

READS: Helping Children Become Summer Bookworms



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About this report

This research summary was produced as part of a commitment by The Wallace Foundation to develop and share useful knowledge to improve policy and practice, in this case about summer learning. It was written by Jennifer Gill, a freelance journalist who reports about a number of topics, including data and its use in public education as well as learning and enrichment.

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READS: Helping Children Become Summer Bookworms

A home-based program can help disadvantaged children sharpen their reading skills over the summer. (*Hint: It takes more than just giving them free books.*)

For many children, summer is a good time to curl up with a book and get lost in a page-turning story. Children in low-income families, however, may be less likely than their wealthier peers to go on an adventure in the *Magic Tree House* or solve mysteries with Cam Jansen. Recent research indicates that the income-based gap in reading comprehension grows significantly during the summer, particularly among elementary-school students.¹

What leads to the gap? Some researchers use a faucet metaphor to describe one possible explanation.² During the school year, all students make gains in reading because they have access to a steady stream of resources, such as classroom instruction and books. The resource faucet, in other words, is on high for everyone. Over the summer, the faucet stays on for higher-income children because their families make up for the resources provided at school by taking them to the library, buying them books and encouraging them to read. However, the faucet slows to a drip for poor children. Research shows that, compared to their wealthier classmates, students from low-income families may have fewer opportunities to visit a library or bookstore, and fewer parental resources to support reading.³ They likely have fewer books at home, too. One study found that the poorest children own an average of 38 books, while children in the wealthiest families have nearly three times as many.⁴ Because of

these inequalities, poor children fall behind in reading relative to their more affluent peers and return to school in the fall at a disadvantage academically.⁵

Now, a series of innovations and studies suggests that a home-based summer reading program may help narrow that achievement gap. READS for Summer Learning provides 10 free, carefully-matched books to third through fifth graders over the summer, supported by family engagement, classroom instruction and comprehension activities. The trick is that simply handing out books doesn't appear to be enough to make a measurable difference. What does is a structured program that, with the help of teachers, encourages kids to read and think about what they are reading.

The design of the READS program was refined over more than a decade of innovation and research by James Kim, professor at Harvard University's Graduate School of Education. His interest was

sparked during an early-career stint as a seventh-grade history teacher, when he saw firsthand how much students forgot during their three-month summer break. In graduate school, he continued learning about summer loss, particularly for reading skills, and started developing a way to mitigate it.

Kim first piloted READS in 2004 with a few hundred elementary-school students, and components of that early program are still evident today. He followed up with revised approaches and four more studies with schools in the mid-Atlantic region of the U.S. to test different aspects of the program and their effect on building reading skills. Then, in 2010, the U.S. Department of Education awarded Kim a five-year grant through its Investing in Innovation, or i3, Fund. The Fund, which has since ended, supported the development of innovative practices shown to have an impact on student achievement. The grant allowed Kim to extend his research on READS with a much larger number of students in a different geographic area. From 2010 to 2015, he conducted three major READS studies in seven North Carolina school districts, involving more than 8,000 students. The Wallace Foundation has also supported the READS project and research as part of its work in summer learning.

What’s noteworthy about Kim’s research is how rigorously it was conducted. Each study used a randomized controlled trial design, meaning students were randomly assigned to either a “treatment” group that participated in READS or a control group that did not. The two groups of students were alike in every other way, including demographic characteristics and initial reading test scores. Randomized controlled trials are considered one of the best research methods because they make it possible to determine with confidence whether a given outcome can be ascribed to the activity being tested. By comparing the results of the treatment and control groups, Kim was able to discern whether the READS program improved reading skills.

The short answer is, it did. In 2013 Kim conducted the largest of his formal READS investigations, a study involving more than 6,000 second and third

graders in 59 North Carolina schools—20 of them moderate poverty, 39 of them high poverty. He found that participation in READS had a statistically significant positive impact on the reading abilities of children in all schools. Specifically, the study followed the students into their next year of school—in this case, third and fourth grade—and examined their scores on an end-of-year reading test. Overall, students who participated in READS had test scores that reflected a gain equivalent to nearly one month of reading skills.⁶

Children in high-poverty schools who had participated in READS did noticeably better on a test the following spring than students at those same schools who had not been part of the program.

