Solving summer slide

Strategies and suggestions

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KEY POINTS

- There is a summer learning loss in New Zealand and this includes both low and high socioeconomic groups.
- Giving students books to read over the summer holidays can reduce learning loss, particularly for poor readers.
- Even students who were given maths books improved in reading.
- Improved results were obtained over the course of this study, probably owing to a combination of refining procedures for home-liaison visitors, and introducing strategies for parents and family members to assist their children.
- Improved results could be achieved by starting summer reading programmes at a younger age and extending them for several years.
- Costs for schools could be reduced if such strategies can be combined with Ministry of Education and other education programmes.

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Summer learning loss suggests that that students' learning achievement drops over the summer holidays when they are not at school, especially those from low socioeconomic backgrounds. The purpose of the studies reported was to investigate the effect summer learning loss has on student achievement in the New Zealand context and to determine whether encouraging Year 3 students from both low- and high-decile schools to read self-selected books over the summer helped stem the summer slide. Results indicated a positive effect of the summer books programme on STAR Reading, and the "poor" reading group made the most gains in sentence and paragraph comprehension. Strategies and suggestions to counter summer slide are outlined.

The existence of an achievement gap between high- and low- performing students is neither unique nor new to New Zealand. Such differences have been documented since the 1930s and, despite decades of reforms and initiatives, these disparities persist (Chamberlain & Caygill, 2012). By international standards New Zealand students on average perform well in reading and literacy at both primary and secondary level. However, there are differences across ethnic and socioeconomic groups as well as a relatively large gap between the highest and lowest achievers (Ministry of Education, 2013).

A growing body of international research into achievement gaps has focused on summer learning loss and the different impact this has on students from low and high socioeconomic backgrounds. Some argue that even small differences in summer learning amass over the years, and by the end of elementary school the achievement gap is substantially larger than at the beginning (Kim & White, 2011). Further, a number of international studies suggest that the cumulative summer learning effect is the primary cause of the widening achievement gap between students from high and low socioeconomic levels (McCombs et. al., 2011; Ready, 2010; Allington et. al., 2010; Terzian, Moore, & Hamilton, 2009; Alexander, Entwisle & Olson, 2007). While such research has identified the summer learning effect as the primary cause of the widening achievement gap, this has not yet been confirmed in the New Zealand context. In the United States, for example, various strategies have been implemented to try to counter the summer learning effect, including summer schools, reading programmes offered by public libraries, and reading books at home. One point of difference between the United States and New Zealand is the length of the summer holidays—2 to 3 months compared with about 6 weeks. Perhaps it is the longer summer break in the United States that exacerbates the summer learning effect.

Although summer learning loss and differential growth in learning when school is closed is well documented in international studies, little is known about this effect on student achievement in New Zealand. One recent study conducted in seven decile 1 South Auckland schools examined the extent and variability of summer learning loss and the associated school, family, and student practices (McNaughton, Jesson, Kolose, & Kercher, 2012). Findings confirmed that summer learning loss is a significant barrier to ongoing achievement and, without specific interventions, gains made during the school year in decile 1 schools may be lost. Lower summer learning effect was associated with specific preparation by teachers for students and guidance for their parents. McNaughton et al. concluded that an effective intervention is needed which includes three components: teacher preparation; parent guidance; and student review.

To date, no New Zealand studies have examined the effects of a voluntary summer reading programme as a means of reducing summer learning loss in reading. The following four studies address this gap in knowledge.

Phase 1: Summer 2010–2011

In 2010, a pilot study was conducted in one decile 1 school located in South Auckland. The purpose of the pilot was to investigate whether giving students from low-income backgrounds 15 self-selected books over the summer holidays would reduce the summer

loss in reading achievement. The hypothesis for this study was that providing students with appropriate level books which they want to read would result in additional practice in reading over summer, and therefore the skills acquired during the school year would be maintained.

The total sample size was 81 Year 2 and 3 students. The ethnicity breakdown of the sample was New Zealand Māori (33%), Samoan (28.5%), Tongan (20%), and Cook Island Māori (18.5%). Students were randomly assigned to one of three groups: a books only group; a maths control group; and a dot-to-dot control group. The school nominated a liaison person who periodically visited the students' homes during the holidays to deliver the books and discuss progress.

