of 4th grade students systematically receiving individualised reading instruction rose by 10 percentage points on average. The absolute change, regardless of direction, amounted to 12 percentage points and corresponds to a moderate effect size of 0.27. Among OECD education systems, this practice remains relatively uncommon, with only 41% of the 4th grade students on average concerned in OECD countries, the span going from 75% in Hungary to 12% in Sweden and Belgium (Fl.).

Countries where there has been the most change

Students in Israel and England (United Kingdom) experienced large increases by 47 and 40 percentage points respectively between 2006 and 2016. Negative changes were less remarkable. Poland saw a fall of 10 percentage points (but remained above average).

Figure 7.3. Individualised instruction in 4th grade reading lessons

Change in and share of students whose teachers always or often use individualised instruction for reading, 2006-2016, teachers report



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.

40. Frequency of teaching reading as a whole-class activity

Why it matters

Teaching reading as a whole-class activity is extremely common given the organisation of the classroom and the teaching culture in most countries. It has its advantages as all students can in principle benefit from the guidance and attention of the teacher, unless they get bored and lose attention and interest. It has to be balanced with other types of teaching and learning strategies.

Change at the OECD level: small

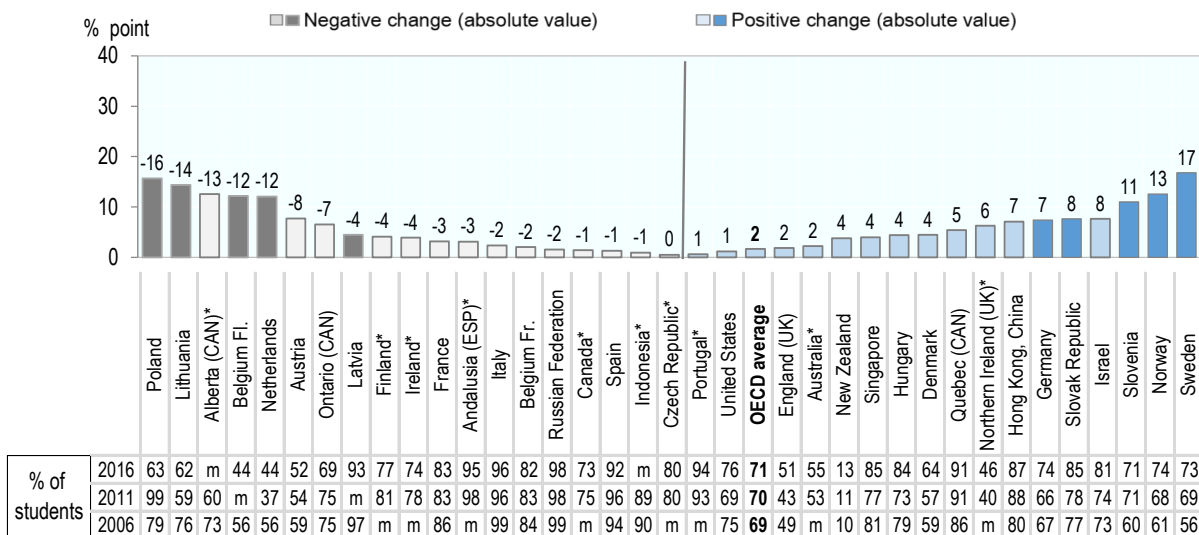
On average, this practice remained stable, with a slight expansion by 2 percentage points between 2006 and 2016. During this period, the mean absolute change was 7 percentage points, corresponding to a small effect size of 0.15. There is a substantial use of systematic whole-class teaching in 4th grade reading lessons, as it concerned 71% students on average in OECD education systems in 2016. The practice is nearly universal in Portugal (94%). New Zealand is an exception to the rule, with only 13% of 4th grade students experiencing this teaching and learning strategy.

Countries where there has been the most change

All in all, few countries experienced strong innovation in this domain. Sweden experienced the largest expansion (17 percentage points), and Poland, the largest contraction (-16 percentage points) between 2006 and 2016: an innovation for many students in both countries.