READS had the greatest benefit in high-poverty schools, defined as those where 75 percent to 100 percent of students receive free or reduced-price lunch. Children in high-poverty schools who had participated in READS did noticeably better on the test the following spring than students at those same schools who had not been part of the program. On average, they read four READS books and their spring test scores reflected an overall gain equivalent to nearly 1.5 months of reading skills. The results, according to Kim and the study’s co-authors Jonathan Guryan, Thomas G. White, David M. Quinn, Lauren Capotosto and Helen Chen Kingston, indicate that children in high-poverty schools “may benefit from participating in home-based summer reading routines and thus enjoy durable gains in reading comprehension.”⁷ The magnitude of the effect was comparable to those of large-scale literacy programs that aim to improve reading skills during the school year, particularly in high-poverty schools.⁸

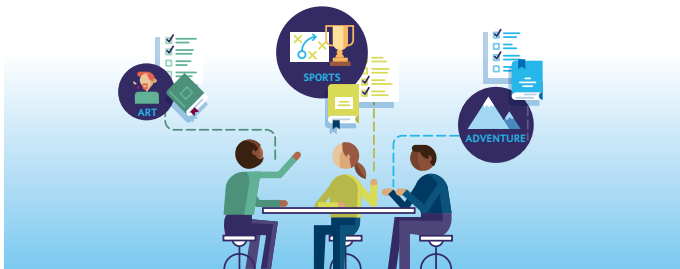
One practical factor for districts considering a summer reading program is cost. Kim estimates that READS costs between \$250 and \$480 per student;⁹ in comparison, RAND researchers analyzing a school-based summer program in 2014 noted that the per-student cost ranged from \$1,070 to \$1,700.¹⁰ Such voluntary school-based summer programs, however, often have a much broader scope. Besides reading instruction, they generally include math lessons, lunch, full-day supervision and enrichment activities—which account for the costs. Kim also found that READS was more cost-effective than federally-funded reading tutoring programs, which run about \$800 per child with a student-tutor ratio of two-to-one.¹¹

Books alone aren't enough

Kim fine-tuned READS as he tested different approaches to determine what benefits children the most and in what context. He found that just giving them free books is not the answer. Rather, Kim identified four evidence-based components that work together to help budding readers strengthen their skills when school's out. They're like pieces of a puzzle, each necessary to realize the full benefits of the READS program:

COMPONENT 1

Match the books to the child.



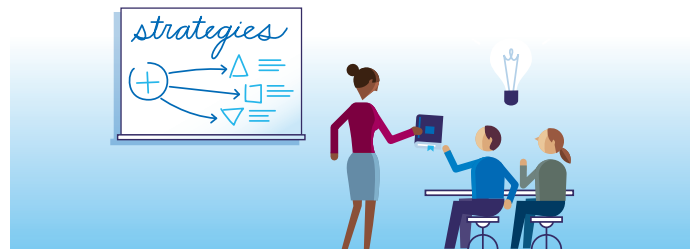
To increase the odds that kids do their summer reading, READS uses a computer algorithm to match books with each student's interest and reading level. The algorithm crunches two types of data. First, it uses information from a survey students fill out about the types of books they like, such as adventures or biographies. The second type of data is the student's reading level. In the spring, students take the Iowa Test of Basic Skills for a baseline measure of their reading skills. Each student's score is translated into a Lexile reading level, part of a proprietary system created by a company called MetaMetrics. The Lexile system is widely used by both state education agencies and children's book publishers. Over the years, Kim has created a children's book list of more than 500 titles with a range of Lexiles, both fiction and nonfiction. Based on a student's Lexile reading level and book tastes, the algorithm picks books on the list that are the best match. In other words, students get books on topics they are interested in, and which aren't so hard that they'll give up in frustration—or so easy that they'll see no improvement in their reading skills. Students receive 10 books over the summer by mail, one every week.

In an early small-scale study, Kim experimented with another approach to selecting books: He let the kids pick them out themselves, reasoning that children

would be more motivated to read if they chose their own. With the help of two veteran teachers, Kim set up a school book fair with more than 140 children's books from a variety of genres and reading levels. Turns out, 67 percent of the students selected books that were too difficult for them, perhaps drawn by a catchy cover or the book's popularity. In that study, students in READS did no better on a follow-up reading test in the fall than students who weren't in the program.

COMPONENT 2

Teach children a routine to build reading comprehension.



Tailoring books to a child's interests and reading level is a start, but it's not enough to strengthen reading skills. In 2004, Kim found that READS students who received appropriate books—and nothing more—did about the same as control group students on a follow-up reading test in the fall.

So, he did further experimenting and conducted two concurrent replication studies in 2005. The first was with 552 fourth graders who were randomly assigned to either a treatment group that participated in READS or a control group that did not. In that study, Kim asked teachers to conduct a few lessons on comprehension strategies before the end of the school year with all of the students. The results were promising: READS students did significantly better on a follow-up reading test than their peers who were not part of the program. However, it was unclear whether the books alone, or the books in combination with the end-of-year teacher lessons, were the active ingredient in READS.¹²

Kim's second study in 2005 involved 514 third, fourth and fifth graders.¹³ This time, each child was randomly assigned to one of four groups: a control group that received no books in the summer; a group that did; a group that received books in the summer and practiced reading aloud with a classmate at the end of the school year; and a group that received

books in the summer as well as both oral reading practice and lessons in comprehension strategies at the end of the school year. As in the previous study, books were matched to each child's interests and reading ability. Kim found that the children who only received books fared no better than the control group on a follow-up reading test in the fall. The students who practiced oral reading didn't do any better either. However, the group of children who received comprehension lessons made significantly greater gains on the test compared to the control group. The takeaway: Lessons that teach comprehension strategies can help kids read effectively on their own and build their reading skills.