Measures used to assess reading, maths, and motivation to read included: PROBE: Prose, Reading Observation, Behavior and Evaluation (Parkin, Parkin & Poole, 2002); Neale Analysis of Reading Ability (1999); Wide Range Assessment Test (WRAT) Maths (Wilkinson and Robinson, 2006), and Reading Attitude Inventory (Nicholson, 2005). Assessments were conducted towards the end of the 2010 school year and again as near as possible to the beginning of the 2011 school year.

A comparison of PROBE scores for the total group of students ($N = 70$) before and after the summer holiday showed the effects of the intervention. Results indicated a significant gain in reading for all groups over the break; however, no one group did better than another, and all groups showed similar improvements, including the dot-to-dot control group. In addition, results for the Neale Analysis of Reading Ability accuracy and comprehension scores also revealed a significant gain in reading for all groups over the summer. Once again, no one group outperformed another.

Analysis of WRAT Maths scores indicated that there was no significant change from pretest to post-test for students in the maths group. Further, none of the groups made gains in maths achievement over the summer, and there were no significant differences between groups.

Examining survey data revealed that there were no significant changes in self-concept for the groups over the summer break and no significant differences between the groups. These results showed that students maintained their prior levels of self-concept as a reader throughout the summer books programme.

To determine the effect of the summer break on reading ability students' reading ability was categorised into four distinct groups: specifically, *well above*, *above*, *below*, or *well below* in reading. Students who were considered *well above* had a PROBE reading age one year or more above their chronological age, while students whose reading age was up to one year ahead of their chronological age were categorised as *above*. Students who were *below* had a reading age up to one year below their chronological age and students whose reading age was more than one year below their chronological age were categorised as *well below*. Results for PROBE revealed that there was a significant positive change in reading ages for the groups over summer; however, there were no significant differences between the groups.

Overall, results from the trial intervention indicated that on average all groups made gains over summer on the PROBE Reading and Neale Analysis of Reading Ability accuracy and comprehension measures. While all groups gained, there were no significant differences between the groups on any of these measures. Similarly, there were no significant changes between the groups in self-concept as a reader. Analysis of WRAT Math results indicated that there was no significant change in scores over summer, and the time by group interaction was not significant. All groups, including the control group, made similar progress over summer, so there was no evidence of a summer slide. All three groups improved in reading ability, which seemed to indicate the summer books programme had no effect.

These findings were at odds with some of the overseas research. For example, Allington et al. (2010) reported findings from their study in which students received 15 free books every summer for 3 consecutive years. The results at the end of the 3 years showed that the treatment group scored significantly higher on state reading tests than the control group.

Phase 2: Summer 2011–2012

To improve on the pilot study, a number of modifications were made. In the pilot study, all three groups gained in reading, and there was no summer loss. This may have been the result of a placebo effect, given that all groups received some intervention. In response to this, four groups were incorporated into the main study, including a control group that received nothing until after the post-testing had been completed. The adoption of a control group as part of the experimental design helped account for placebo effects. The sample size was increased in the main study to include 10 schools and 583 students. A larger sample allowed for greater statistical power. A further change was the inclusion of three decile 10 schools. International studies suggest that students from high-income backgrounds show gains in reading achievement during the summer (Entwisle & Alexander, 1992), while students from low-income homes tend to lose ground. Of particular interest in this study was identifying whether a similar pattern in achievement over the summer holidays occurs in the New Zealand context.

This phase was designed to investigate four main areas of interest. First, would students who received books matched to their reading levels and interests make greater gains in reading achievement than students who received maths workbooks, or students who did not receive any books? Next, would students who received reading books and vocabulary quizzes (see Figure 1) make greater gains in reading comprehension than the students who only received the reading books? Third, would students in high- and low-decile schools who received reading books make similar gains in reading achievement? Finally, would poor readers who received reading books make greater gains in reading achievement than good readers who received reading books?

VOCABULARY QUIZ

Fagan's Friends
By Damian Morgan (Box 28)

Here are some words from the story. After you have read the story see if you can pick the best meaning for each word. In Question 1, the best answer is "raised area in a station where you stand to get on or off a train".