Figure 7.4. Frequency of teaching reading as a whole-class activity in 4th grade

Change in and share of students whose teachers always or often teach reading as a whole-class activity, 2006-2016, teachers report



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.

41. Students working independently on an assigned plan or goal in reading

Why it matters

Working independently on an assigned plan or goal in reading is one feature of individualised or personalised learning, allowing students to learn and progress based on their actual reading proficiency. Teachers may want to strike a balance between collaborative and individual learning, as working independently and collaboratively both have benefits for learning, including learning to read.

Change at the OECD level: small

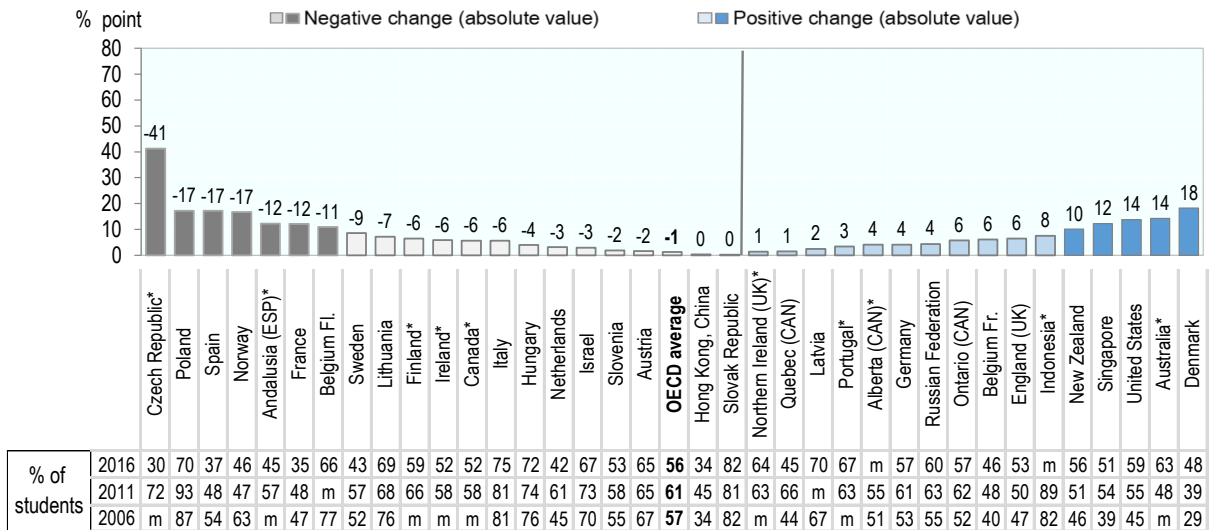
There has been little change on average in this practice, with positive and negative changes outweighing one another and leading to an average net decrease of just 1 percentage point in OECD countries between 2006 and 2016. The average absolute change was 8 percentage points, corresponding to a small effect size of 0.16. While this practice touches one in two students (56%) on average in OECD systems, it is widespread in the Slovak Republic (82%) but uncommon in the neighbouring Czech Republic (30%).

Countries where there has been the most change

A few countries experienced a lot of innovation in this practice, which remained stable in most others. In the Czech Republic, the use of the practice fell by 41 percentage points between 2011 and 2016. Poland, Spain and Norway experienced a significant decrease between 2006 and 2016, and Denmark, an increase (all by 17-18 percentage points).

Figure 7.5. 4th grade students working independently on an assigned plan in reading

Change in and share of students who work independently always or often on an assigned plan or goal, 2006-2016, teachers report



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/10.1787/888933904733>

42. Frequency of teachers reading aloud to the class

Why it matters

While reading aloud to the class may appear as a “traditional” or teacher-centred practice, some research shows that it is actually a good practice. It increases students’ phonological awareness, may help students to concentrate and improve their understanding, and is also said to create a good class dynamics. Reading aloud does not need to be restricted to reading lessons and is more effective when done frequently, not just once a week.