Education researchers call this type of support—that is, the comprehension lessons—"scaffolding" because it equips children with techniques to read effectively on their own. Over time, Kim refined the lessons by consulting literacy experts, incorporating recommendations from a research-based practice guide on improving early readers' comprehension skills and piloting the lessons before full roll-out. In the end, Kim and his team had developed six READS lessons that model a before-, during-, and after-reading comprehension enhancement routine tailored to fiction and non-fiction. They even wrote scripts for the lessons, which teachers conduct on six consecutive school days.

Three lessons teach a routine for reading non-fiction, and three focus on fiction. For instance, in the first lesson on reading fiction, teachers read aloud key words from the story and ask students to use them to make predictions about the book. The following day, the teachers read the story aloud and ask students both factual and inferential questions about it. Finally, teachers in the last lesson lead a discussion comparing the actual story with the students' predictions. The first two READS books that students receive over the summer are the ones used in these lessons, regardless of the child's interests or reading level. This is done so children have good initial experiences using the reading routines, since the books are familiar to them. The other eight books they get are matched to their preferences and skill level.

Kids, however, can have a short attention span. A couple of lessons about comprehension routines may be long forgotten by the time READS books arrive in the summer. To jog students' memory, each book comes with a "tri-fold" brochure that guides them through the reading routine. Kim tried this approach in the

2013 longitudinal study of more than 6,000 second and third graders. The tri-fold included an activity that reviewed the routine—for instance, a list of key words from the book and space for the student to write story predictions based on them. It also asked three multiple-choice comprehension questions to be completed once the student read the book. Families were asked to mail back the postage-paid tri-folds, which served two main purposes. First, Kim and his research team used tri-fold returns as a proxy measure for participation. The more tri-folds returned, their thinking went, the more READS books the students read in the summer. The comprehension questions, meanwhile, gave insight into how closely children read the books.

On average, READS students filled out and returned four out of 10 tri-folds and answered 70 percent of the questions correctly. Two-thirds returned at least one tri-fold. Then, Kim drilled deeper into the data. He wanted to know if READS participants who returned more tri-folds and answered at least one question correctly on each one did better on the test than other students in the program. They did. The impact was even greater in high-poverty schools, compared with moderate-poverty schools.¹⁴ "The key takeaway is that doing more of the READS activities—reading books, answering questions—is a better predictor of reading comprehension gains on the end-of-grade test than measures where kids self-report reading more," says Kim.

COMPONENT 3 Engage families.



Other education researchers have found that parents can better support their children's at-home reading if they understand the comprehension routines taught at school. To that end, READS includes a family literacy night where parents learn about the program and how to encourage their child's participation over the summer. The event is held at

READS: Helping Children Become

READS for Summer Learning is a school-supported, at-home reading program that provides 10 free, carefully-matched books over the summer. It's about more than books, however, requiring family engagement, classroom instruction and a decade of rigorously conducted research by James Kim, professor at Harvard University's Graduate School of Education.