1. Page 2 – "Casey examined the people on the **platform** but couldn't see his uncle."

   Platform means _____

   a railway cafeteria
   a railway carriage
   a raised area in a station where you stand to get on or off a train

2. Page 6 – "She pointed around the **concourse**."

   Concourse means _____

   a place where people gather to talk
   a large open space in a railway station (or other building)
   a road

3. Page 12 – "Don had agreed but Casey now **wondered** why."

   Wondered means _____

   to be curious and think about why something happens
   to walk across parks or hills
   something that cannot be understood

4. Page 12 – "The rest of the room was **cluttered** with broken furniture from the restaurant…."

   Cluttered means _____

   very full but neatly arranged
   has a nice colour scheme
   crowded and untidy

5. Page 22 – "You should visit the **maritime** museum."

   Maritime means _____

   army and military
   connected to the sea
   old or ancient

FIGURE 1. A VOCABULARY QUIZ

The sample consisted of 583 Year 3 students from ten schools, seven of them low socioeconomic status (SES) and three of them high SES in South and East Auckland. Within this sample, a wide range of ethnic groups was represented. The largest groups were New Zealand European (24.2 percent), Samoan (18.7 percent), New Zealand Māori (18.4 percent), Tongan (12 percent), Cook Island Māori (11.5 percent), Asian (6.2 percent), Indian (5.3 percent), and Niuean (1.7 percent). Students were randomly assigned to one of the groups over the summer break: Group 1, a books group; Group 2, a books plus quizzes group; Group 3, a treatment control group that received maths books; and Group 4, a no-treatment control group that received books only after the study was completed. Towards the end of Term 3, 2011, students in Groups 1, 2, and 4 selected 25 books that they wanted to read. The books were a mixture of fiction and non-fiction, 15 at the students' instructional levels and 10 at the next level up. Students in Group 3, the maths control group, each received two maths workbooks which corresponded to the GloSS stages they were working on in class. In addition, each school nominated a home visitor who visited the homes of students in Groups 1, 2 and 3, three or four times over the summer holiday to deliver the reading books, vocabulary quizzes (Group 2 only), maths workbooks (Group 3 only), discuss progress with students and parents or caregivers, and check on reading and maths logs. Parent meetings were held in each school in Term 4 2011 to inform parents of the programme and to get their consent to participate.

All groups were pre- and post-tested using a range of reading measures, including STAR (Elley, 2003); Reading Attitude Inventory (Nicholson, 2005); and a home literacy measure (Nicholson, 2005). The STAR reading test was selected as it is a standardised assessment tool developed in New Zealand and designed to be used with students from Year 3 to Year 9. STAR is widely used in New Zealand schools. It assesses the skills of word recognition, vocabulary knowledge, sentence comprehension, and paragraph comprehension. While it could be argued that sentence and paragraph close questions, like those used in STAR, do not fully represent a student's comprehension level, the absence of an alternative New Zealand-developed standardised reading assessment for Year 3 students limited the available options. In addition, STAR is commonly used in schools and therefore assessor effects by the assessors in the study were avoided. At the completion of post-testing, the analysis of data compared the reading progress of Groups 1 and 2, and Groups 3 and 4 over summer. A further analysis compared the reading progress of below-average and not-below-average readers. A comparison was also made between the reading progress of high- and low-SES schools. Data from reading

TABLE 1. MEAN RAW STAR SCORES ACROSS ALL GROUPS, PHASES 2–4

	Phase 2			Phase 3			Phase 4	
Group (4 groups)	**Dec. 11**	**Feb. 12**	**Group (3 groups)**	**Dec. 12**	**Feb. 13**	**Group (4 groups)**	**Dec. 13**	**Feb. 14**
Book	30.40	25.53	**Book**	27.84	28.46	**Book**	23.53	25.34
Book & Vocab Quizzes	30.80	25.17	**Book & Prompt**	27.89	29.51	**Book & Parent Support**	23.66	25.81
Maths	30.85	25.52	**Maths**	27.35	28.09	**Maths**	22.67	24.86
Control (received books after summer)	30.62	24.27				**Maths & Parent Support**	22.87	23.88
N =	472	472	***N =***	384	384	***N =***	456	456

TABLE 2. MEAN RAW STAR SCORES ACROSS ABILITY LEVELS, PHASE 2

	Phase 2		
Group	***N =***	**Dec. 11**	**Feb. 12**
Book "at risk"	46	18.45	18.62
Book "not at risk"	72	38.04	29.94
Book & Quizzes "at risk"	50	19.24	18.39
Book & Quizzes "not at risk"	70	39.05	30.01
Maths "at risk"	43	18.46	18.48
Maths "not at risk"	75	37.96	29.56
Control "at risk"	46	19.73	15.58
Control "not at risk"	70	37.78	29.98

"at risk" = stanines 1–4
"not at risk" = stanines 5–9

logs and parts of the family reading practices survey were also analysed.