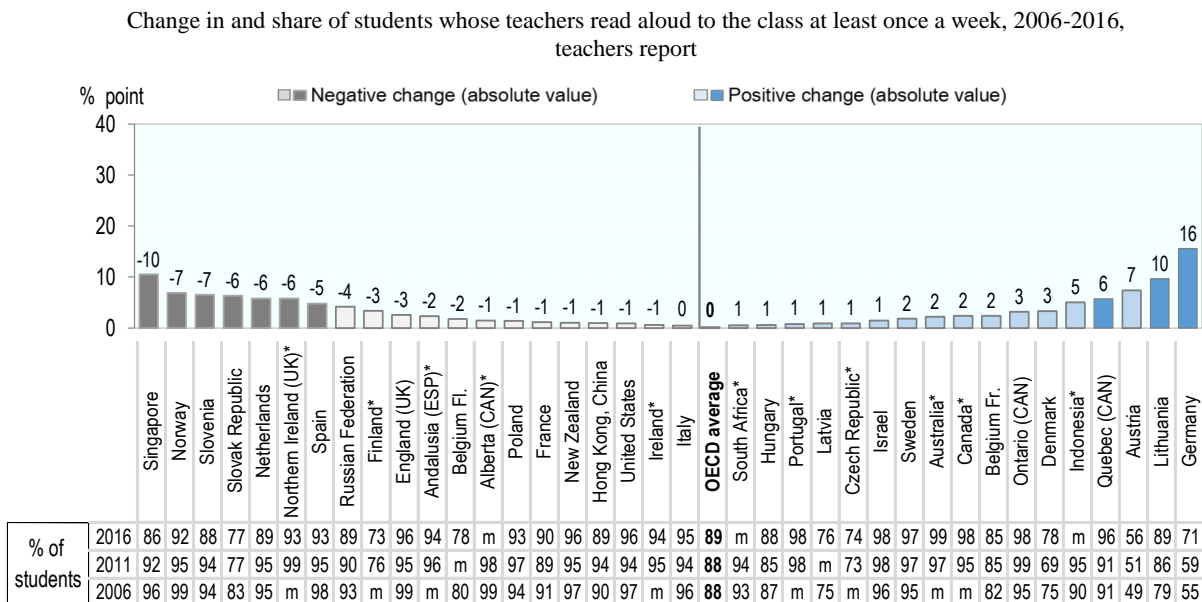
Change at the OECD level: small

Positive changes and negative changes have balanced each other with an average zero net change between 2006 and 2016. The absolute change in this practice, positive and negative, was 4 percentage points on average, corresponding to a minor effect size of 0.14. Reading aloud to the class in primary reading lessons was a nearly universal practice in the OECD area in 2016, touching 89% of the 4th grade students on average. Austria is a bit of an exception with only 56% of students exposed to it.

Countries where there has been the most change

Between 2006 and 2016, the practice spread by 16 and 10 percentage points respectively in Germany and Lithuania. In the same period, it contracted in Singapore (10 percentage points), Slovenia (7 percentage points) and Norway (7 percentage points). This was an innovation for students in all these countries.

Figure 7.6. Frequency of teachers reading aloud to the class in 4th grade reading lessons



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/10.1787/888933904752>

43. Students' peer discussion on read text

Why it matters

Peer discussion on a text allows students to confront their views and deepen their understanding – not to mention the opportunity to develop their communication skills. While this can lead to more student engagement and learning, this may or may not work depending on the students and the text read, unless clear learning goals are set. Some evidence shows the format works for students with learning disabilities.