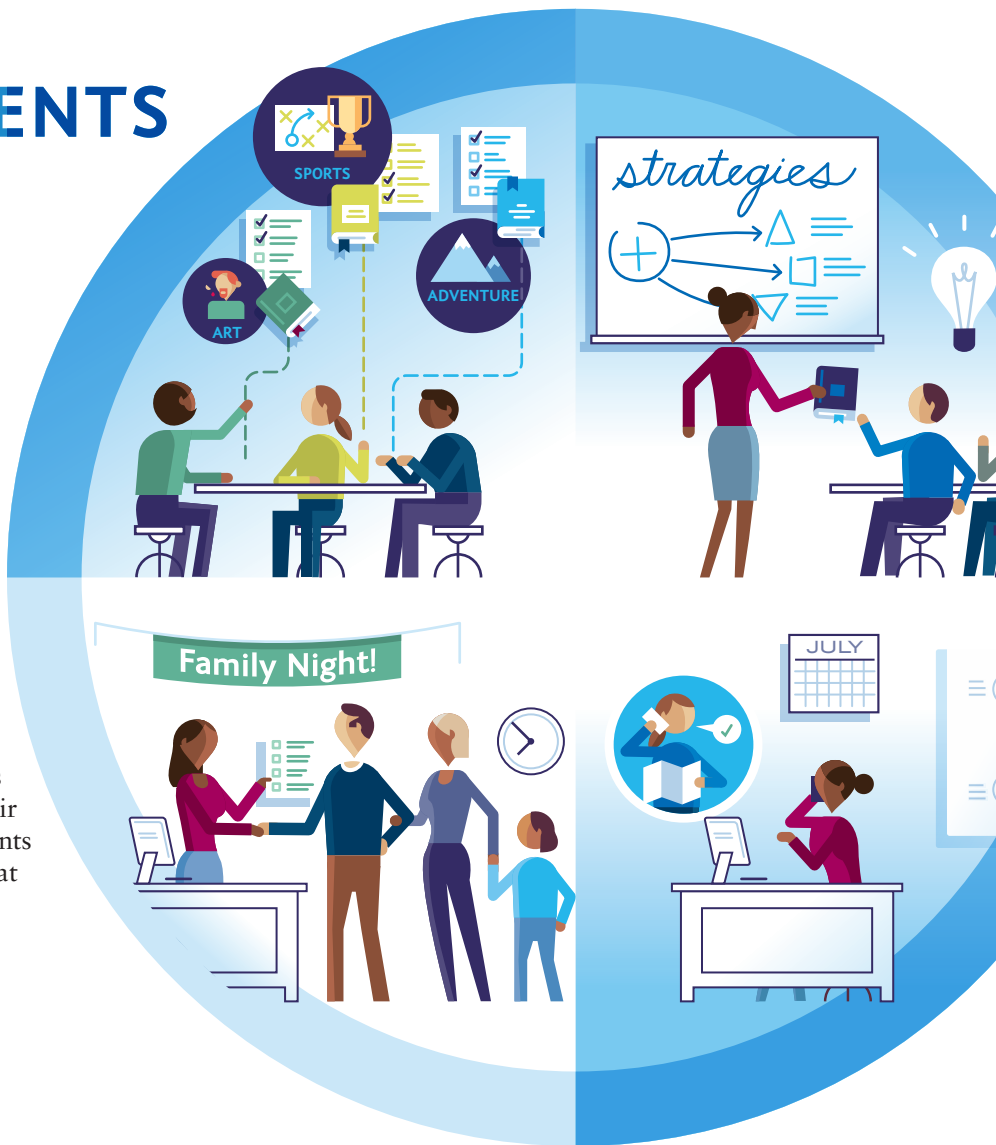
FOUR COMPONENTS

Match the books to the child.

READS uses a computer algorithm to match books with each student's interests and reading level. Students receive 10 free books over the summer by mail, one every week.

Engage families.

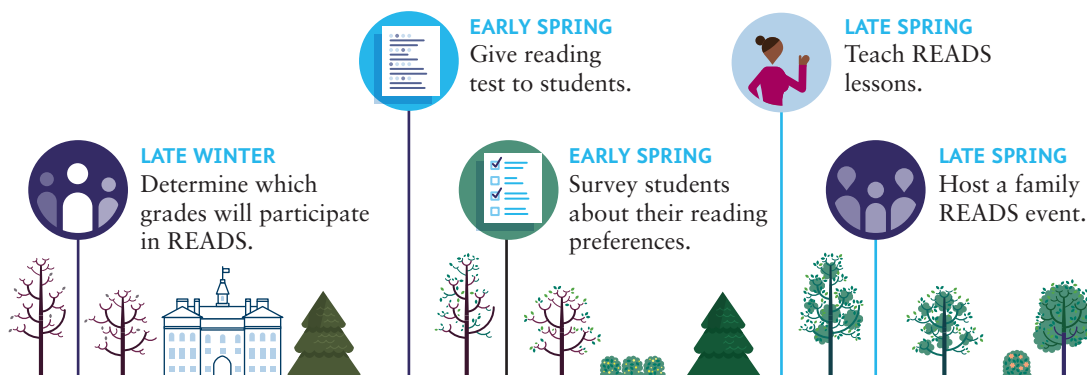
Schools host a family literacy event where parents learn about READS and how to encourage their child's participation over the summer. When parents understand the comprehension routines taught at school, they can better support their children's at-home reading.



TIMELINE

Bringing READS to your school

READS schools carry out a number of tasks from late winter through the fall.



the Summer Bookworms

matched books to disadvantaged elementary-school children and reading comprehension activities. READS is backed by more than 20 years of research from the U.S. Department of Education. Here's an overview:

KEY FINDINGS

Teach a reading comprehension routine.

Before the summer, students receive classroom instruction in how to read effectively on their own. Teachers model a before-, during- and after-reading routine that guides children in using vocabulary words to figure out main ideas in non-fiction books and plot turns in fiction. A tri-fold brochure mailed with every book—and to be filled out and returned—reminds students of the routine and includes reading comprehension questions.

Nudge kids over the summer.

Weekly tips by text and email remind parents to encourage their child's participation and to fill out and mail back the tri-folds. Students who haven't returned a tri-fold by mid-summer may be called by a teacher reminding them to do so.

Kim's research found that READS can have a meaningful impact on the reading skills of children living in the poorest communities.

READS children in high-poverty schools gained nearly 1.5 months of reading skills compared to non-participants.

The magnitude of the benefit was comparable to that of school-year literacy programs in high-poverty schools.

Carrying out READS proved feasible and straightforward in a range of districts. It required minimal teacher training and no additional staffing.