A comparison of STAR scores for the total group of students in the study before and after the summer holiday showed the extent of the summer slide (see Tables 1 & 2).

Overall the data revealed there was a summer slide of approximately one stanine and that the intervention had a positive effect on STAR sentence comprehension scores. A stanine is a method of scaling test scores on a nine-point standard scale with a mean of five. Stanines divide the distribution of results for a year group into nine categories. Most students, when compared with their own year level, achieve between stanines 4 to 6. Stanines 7, 8, and 9 represent comparatively high achievement for a year group, while stanines 1, 2, and 3 represent comparatively low achievement. Students from high-decile schools dropped more over summer than students from low-decile schools. High-decile good readers dropped more in comprehension and vocabulary, but low-decile good readers dropped more in word reading. Poor readers as a group dropped over summer, but not as much as good readers as a group. There was a significant slide for poor readers in word reading and vocabulary; however, there was no significant slide in sentence comprehension or paragraph comprehension. These results support the possibility that the summer intervention had positive effects for the *poor reader* group.

Analysis of the home literacy measures showed large differences in home literacy resources between high- and low-SES families, such as number of books, and access to the computer and to libraries. Responses indicated a very large difference in the number of books in the homes of *poor* and *good readers*. Numbers ranged from zero to 1,000, with an average of 61.61 books. An examination of *good* and *poor readers* showed that the mean for *poor readers* was 27.23 (n = 65) and for *good readers* was 79.00 (n = 133). This was a significant difference. A large 24 percent of the total number of respondents commented that they never visit the library with their child. A substantial 36 percent of low-decile families never visit the library compared with 5 percent of high-decile families. Similarly, 35 percent of low-decile students do not use or do not have access to a home computer, compared with just 2 percent of high-decile students.

Phase 3: Summer 2012–2013

In the third phase of the study, further modifications were made, and the vocabulary quizzes from Phase 2 were replaced with comprehension prompt cards. This change was made because including vocabulary quizzes had not resulted in gains in comprehension. Prompt cards, consisting of simple generic questions for parents or other family members to ask students about the books, were developed as a tool to provide parents with specific strategies to support their child's reading.

Year 3 students from seven of the Phase 2 schools (five decile 1 and two decile 10) participated. In total 454 students were involved. Of the total sample, 49.1% were Pasifika, 22.2% were New Zealand Māori, and 13.4% were New Zealand European. Students were randomly assigned to one of three treatment groups: Group 1, a books group; Group 2, a books and prompts group; and Group 3, a maths group. Students in Groups 1 and 2 received 25 self-selected books at their instructional levels, and those in Group 3 received two maths workbooks. There was no control group.

STAR Reading Assessment (Elley, Ferral, & Watson, 2011), and PAT Maths (Darr, Neill, Stephanou, & Ferral, 2007) were used to assess students' reading and maths before and after the summer holidays. Students in the book groups 1 and 2 also completed reading logs after reading each book, and parents and students filled out home-literacy surveys.

The results indicated that all three groups made small non-significant gains in reading. Similarly, the three groups made small gains in maths. No significant differences were found between the treatment groups. Group 2, books and prompts, did gain more than Group 1, books only, but this was not a significant difference. Statistically significant differences were detected between the "well below" (stanines 1 and 2) and "above" (stanines 7, 8, and 9) groups as well as between the "at" (stanines 5 and 6) and "above" groups (see Tables 1 & 3).

Overall, findings from Phase 3 indicated that students made gains in reading achievement over the summer holidays regardless of which treatment group they were in.

Phase 4: Summer 2013–2014

In a further refinement of the study, the fourth phase examined whether providing parent/family support to both reading and maths groups added to the effectiveness of the summer programme. In addition, the number of reading books given to students who were reading at high levels at pretest was reduced. These students received 15 books, as the books at these levels tended to be lengthier, more complex chapter books. Students at the lower levels continued to receive a greater number of books.

A total of 569 Year 3 students from nine decile 1 and 2 schools in South Auckland participated in this phase. Students were randomly assigned to one of four groups: (1) Books; (2) Books and Parent Support; (3) Maths; (4) Maths and Parent Support. Prompt cards were provided to Groups 1 and 2 (see Figures 2 and 3). In addition, parents/caregivers of Group 2 students, Books and Parent Support, received more in-depth discussion with the school representative during the three book deliveries over the summer holidays. This provided an opportunity for specific guidance and targeted instruction on how parents can best help their children with their reading. Similarly, parents/caregivers of Group 4 students, Maths and Parent Support, received extra discussion time focusing on how best to support their child's maths skills and knowledge.