Change at the OECD level: moderate

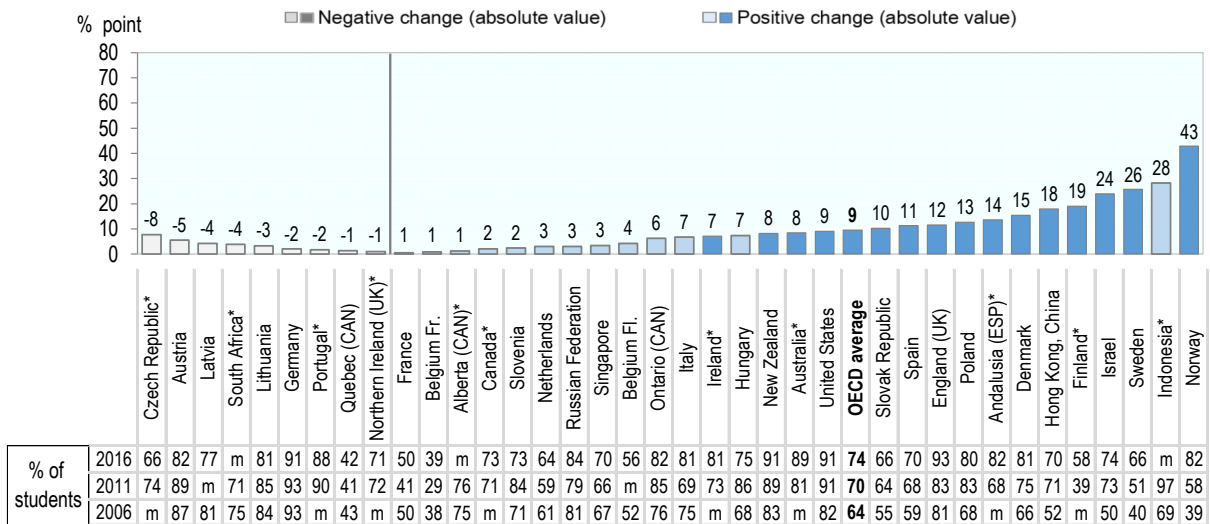
In the OECD area, the percentage of 4th grade students whose reading teachers regularly ask them to engage in peer discussion on read text rose by 9 percentage points on average between 2006 and 2016. The absolute change, regardless of direction, was 10 percentage points on average, corresponding to a modest effect size of 0.23. This is a widespread practice in most OECD education systems, covering around three fourths (74%) of 4th grade students in 2016.

Countries where there has been the most change

This has been a domain of innovation in a few countries. Students in Norway experienced a spread by 43 percentage points of the practice between 2006 and 2016. It also diffused in Israel, Sweden and Indonesia, with increases above 20 percentage points. There were few contractions, all below 10 percentage points.

Figure 7.7. 4th grade students discussing read text with peers in reading lessons

Change in and share of students whose teachers ask them to discuss read text with peers at least once a week, 2006-2016, teachers report



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/10.1787/888933904771>

44. Use of school computers for group work and communication with other students

Why it matters

While often criticised for their isolating power, computers can also facilitate group work, when students use them to carry out a group project or a common task. In some cases, mobile computer devices can be deliberately limited compared to the number of students to ensure collaboration and group work. Hopefully this develops collaborative and computer skills.