READS costs \$250-\$480 per student.

FIRST WEEK OF SUMMER BREAK

Mail first READS book and tri-fold to students' homes.

FIRST WEEK OF SUMMER BREAK

Begin weekly tips to parents by phone and text.

THROUGHOUT SUMMER

Mail additional books and track tri-fold returns.

MID-SUMMER

Call students who haven't returned any tri-folds.

BACK TO SCHOOL

Give follow-up reading test and compare with scores from the spring.

FALL

Analyze participation data. Make adjustments to improve participation next year.

school, after the READS lessons have started. In fact, family night is considered the seventh lesson because it reinforces the READS reading routines and parent involvement. Children explain the steps of the routine to their parents, showing, for example, how they use key words to make predictions about a book's content. Parents also learn the acronym EATS: Encourage your child to read everyday, Ask your child if they completed the tri-fold, Talk to your child about the books, and Send back the tri-folds. Contact information is also collected, so families can be reached over the summer by email, text or phone.

COMPONENT 4

Nudge kids over the summer.



Over the years, Kim has tried different methods to encourage participation in the program. In a 2011 study with about 1,400 third graders in high-poverty and moderate-poverty schools, he tested whether phone calls from teachers over the summer motivated children to read and resulted in stronger comprehension skills than for students who did not get called. Teachers were asked to call each student up to

three times and discuss the book they were reading. Kim found that students in high-poverty schools who were assigned to get calls made significantly greater gains in reading than students who were not called as well as the control group. The calls didn't make a difference in moderate-poverty schools.

Despite the positive results in high-poverty schools, Kim realized that calling every student wouldn't be sustainable as the program grew. Yet reaching out to kids and families appeared to be a critical ingredient. So he modified it. READS now recommends that instead of personally calling every family, schools call a randomly selected group of students who haven't returned a tri-fold by July 1. The process is repeated in August: A random selection of students who still haven't sent back a tri-fold is called. The nudging seems to work: In one experiment, the number of tri-folds returned per week by students who got calls soared. During one week in August, for example, they returned nearly four tri-folds on average. Other kids in the program returned just one.

Weekly tips are also part of the READS summer regimen. They're sent to parents via email, text or automated phone message, in English or Spanish, depending on the family's preferences. The brief messages review the reading routines that kids should be using with the books and suggest ways that parents can nurture good reading habits, like taking their children to the library.

In some studies, Kim used small prizes to motivate kids to read and return tri-folds. Trinkets such as stickers and bookmarks were mailed to students when

Adapting the READS program can lead to better results

In 2014, teachers in 13 high-poverty elementary schools were given the option to adapt READS in ways that they believed would benefit their students and families. All of them did, even when it cost money or meant more work for teachers. Using data from their participation in the program the previous year, the schools made informed changes to each component, such as:

Matching books

Teachers at 11 of the 13 schools opted not to send students the books that were used in the READS lessons, preferring to send 10 different books instead. A number of teachers selected books that were more challenging. Teachers at two schools conferred with students about the books that were chosen for them.

Teaching lessons

In most cases, schools modified existing activities associated

with the READS lessons. For instance, instead of teaching the lessons on consecutive days, nine schools spread them out and taught one or two a week. Other schools went beyond the lessons and created new activities to spark interest in the program. One school, after learning that boys had lower participation rates than girls in READS the previous summer, held pep rallies for each gender. Male teachers shared their reading habits with the boys to reinforce the importance of reading.

Engaging families

Schools that adapted the program tried many innovative ways to boost attendance at the family literacy event. They offered gift cards for coming and added student performances. A couple of schools offered simultaneous presentations in English and Spanish. Some held the event twice, in the morning and evening, to accommodate parents' schedules. Two offered free babysitting. Overall, 45 percent of families attended, compared with 35 percent at

schools doing the traditional program.

Summer nudging

Eight schools added a fall event to celebrate student participation in READS, the most common adaptation. One school organized an extra event for the summer so students could hand in tri-folds to their teachers. In all cases, schools funded and managed these events themselves. A few also chose to make personal phone calls to students or parents.

they sent back one, three, seven and 10 tri-folds. A small-scale study in 2007, however, revealed some limitations to this approach. Kim and co-authors Jonathan Guryan and Kyung Park ran a randomized controlled trial with three groups: a control group, a group that participated in READS, and a group that participated in READS and earned prizes for reading the books. Before the summer, they also asked all of the students to take a survey that gauged their motivation to read. The study found that highly-motivated readers responded more to incentives than students with average or low motivation. When offered a reward, children who were already intrinsically motivated to read did so at significantly higher levels than their peers. The study suggests that rewards may not be effective with unmotivated struggling readers, the very students that READS aims to reach.¹⁵

From good to great: When teachers make informed adaptations

When teachers tweak READS based on their local context, students benefit even more. Kim discovered this in a 2014 experiment involving nearly 1,300 fourth graders at 27 high-poverty schools that had participated in READS the previous year. Half of the schools were randomly assigned to the traditional READS program again. The rest were given autonomy to adapt it—within reason. Eliminating any of the four components was not an option. However, teachers at the schools could change, extend or create new activities and procedures for carrying them out based on their personal knowledge of students and families. Schools and teachers structured their adaptations based on data about student participation and performance in READS the year before.