Once again, STAR Reading Assessment (Elley et al., 2011) and PAT Maths (Darr et al., 2007) were the assessment measures used. In addition, reading and maths logs were given to students to complete, and parents and students completed a home-literacy survey.

A. Questions to ask before reading the story…

- Talk about the book; look at the pictures, the cover and the title
- Ask: What do you think this might be about?
- Go through the book together and talk about the pictures/words/ideas
- Talk about any similar experiences you and your child have had

B. Questions to ask after reading the story…

- How did the story end? Can you think of another ending?
- Did you find any unusual words? Let's look at them together.
- What is the problem in the story? How does it get solved?
- Can you tell me in your own words what the story is about?

FIGURE 2. QUESTIONS TO ASK BEFORE AND AFTER READING A STORY

A. Question ideas for factual books (before reading)… A

- What do you already know about…?
- What do you think we might find out about … in the book?
- Go through the book together before reading it and then talk about the pictures/charts. Talk about any new words and what they mean.

B. Question ideas for factual books (after reading) …

- What is something new you have found out about …?
- What is the most interesting fact you have found out?
- What is the strangest fact you have learned?
- What else would you like to find out about …? How could we find out more?

FIGURE 3. QUESTIONS TO ASK BEFORE AND AFTER READING A FACTUAL BOOK

TABLE 3. MEAN RAW STAR SCORES ACROSS ABILITY LEVELS (PHASES 3 AND 4)

	Phase 3			Phase 4		
Ability Level	***n* =**	**Dec. 12**	**Feb. 13**	***n* =**	**Dec. 13**	**Feb. 14**
Well below (stanines 1 & 2)	66	11.14	13.80	161	12.18	15.81
Below (stanines 3 & 4)	143	24.20	25.59	182	24.46	25.93
Average (stanines 5 & 6)	119	34.74	35.50	99	34.77	35.96
Above (stanines 7, 8 & 9)	56	41.36	40.07	14	41.00	40.07
***N* =**	384			456		

Results revealed all groups made similar non-significant gains in reading and maths. While no significant differences were detected between the four groups, they were evident between ability groups. As in earlier phases, the "well below" group made significant gains in reading and maths compared with the other ability groups (see Tables 1 & 3).

While providing extra support for parents of Groups 2 and 4 students did not result in significant gains, school representatives reported that this support was an important component of the programme, especially for struggling readers. Further, it could be argued that although parents of students in Groups 2 and 4 received extra support, the visits of school representatives to the homes of students in Groups 1 and 3 to deliver the books also served as support by reminding parents of the need to work with their child over the holidays. Some school representatives commented that when parents asked questions during their visits, they answered them regardless of which group the students were in. It could be that the variation in home-visitor procedures has influenced the effects of parent support versus no parent support.

Results summary

Some results have regularly occurred over the 4 years of the study. First, in Phases 1, 3, and 4 all treatment groups gained in reading over the summer. Interestingly, even the maths groups improved in reading achievement, and there were no significant differences between the books and maths groups. In addition, in Phases 2, 3, and 4 results indicated that the intervention had a positive effect for the "well below" and "poor readers".

Implications

It is important to find ways to maintain student achievement over the summer holidays, especially for students from low socioeconomic backgrounds. Failure to do so may contribute to the widening achievement gap between students from low and high socioeconomic backgrounds (Terzian, Moore, & Hamilton, 2009; Kim & White, 2011). To do this, schools need to be creative in developing ways to provide students with access to resources as well as support for students and their families to engage effectively with these over the holidays. The example given in this article of a voluntary summer reading programme has been effective particularly for students in the "low-ability" reading group.

Funding free books and home-liaison visitors for every low-ability reader over the summer holiday may not be a viable option for schools. Other ideas that could help facilitate implementing a summer books programme include having school libraries open regularly throughout the holidays, schools linking up with local libraries, operating a mobile library targeting the low-ability readers, or redistributing some of the Duffy Books (low-decile schools only). Currently Duffy Books are distributed to students during the school year when they have ready access to resources. An alternative could be to allocate the books at the end of the school year. While responses to the Home Literacy Survey did indicate that over one-third of students from low-decile schools never visit a library with their family, what is not clear is the reason why they do not. It is possible that the distance from home and transport to and from the library are issues that prohibit these families from visiting them. In this case, having the school libraries open over the summer would address this issue as most children attend their neighbourhood primary school.