Change at the OECD level: small

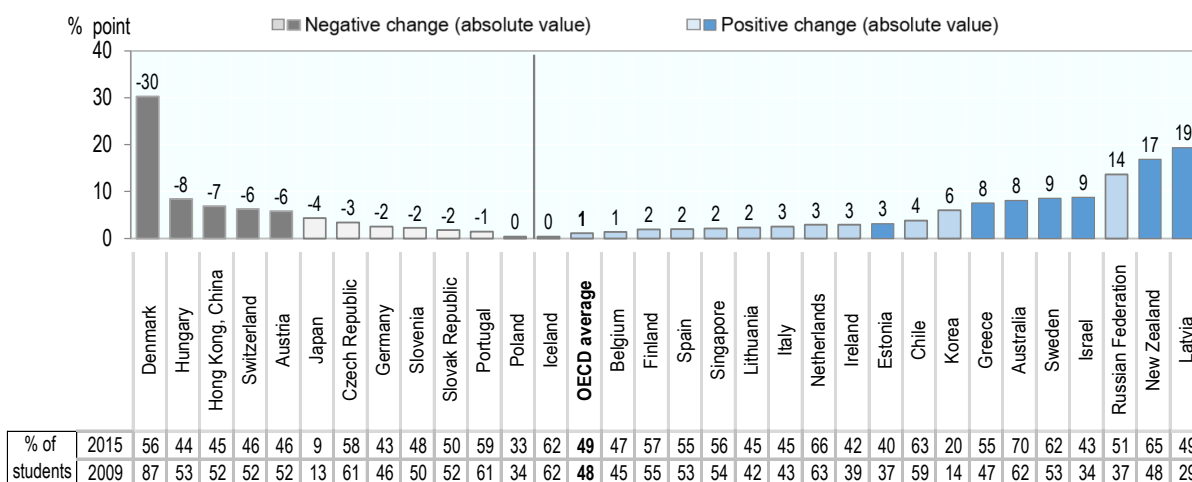
Positive changes compensated negatives ones across OECD countries. On average, the share of 15 year old students using school computers for group work and communication at least once a month increased by 1 percentage points between 2009 and 2015. The absolute change, including increases and reductions, reached 6 percentage points, corresponding to a small effect size of 0.13. The use of this computer-based practice at least once a month varied a lot across OECD countries in 2015, ranging from 70% of students concerned in Australia to only 9% in Japan.

Countries where there has been the most change

Innovation in Denmark took the form of a large decline of 30 percentage points in the use of this practice between 2009 and 2015, with still an above-average use though. At the other end of the spectrum, Latvia and New Zealand recorded a notable innovation for their students with a diffusion of the practice by 19 and 17 percentage points respectively.

Figure 7.8. 4th grade students using computers to work and communicate with peers

Change in and share of students who use computers for group work or communication with other students at least once a month, 2009-2015, teachers report



Note: Darker tones correspond to statistically significant values.

Source: Authors' calculations based on PISA Databases.

StatLink  <https://doi.org/10.1787/888933904790>

45. Same-ability class groups in reading lessons

Why it matters

Breaking away from the whole-class format in reading lessons allows for more engagement and personalised learning. Same-ability groups have been traditionally favoured by teachers, but criticised for lowering the self-efficacy of poor readers and for widening the gap between strong and poor readers for only a modest gain in effectiveness for good readers. Poor readers may also receive poorer instruction than good readers in this format. The format works well for “gifted” students though.