Teachers jumped at the chance to adapt READS, even when the changes added to their normal workload. Some adjusted the timing of the READS lessons while others tried novel ways to attract families to the literacy event. Several added a new READS event in the fall to celebrate the end of the program. [See box on p. 10 for more adaptations.]

At 11 of the 13 schools that made adaptations, teachers also tweaked the books that the computer algorithm had selected for their students. Many swapped in more challenging books, guided by their first-hand knowledge of individual student's abilities. Notably, students in the schools that adapted READS

were more likely to say their books were “just right” (and less likely to say they were “too easy”) than their peers in the traditional program.

The various adaptations added up to greater success: On a follow-up reading test in the fall, students in the schools that made adaptations significantly outperformed their peers at schools that implemented the traditional program. The gains were positive, statistically significant and reasonably large—big enough to offset the negative impact of summer vacation on low-income children's reading comprehension scores compared with scores of children from more affluent families.¹⁶ The results show that “structured teacher adaptations had an immediate and proximal effect on students' opportunities to learn and apply the READS comprehension routine,” according to Kim and his study co-authors.¹⁷ It's not possible to pinpoint which tweaks were the most effective; in fact, because many of the changes were inter-related, it's likely that no single modification deserves all the credit.

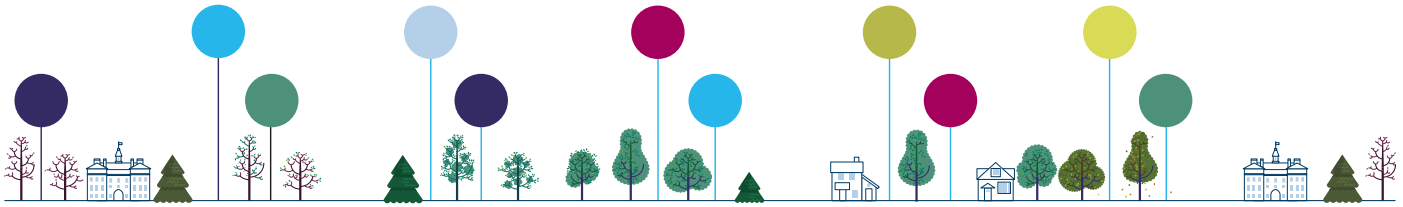
Kim strongly recommends that schools contemplating an adaptation of the program first do the traditional READS for at least one summer. The reasons are twofold. First, it gives teachers a solid foundation in READS and its underlying principles before they start to modify it. Second, it lets schools gather valuable participation data that can inform changes to improve student outcomes.

Bringing READS to schools

Kim's research ended in 2015, but he has a “folder full of emails” from teachers and principals all over the country who've heard about his studies and want to bring READS to their schools. To assist them, Kim and his team of researchers have created a free READS toolkit online (<https://www.readslab.org/>). The toolkit consists of four learning modules, one on each component, and includes sample tri-folds, scripts for the READS lessons, materials for the family literacy event, and more.

Perusing those materials can give educators a detailed understanding of what running a READS program entails. The big message, though, is that after a decade of research, the READS team has shown that a summer reading program with the right supports can make a difference for children in high-poverty schools. School districts might well want to consider what READS has learned, so they can work toward turning the page on the achievement gap during the summer.

Timeline of READS studies



Harvard University education professor James Kim spent 10 years researching and developing the READS for Summer Learning program. Each of his studies built on the previous one, allowing him to fine-tune components of the program and improve their effectiveness. The studies are available under the Publications tab at <https://scholar.harvard.edu/jameskim>. A timeline of his work:

2004 *First READS pilot: Which grades to target?*

- One school
- 331 children in grades 1 to 5
- Research design: Students were randomly assigned to one of two conditions: a READS group that received 10 books over the summer or a control group that received 10 books after a reading test in the fall.
- Findings: READS students reported reading more books over the summer than students in the control group, but there was no significant difference between the groups on a fall reading test. However, there was suggestive evidence that children in grades 3 and above enjoyed larger gains in comprehension than those in grades 1 and 2.

Source: “*The Effects of a Voluntary Summer Reading Intervention on Reading Activities and Reading Achievement*,” *Journal of Educational Psychology*, 2007.

2005 *Replicating READS: Which students benefit most?*

- 10 schools
- 552 fourth graders
- Research design: Students were randomly assigned to one of two conditions: a READS group or a control group that did not participate. All students were taught reading comprehension strategies before the end of the school year
- Findings: Subgroups of disadvantaged children participating in READS did significantly better on a follow-up reading test in the fall than children who weren’t in the program. The impact was greatest for minority students, students who scored below the median on a pre-summer reading test, and students who reported owning fewer than 50 children’s books. However, it was unclear whether the books alone, or the books in combination with end-of-year teacher lessons, were the active ingredient in READS.

