

# Single-track year-round education modestly improves average math and reading achievement of K-12 students



*Schools that shortened summer to the fewest weeks of vacation could expect an improved student achievement gain, equivalent to one month of learning, from a year-round calendar.*

#### What is the aim of this review?

This Campbell systematic review synthesizes the findings from 30 studies that compared the performance of students at schools using single-track year-round calendars to the performance of students at schools using a traditional calendar.

Single-track year-round education (YRE) is linked to higher average achievement in both math and reading, though not overall student proficiency rates. Achievement gains are similar in magnitude to the degree of summer learning loss documented in other studies.

#### What is this review about?

Over the long summer break, students forget some of what they learned during the school year. This “summer learning loss” may be especially large for low-income students. One policy aimed at decreasing summer learning loss is year-round education (YRE): re-distributing the usual number of school days so that students have more short breaks during the school year, and a much shorter summer vacation.

A specific design used to achieve this goal is single-track YRE, which involves placing all students at a given school on the same year-round calendar.

This review considers evidence on the effect of single-track YRE on academic achievement – test scores and proficiency rates – of K-12 students in math and reading from studies published between 2001 and 2016.

#### What studies are included?

This review includes studies that compare achievement in single-track YRE schools to achievement in traditional-calendar schools. Of a total of 39 studies on the topic, nine reported outcomes in a way that could not be combined with the 30 that this review focuses on. The studies were from 2001-2016 and were all of K-12 schooling in the USA, but varied in school characteristics (state, size, percent minority, percent low-income).

None of the studies used an experimental design (random assignment); studies were about evenly split between (a) comparing one school to another that is very similar, (b) comparing one school to a nearby school, and (c) comparing students at a school before versus after a switch to a year-round calendar.



### How up-to-date is this review?

The review authors searched for studies up to 2016, with electronic searches conducted in July and August 2017.

### What is the Campbell Collaboration?

Campbell is an international, voluntary, non-profit research network that publishes systematic reviews. We summarise and evaluate the quality of evidence about programmes in the social and behavioural sciences. Our aim is to help people make better choices and better policy decisions.

### About this summary

This summary is based on Fitzpatrick, D, Burns, J. Single-track year-round education for improving academic achievement in U.S. K-12 schools: Results of a meta-analysis. *Campbell Systematic Reviews*. 2019; 15:e1053. <https://doi.org/10.1002/cl2.1053>.

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### What are the findings of this review?

#### *Is academic achievement higher at YRE schools?*

Average student achievement was higher in both reading and math at single-track YRE schools, but proficiency rates were no higher in either subject. Compared to a prior meta-analysis of summer learning loss, which found that students typically forget the equivalent of one month's learning over the summer, this review found the gain from YRE to be slightly more than this in reading and slightly less in math.

#### *Do some students benefit more from YRE?*

For the most part, no. Low-income and minority students do not see greater benefit from YRE than average students in either reading or math. Elementary and middle school students show about the same gain in reading. However, we find that middle school students' achievement in math increases more than elementary school students' from the year-round calendar. Because none of the included studies were experiments (and therefore factors other than duration of summer break may have been distributed non-randomly), the certainty of these findings for smaller groups of students is lower.

#### *Do some year-round calendars help students more than others?*

Tentatively, yes: the schools that shortened summers to the fewest weeks had the largest effect on student achievement in both math and reading.

### What do the findings of the review mean?

Single-track year-round education (YRE) appears to have a benefit to student achievement that is equivalent in size to about a month of learning. This is similar in size to some ways of calculating the learning loss students experience over the traditional 10-week summer break.

In examining smaller subsets of data, which weakens the reliability of our analyses, the authors did not find YRE to be more helpful for low-income or minority students than for the average student, but did find that YRE might have a larger effect for middle school students than elementary school students in math.

Schools that shortened summer to the fewest weeks of vacation showed the greatest gain in student achievement, but the (non-experimental) design of the studies examined preclude us from interpreting this relationship as causal. This might indicate that schools could expect an improved student achievement gain equivalent to one month of learning from a year-round calendar, with a larger improvement from shortening the summer break to 4-6 weeks in length than from shortening the summer break to 7-8 weeks.