

Chapter 10.

Innovation in learning scaffolding practices in reading

This chapter presents the change in teaching and learning practices aimed at supporting students having difficulties in reading. They go from waiting for maturation to having a teaching aid or asking parents to help. 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.

57. Availability of teacher aide or an adult volunteer to work with students who have difficulty with reading

Why it matters

Having to teach whole classes, teachers may find it difficult to provide students with reading difficulties the individualised instruction that works best for them. A possible strategy is to support teachers with teacher aides, adult or parent volunteers having the competence to help students. If teacher aides are not properly trained, this support may not add much to the learning gains to the beneficiary students, although it may have other benefits.

Change at the OECD level: small

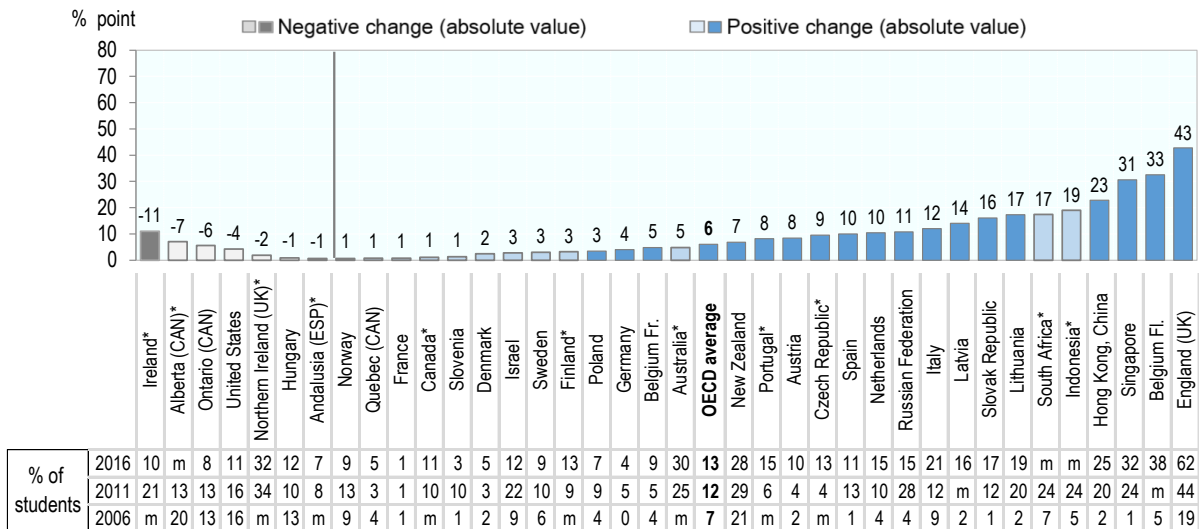
In OECD systems, on average 13% of 4th grade students with reading difficulties had a teacher aide or an adult volunteer supporting them academically in 2016, compared to 7% in 2006. When both increases and decreases are accounted for, the absolute change amounted to 7 percentage points on average, corresponding to a small absolute effect size of 0.24. In 2016, England stood out with 62% of 4th grade reading students having this type of scaffolding available. But overall, this practice is not common in OECD systems.

Countries where there has been the most change

England innovated the most with an increase of 43 percentage points in the share of students exposed to the practice. With increases exceeding 30 percentage points, Belgium (Fl.) and Singapore display the same pattern. Decreases in this practice were rather small.

Figure 10.1. Availability of an aide for 4th grade students who have reading difficulty

Change in and share of students who have always teacher aide or adult volunteer available to work with those who have reading difficulty, 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/10.1787/888933905227>

58. Waiting for maturation to improve performance if a student begins to fall behind in reading

Why it matters

Maturation does improve reading performance, both for cognitive and biological reasons (e.g. eye maturation and visual span). Waiting for maturation to improve performance if students begin to fall behind in reading is better than, say, make students repeat a grade. In some cases this may be too passive a teaching strategy, unless the origin of the reading difficulty cannot be tackled. While not harmful, one would not want this practice to be systematic.