Source: “*Effects of a Voluntary Summer Reading Intervention on Reading Achievement: Results from a Randomized Field Trial*,” *Educational Evaluation and Policy Analysis*, 2006.

2005 *The effect of teacher involvement: Do classroom lessons make a difference?*

- Two schools
- 514 children in grades 3, 4 and 5
- Research design: Students were randomly assigned to one of four conditions: a control group that received no books in the summer; a group that did; a group that received books in the summer and practiced reading aloud with a classmate at school at the end of the school year; or a group that received books in the summer as well as both oral reading practice and lessons in comprehension strategies at school.
- Findings: Students who only received books fared no better than the control group on a follow-up reading test in the fall. The group that got books and practiced reading aloud in school didn’t do any better either. However, the group that received comprehension lessons at the end of the school year made significantly greater gains on the test compared to the control group. This finding suggests that the combination of summer reading and comprehension lessons made the difference.

Source: “*Scaffolding Voluntary Summer Reading for Children in Grades 3 to 5: An Experimental Study*,” *Scientific Studies of Reading*, 2008.

2007 *Book selection: What happens when children choose their own books?*

- Four schools
- 370 fourth graders
- Research design: Students in the READS program selected their own books at a book fair rather than being matched with books using a computer algorithm.

- Findings: Two out of three children in the READS program chose books that were too difficult for them. They were exposed to a higher proportion of unfamiliar words and longer sentences than children who selected books suitable to their reading level. Other researchers have found that a preponderance of unknown words in a text may impede a child's ability to read fluently and to process the meaning of words. Overall, READS students did no better on a follow-up reading test than students who weren't in the program.

Source: "The Efficacy of a Voluntary Summer Book Reading Intervention for Low-Income Latino Children from Language Minority Families," *Journal of Educational Psychology*, 2010.

2007 The role of incentives: Do prizes make children read more?

- Nine schools
- 400 third and fourth graders
- Research design: Children were assigned to one of three conditions: a control group, a READS group or a READS group that could earn prizes for reading the books. All students completed a pre-summer survey that gauged their motivation to read.
- Findings: Intrinsically motivated readers responded more to incentives than students with average or low motivation. This suggests that rewards may not be effective with unmotivated struggling readers, the very students that READS aims to reach.

Source: "Motivation and Incentives in Education: Evidence from a Summer Reading Experiment," *Economics of Education Review*, 2016.

2010 Kim receives federal funding to replicate and extend his research on READS on a larger scale in a different geographic region.

2011 The role of poverty: Does READS work in all schools?

- 10 high-poverty schools and nine moderate-poverty schools
- 1,421 third graders
- Research design: Within each school, students were randomly assigned to one of three conditions: a control group, a group that participated in READS, or a group that participated in READS and received teacher phone calls during the summer.
- Findings: In high-poverty schools, students in the READS program did significantly better than the control group on a follow-up reading test. READS students in moderate-poverty schools made gains, but students in the control group advanced more. READS students in high-poverty schools who were assigned to get calls made significantly greater gains in reading than READS students who were not called, as well as the control group. The calls didn't make a difference in moderate-poverty schools:

Whether they got calls or not, READS students in these schools made smaller gains compared to the control group.

Source: "Replicating the Effects of a Teacher-Scaffolded Voluntary Summer Reading Program: The Role of Poverty," *Reading Research Quarterly*, 2014.

Note: The 2011 findings in moderate-poverty schools were puzzling. In his next READS research undertaking, Kim designed a more rigorous study that involved more than four times as many students. The increased statistical power of the study was designed to replicate earlier findings regarding the impact of READS in high- and moderate-poverty schools.

2013 What are the long-term effects of READS on students in high- and moderate-poverty schools?

- 39 high-poverty schools and 20 moderate-poverty schools
- 6,383 second and third graders
- Research design: Within each school, students were randomly assigned to one of two conditions: a group that participated in READS or a group that participated in end-of-year math lessons. Kim tracked the students into the following school year and examined their scores on an end-of-year reading test.
- Findings: READS had a statistically significant positive impact on the reading abilities of children in all schools, both high and moderate-poverty. The effect was largest in high-poverty schools. Children in those schools who had participated in READS did noticeably better on the End-of-Grade North Carolina reading comprehension test than students at the same schools who had not been part of the program.

Source: "Delayed Effects of a Low-Cost and Large-Scale Summer Reading Intervention on Elementary School Children's Reading Comprehension," *Journal of Research on Educational Effectiveness*, 2016.