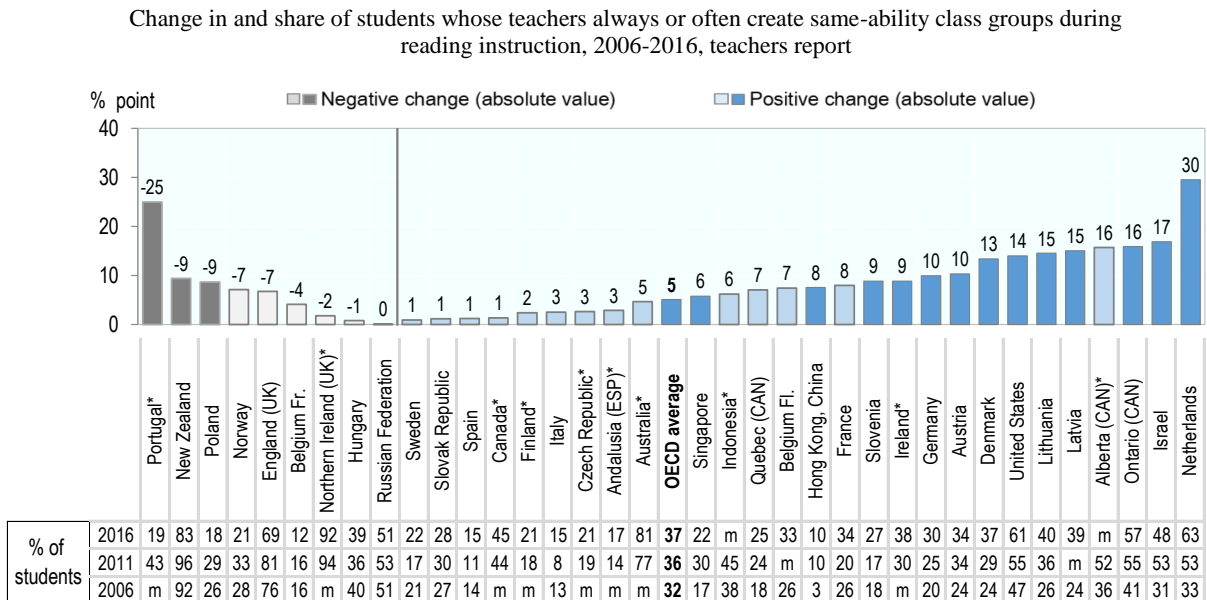
Change at the OECD level: moderate

Increases in the use of this practice have prevailed over decreases across OECD countries. Between 2006 and 2016, there was an average net increase by 5 percentage points, while the mean absolute change, mirroring positive and negative changes, was 9 percentage points, corresponding to a modest effect size of 0.2. This practice is employed at very different intensities across OECD countries. In 2016, only 12% of primary students in Belgium (Fr.) had a teacher systematically creating same-ability groups, against 92% in Northern Ireland (United Kingdom) where the practice is nearly universal.

Countries where there has been the most change

The Netherlands experienced strong innovation in this practice, with an expansion by 30 percentage points of students concerned. In Portugal, innovation took the form of a contraction by 25 percentage points between 2011 and 2016.

Figure 7.9. Same-ability class grouping in 4th grade reading lessons



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.

46. Mixed-ability class groups in reading lessons

Why it matters

Breaking away from the whole-class format in reading lessons allows for more engagement and personalised learning. Given the criticism against same ability groups that provide little gain on learning achievement but strong negative effects on equity, mixed-ability groups are now usually favoured even though teachers may still have the habit to create same-ability groups in some countries.