Change at the OECD level: moderate

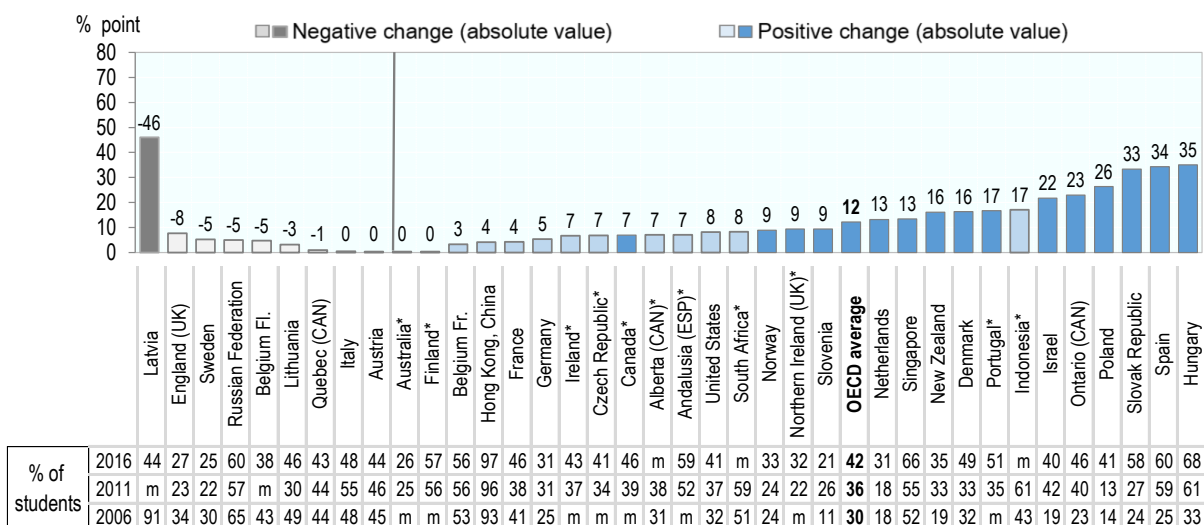
In 4th grade reading lessons, across OECD systems, this approach generally spread and the share of students exposed to it increased by 12 percentage points on average. As a result of negative and positive changes, the absolute change was 14 percentage points, corresponding to a moderate absolute effect size of 0.3. Within OECD countries, the use of this practice is modest. In 2016, 42% of 4th grade students were instructed by teachers employing this “waiting” method with students beginning to fall behind in reading.

Countries where there has been the most change

Between 2006 and 2016, this practice scaled up significantly in Hungary, Spain and the Slovak Republic, all three recording increases above 30 percentage points. In contrast, decreases in this domain were of a small order, with the exception of Latvia where the practice contracted by 46 percentage points.

Figure 10.2. Waiting for maturation to improve performance in 4th grade reading

Change in and share of students whose teachers wait for maturation to improve performance if a student begins to fall behind, 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/10.1787/888933905246>

59. Spending more time on reading individually with students beginning to fall behind in reading

Why it matters

One on one instruction seems to be the most effective teaching strategy for students falling behind in reading (and elsewhere). It is thus good practice for teachers to spend more time on reading individually with students who begin to fall behind in reading. Part of the issue may be emotional and related to anxiety, so the earlier the teacher intervention the better.