Data from McNaughton et al. (2012) showed that parents of students with a high summer learning loss indicated that access to books was a major factor in their child's summer reading habits. Further, data indicated that students in classes with low summer learning loss had been given ideas about reading over the summer by their teachers before the end of the school year, and all reported that someone at home helped them read. From these results, it appears that to reduce summer learning loss schools need to provide access to high-interest appropriately leveled texts over summer, include revision of comprehension strategies before the end of the school year, and provide parents with ideas on how to support their child's reading over summer. Although the study outlined in this article provided access to books, it did not include a teaching component at the end of the school year. This might be a possibility for a future replication of the study.

Building on from McNaughton et al.'s (2012) findings as well as those from family literacy research (Lonigan & Whitehurst, 1998; Nye, Turner, & Schwartz, 2006; Sénéchal & Young, 2008) it is evident that parents play a key role in supporting their child's learning, including over the summer holiday. It is important that parents be informed about the importance of maintaining reading over the holidays. They need to be encouraged to support their child's reading through stimulating parent–child interactions and modeling sound comprehension and fluency strategies. Schools need to work alongside parents to ensure they have the skills and confidence to achieve this.

Incorporating the key findings from this research into existing school–home support initiatives is one way to address this issue. Programmes and initiatives such as Mutukaroa; Pause, Prompt, Praise (PPP); Hei Awhiawhi Tamariki ki te Panui Pukapuka (HPP); and Reading Together are all evidence-based, focus on the

active engagement of parents/families in their child's learning, and provide specific and constructive ways to help support learning. The Mutukaroa initiative, for example, currently involves 110 schools throughout New Zealand with that number possibly increasing during 2015. If, during discussions with parents/whānau, the learning support advisor at each of these schools stressed the importance of maintaining reading over the summer holidays as well as providing the tools and knowledge to support their child's learning during this time, it is likely that the impact of summer learning loss on student achievement would be substantially reduced. Ideally they would make some visits to the homes over the holiday period to provide support and encouragement to families.

Conclusion

The conclusion, based on the findings from all four phases of this study, is that summer learning loss is a reality for New Zealand students. It impacts on student achievement. As this study has illustrated, providing books at the appropriate reading and interest levels over the summer is particularly beneficial for struggling readers. To achieve the government's vision where all students "achieve to a high standard" schools need to be responsive to the needs of their students and identify and remove barriers to learning (Ministry of Education, 2012). One barrier to achievement is summer learning loss. Schools need to consider the impact this has on their students and work collaboratively with parents and students to develop and implement strategies to help counter its effects. Implementing a voluntary summer reading programme for at-risk readers is one intervention schools could put in place to maintain or increase their reading levels over the summer.

Further research

One limitation to the present study is that it did not follow the same cohort of students across the 4 years. The Allington et al. (2010) study gave 15 books to the students each summer, over 3 consecutive years. At the end of the third summer, the results indicated that the treatment group was significantly higher in reading as measured by state reading tests than the control group. The results were particularly significant for students from the lowest socioeconomic level. Kim and White (2011) suggested that, as summer learning loss is cumulative and occurs across the elementary school years, a multiyear intervention is ideal. Future replications of the present study may consider extending the intervention across several summers.

A second limitation is the variation between home-visitor procedures, with some home visitors answering parents' questions regardless of the student's group. Given the Phase 4 results, which showed no significant differences between the "support" and "no support" groups, it seems essential that any future replication addresses this issue. One possibility could be having books for the "no support" group dropped off in the letterbox or collected from school, and only the "support" group receiving home visits.

An additional limitation may be the age of the participants. The studies in this article were largely Year 3 students. In the first year of the Allington et al. (2010) study the participants were in Grades 1 and 2 (6 and 7 years old). In contrast, participants in Kim and Guryan's (2010) study were in Grade 4 (9 years old). Allington et al. suggested the positive results from their study could have occurred because the participants were younger; they selected their own books and received them for 3 years. Downey, von Hippel, and Broh (2004) argued that the achievement gap between high- and low-SES students is apparent at school entry, and as cognitive growth occurs more rapidly among young children, the learning differences associated with family background increase during the early elementary years. Given the critical importance of the early years at school to master the foundations of literacy (Ministry of Education, 2012) and the cumulative effect of summer learning loss, it seems reasonable to argue that the earlier measures are implemented to address summer learning loss, the sooner the achievement gap can be closed. This could be an area for future investigation.

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