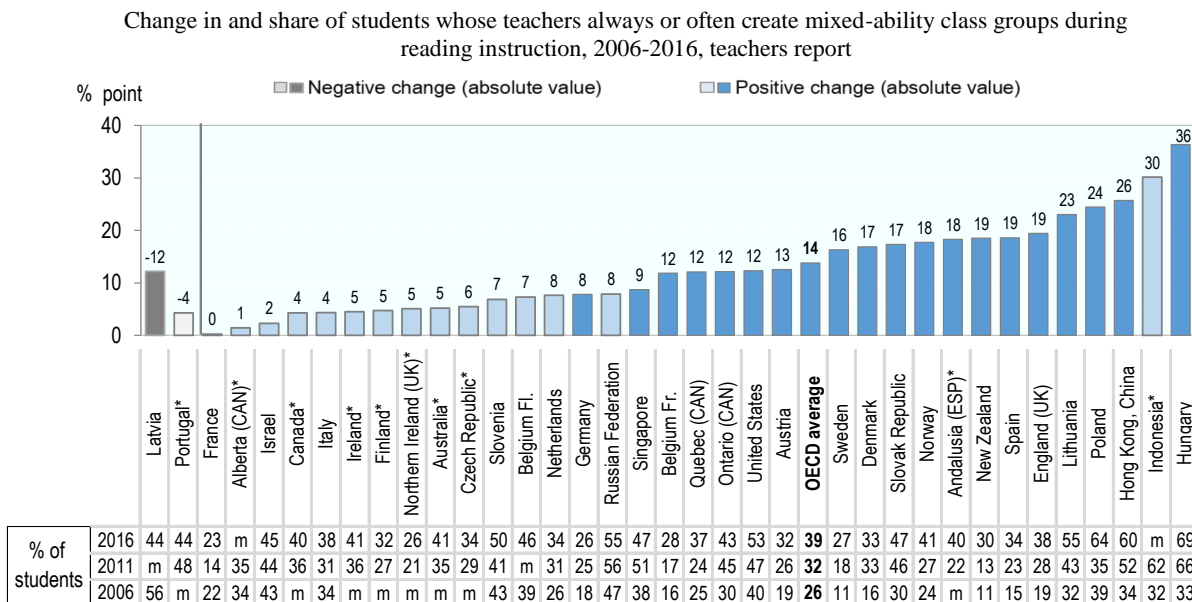
Change at the OECD level: moderate

At the OECD level, the share of 4th grade students whose teachers systematically create mixed-ability groups increase by 14 percentage points on average between 2006 and 2016. The overall absolute change was the same, corresponding to a moderate absolute effect size of 0.3. This practice is used to a moderate extent in OECD systems, with around 39% of 4th grade students concerned in 2016 on average, with a span ranging from 23% in France to 69% in Hungary.

Countries where there has been the most change

This has been a domain of innovation in many countries, usually through a diffusion of the practice. Hungary experienced the largest increase (36 percentage points), but the practice also gained significant ground in Indonesia, Hong Kong, China, Poland and Lithuania. Latvia (12 percentage points) recorded the only statistically significant negative change.

Figure 7.10. Mixed-ability class grouping in 4th grade reading lessons



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.

Table 7.1. Effect sizes for changes in personalised, collaborative and front-of-class teaching and learning practices in reading