2014 Adapting READS: Do children benefit more when schools adjust the program?

- 27 high-poverty schools that had participated in READS the previous summer
- 1,272 fourth graders
- Research design: Schools were randomly assigned to one of two conditions: a group that followed the READS program with no deviation or a group whose teachers structured adaptations based on data about student participation and performance in READS the year before.
- Findings: On a follow-up reading test in the fall, students at schools that adapted READS significantly outperformed students at schools that followed the traditional program.

Source: "Effectiveness of Structured Teacher Adaptations to an Evidence-Based Summer Literacy Program," *Reading Research Quarterly*, 2017.

Endnotes

- ¹ Catherine H. Augustine, Jennifer Sloan McCombs, John F. Pane, Heather L. Schwartz, Jonathan Schweig, Andrew McEachin, and Kyle Siler-Evan, *Learning from Summer: Effects of Voluntary Summer Learning Programs on Low-Income Urban Youth*, RAND Corporation, 2016. This study and its appendix summarize several studies on this topic.
- ² D. R. Entwisle, K. L. Alexander, and L. S. Olson. *Summer learning and home environment*. In R. D. Kahlenberg (Ed.), *A Notion At Risk: Preserving Public Education as an Engine for Social Mobility* (pp. 9-30). New York: The Century Foundation Press, 2000.
- ³ David T. Burkam, Douglas D. Ready, Valerie E. Lee, and Laura F. LoGerfo, *Social-Class Differences in Summer Learning Between Kindergarten and First Grade: Model Specification and Estimation*, *Sociology of Education* 77, 2004.
- ⁴ V. E. Lee and D. T. Burkam. *Inequality at the starting gate: Social background differences in achievement as children begin school*. Washington, DC: Economic Policy Institute, 2002.
- ⁵ Augustine et al., *Learning from Summer*.
- ⁶ In the North Carolina End of Grade test interval scale, children enjoy a 0.45 point gain per month from grade 3 to grade 4. This computation is based on the gain from grade three to grade four (5.38 points) divided by 12 months. Overall, the intent-to-treat impact of READS on the reading test scores was 0.42, or a gain of about one month (0.42/0.45).
- ⁷ James S. Kim, Jonathan Guryan, Thomas G. White, David M. Quinn, Lauren Capotosto and Helen Chen Kingston, *Delayed Effects of a Low-Cost and Large-Scale Summer Reading Intervention on Elementary School Children's Reading Comprehension*, *Journal of Research on Educational Effectiveness*, 2016.
- ⁸ James S. Kim and David M. Quinn, *The Effects of Summer Reading on Low-income Children's Literacy Achievement from Kindergarten to Grade 8: A Meta-analysis of Classroom and Home Interventions*, *Review of Educational Research*, 2013.
- ⁹ Kim, Guryan et al., Table 5.
- ¹⁰ Augustine et al., 33.
- ¹¹ Kim, Guryan et al., Table 5.
- ¹² James S. Kim, *The Effects of a Voluntary Summer Reading Intervention on Reading Achievement: Results from a Randomized Field Trial*, *Educational Evaluation and Policy Analysis*, 2006.
- ¹³ James S. Kim and Thomas G. White, *Scaffolding Voluntary Summer Reading for Children in Grades 3 to 5: An Experimental Study*, *Scientific Studies of Reading*, 2008.
- ¹⁴ Kim, Guryan et al.
- ¹⁵ Jonathan Guryan, James S. Kim and Kyung Park, *Motivation and Incentives in Education: Evidence from a Summer Reading Experiment*, *Economics of Education Review*, 2016.
- ¹⁶ James S. Kim, Mary A. Burkhauser, David M. Quinn, Jonathan Guryan, Helen C. Kingston, Kirsten Aleman, *Effectiveness of Structured Teacher Adaptations to an Evidence-Based Summer Literacy Program*, *Reading Research Quarterly* 52, 2017.
- ¹⁷ *Ibid.*, p. 27.



Further reading about summer learning

The Wallace Foundation has published a range of reports and other resources about summer learning, all available free of charge at www.wallacefoundation.org. They include:

[Learning from Summer: Effects of Voluntary Summer Learning Programs on Low-Income Urban Youth \(2016, RAND Corporation\)](#)

The largest-ever study of summer learning finds that students who consistently attended free, five- to six-week, voluntary summer learning programs run by school districts and their partners experienced educationally meaningful benefits in math and reading.

[Getting to Work on Summer Learning: Recommended Practices for Success \(2013, RAND Corporation\)](#)

Recommendations for school districts interested in running effective summer learning programs include early planning and sticking to firm enrollment deadlines.

[Making Summer Last: Integrating Summer Programming into Core District Priorities and Operations \(2017, RAND Corporation\)](#)

Introducing a high-quality summer learning program in a school district requires effort. So does ensuring that the program can last beyond a handful of summers. This report offers ideas on how to achieve that goal.

[The Summer Learning Recruitment Guide \(2018, Crosby Marketing Communications\)](#)

A website and written guide offer eight keys to success for school districts that want to recruit students for voluntary summer learning programs.



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