Change at the OECD level: moderate-low

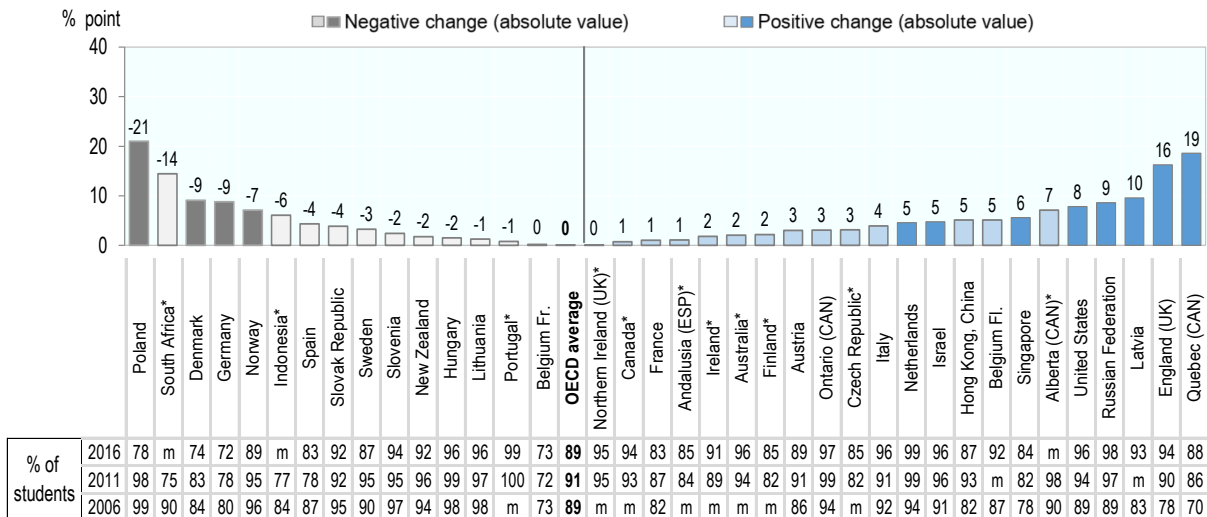
Contractions have fully balanced expansions of the practice across OECD systems, but on average there has been an absolute change of 6 percentage points in the use of this practice, corresponding to a moderate-low absolute effect size of 0.22. This scaffolding technique in reading is widely used, with on average 89% of students instructed by teachers that work individually with those falling behind in reading in an OECD system in 2016 – and always at least 70% of students taught by such teachers.

Countries where there has been the most change

Innovation has taken the shape of both diffusion and recession of the practice. While the practice spread in Quebec (Canada) and England by over 15 percentage points between 2006 and 2016, it contracted by 21 percentage points in Poland. South Africa registered a contraction of this practice by 14 percentage points between 2006 and 2011.

Figure 10.3. Spending more time on 4th grade students beginning to fall behind in reading

Change in and share of students whose teachers spend more time working individually with those who begin to fall behind, 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/10.1787/888933905265>

60. Parental help if a student begins to fall behind in reading

Why it matters

Parents play a fundamental role in the education of their children, including their school education. Parental engagement is one of the strongest predictors of good learning outcomes. This is even more important when student start having difficulties in reading (or elsewhere) and need extra support. Parental interventions are particularly effective in early grades, for example when they teach literacy skills to their children.

Change at the OECD level: small

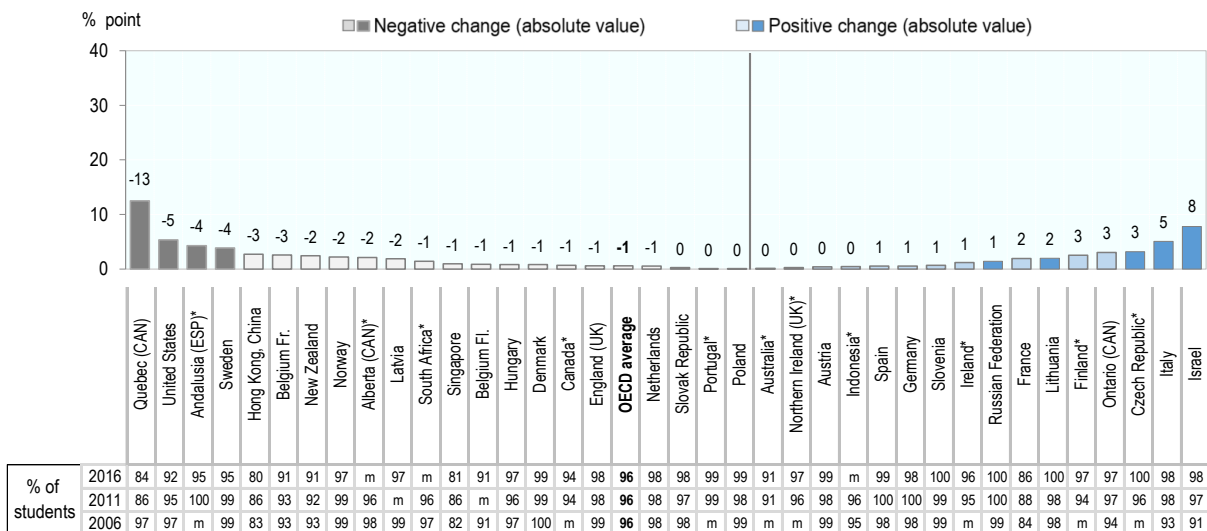
Between 2006 and 2016, the use of this practice has both increased and decreased across OECD countries, resulting in a net decline of 1 percentage point in the share of 4th grade students instructed by teachers who ask parental help for students falling behind in reading. The mean absolute change in this practice was only 3 percentage points, corresponding to a small absolute effect size of 0.13. All OECD education systems covered show near universal use of this practice, concerning on average 96% of students.