	Making students read items of their choice	Giving students time to read books of their own choice	Individualised instruction for reading	Frequency of teaching reading as a whole-class activity	Students working independently on an assigned goal or plan	Frequency of reading aloud to the class	Students' peer discussion on read text	Use of school computers for group work and communication	Same class-ability groups in reading classes	Mixed-ability groups in reading classes
	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade	8th grade	4th grade	4th grade
Australia	0.09	-0.40	0.23	0.04	0.29	0.15	0.24	0.17	0.12	0.11
Austria	-0.01	0.14	0.43	-0.16	-0.03	0.15	-0.15	-0.12	0.23	0.29
Belgium (Fl.)	0.01	-0.19	0.08	-0.24	-0.24	-0.04	0.08	m	0.16	0.15
Belgium (Fr.)	-0.39	-0.39	0.02	-0.05	0.12	0.06	0.02	m	-0.12	0.29
Canada	-0.02	-0.42	0.04	-0.03	-0.11	0.13	0.05	m	0.03	0.09
Canada (Alberta)	0.07	-0.09	0.43	-0.27	0.08	-0.12	0.03	m	0.32	0.03
Canada (Ontario)	0.04	-0.55	0.31	-0.15	0.12	0.18	0.15	m	0.32	0.25
Canada (Quebec)	0.09	-0.10	0.35	0.17	0.03	0.24	-0.03	m	0.17	0.26
Czech Republic	0.44	0.18	0.00	-0.01	-0.85	0.02	-0.17	-0.07	0.07	0.12
Denmark	-0.29	-0.56	-0.14	0.09	0.38	0.08	0.35	-0.69	0.29	0.40
Estonia	m	m	m	m	m	m	m	0.06	m	m
Finland	0.16	-1.15	0.17	-0.10	-0.13	-0.08	0.38	0.04	0.06	0.10
France	-0.18	-0.37	0.06	-0.09	-0.25	-0.04	0.01	m	0.18	0.01
Germany	-0.21	-0.08	-0.04	0.16	0.08	0.32	-0.07	-0.05	0.23	0.19
Hungary	-0.20	0.17	0.34	0.11	-0.09	0.02	0.16	-0.17	-0.02	0.74
Iceland	m	m	m	m	m	m	m	0.01	m	m
Ireland	-0.02	-0.56	0.08	-0.09	-0.12	-0.03	0.17	0.06	0.19	0.09
Israel	-0.13	-0.14	1.00	0.18	-0.06	0.09	0.50	0.18	0.35	0.05
Italy	-0.75	0.46	0.09	-0.16	-0.14	-0.02	0.16	0.05	0.07	0.09
Japan	m	m	m	m	m	m	m	-0.14	m	m
Korea	m	m	m	m	m	m	m	0.16	m	m
Latvia	-0.40	0.13	0.08	-0.21	0.05	0.02	-0.10	0.40	0.33	-0.24
Lithuania	-0.63	0.57	0.14	-0.31	-0.16	0.27	-0.09	0.05	0.31	0.47
Netherlands	0.14	-0.20	0.28	-0.24	-0.06	-0.22	0.06	0.06	0.60	0.17
New Zealand	-0.07	-0.41	0.19	0.12	0.20	-0.05	0.25	0.34	-0.29	0.47
Norway	-0.06	-0.87	0.33	0.27	-0.34	-0.35	0.91	m	-0.17	0.38
Poland	-0.36	-0.33	-0.20	-0.35	-0.43	-0.06	0.29	-0.01	-0.21	0.49
Portugal	-0.21	-0.42	0.01	0.02	0.07	0.06	-0.06	-0.03	-0.55	-0.09
Slovak Republic	-0.71	0.40	-0.01	0.20	0.00	-0.16	0.21	-0.04	0.03	0.36
Slovenia	-0.29	0.00	-0.08	0.23	-0.04	-0.23	0.05	-0.05	0.21	0.14
Spain	-0.07	-0.16	0.27	-0.05	-0.35	-0.23	0.24	0.04	0.04	0.44
Spain (Andalusia)	-0.10	-0.37	0.11	-0.18	-0.24	-0.11	0.32	m	0.08	0.40
Sweden	0.01	-0.75	-0.06	0.35	-0.17	0.09	0.52	0.17	0.02	0.42
Switzerland	m	m	m	m	m	m	m	-0.13	m	m
UK (England)	0.09	-0.54	0.84	0.04	0.13	-0.17	0.35	m	-0.15	0.44
UK (Northern Ireland)	-0.01	-0.41	0.18	0.13	0.00	-0.34	-0.02	m	-0.07	0.12
United States	-0.01	-0.31	0.45	0.03	0.28	-0.05	0.27	m	0.28	0.25
OECD (average)	-0.20	-0.16	0.22	0.04	-0.02	0.01	0.20	0.02	0.11	0.30
OECD (av. absolute)	0.20	0.35	0.27	0.16	0.16	0.14	0.24	0.13	0.20	0.31

	Making students read items of their choice	Giving students time to read books of their own choice	Individualised instruction for reading	Frequency of teaching reading as a whole-class activity	Students working independently on an assigned goal or plan	Frequency of reading aloud to the class	Students' peer discussion on read text	Use of school computers for group work and communication	Same class-ability groups in reading classes	Mixed-ability groups in reading classes
	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade	4th grade	8th grade	4th grade	4th grade
Hong Kong, China	-0.25	-0.47	0.11	0.19	-0.01	-0.03	0.37	-0.14	0.32	0.52
Indonesia	0.22	0.29	-0.04	-0.03	0.22	0.20	0.84	m	0.13	0.61
Russian Federation	-0.41	-0.39	0.11	-0.12	0.09	-0.15	0.08	0.28	0.00	0.16
Singapore	-0.04	-0.47	0.05	0.11	0.25	-0.38	0.07	0.04	0.15	0.18
South Africa	0.25	0.46	m	m	m	0.02	-0.09	m	m	m

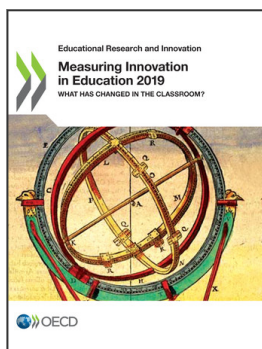
Effect size from -0.5 to -0.2 and from 0.2 and 0.5

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) and PISA (2006, 2009 and 2015).

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