Countries where there has been the most change

Israel experienced the largest positive change in the use of this practice, with an increase of 8 percentage points in the share of students with a teacher asking their parents to help when they fall behind. In contrast, Quebec (Canada) recorded the largest decrease (13 percentage points). However these changes remain modest and innovation in this domain was minor in the past decade.

Figure 10.4. Parental help for 4th grade students beginning to fall behind in reading

Change in and share of students whose teachers ask parents to help those students who begin to fall behind, 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/10.1787/888933905284>

Table 10.1. Effect sizes for changes in scaffolding practices in reading

	Availability of teacher aide or adult volunteer to work with students who have difficulty in reading	Waiting for maturation to see if performance improve to work to work with students who have difficulty in reading	Reading individually with students	Parental help
	4th grade	4th grade	4th grade	4th grade
Australia	0.11	0.01	0.09	0.00
Austria	0.38	-0.01	0.09	0.04
Belgium (Fl.)	0.86	-0.10	0.17	-0.03
Belgium (Fr.)	0.20	0.06	0.00	-0.10
Canada	0.03	0.14	0.03	-0.03
Canada (Alberta)	-0.19	0.15	0.32	-0.12
Canada (Ontario)	-0.18	0.49	0.16	0.15
Canada (Quebec)	0.04	-0.02	0.47	-0.45
Czech Republic	0.35	0.14	0.09	0.26
Denmark	0.14	0.33	-0.22	-0.09
Finland	0.10	0.01	0.06	0.12
France	0.07	0.08	0.03	0.05
Germany	0.33	0.12	-0.21	0.04
Hungary	-0.03	0.72	-0.09	-0.05
Ireland	-0.31	0.14	0.06	0.05
Israel	0.09	0.48	0.20	0.37
Italy	0.34	-0.01	0.16	0.26
Latvia	0.54	-1.06	0.30	-0.15
Lithuania	0.64	-0.06	-0.07	0.20
Netherlands	0.37	0.31	0.27	-0.04
New Zealand	0.16	0.37	-0.07	-0.09
Norway	0.02	0.20	-0.28	-0.17
Poland	0.15	0.61	-0.79	0.00
Portugal	0.27	0.34	-0.18	-0.01
Slovak Republic	0.63	0.69	-0.16	-0.02
Slovenia	0.09	0.26	-0.12	0.11
Spain	0.45	0.71	-0.12	0.05
Spain (Andalusia)	-0.02	0.14	0.03	-0.31
Sweden	0.12	-0.12	-0.10	-0.26
UK (England)	0.91	-0.17	0.49	-0.05
UK (Northern Ireland)	-0.04	0.21	0.00	0.02
United States	-0.12	0.17	0.31	-0.24
OECD (average)	0.20	0.26	0.00	-0.03
OECD (av. absolute)	0.24	0.30	0.22	0.13
Hong Kong, China	0.75	0.20	0.14	-0.07
Indonesia	0.57	0.34	-0.15	0.02
Russian Federation	0.38	-0.10	0.39	0.24
Singapore	0.98	0.27	0.14	-0.02
South Africa	0.50	0.17	-0.39	-0.08

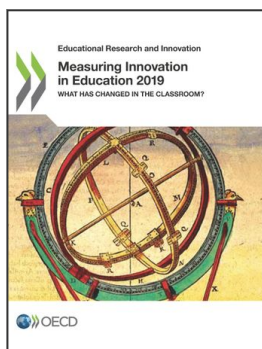
Effect size from -0.5 to -0.2 and from 0.2 and 0.5

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)

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