Teacher and Parent Scaffolding of Voluntary Summer Reading

Thomas G. White, James S. Kim

Voluntary reading of books over the summer can enhance the reading achievement of ethnic minority students and reduce skill loss over the summer break if the books closely match students’ reading levels and interests.

We recently designed and implemented a voluntary summer reading program for third-, fourth-, and fifth-grade students that provided interesting books and encouraged oral and silent reading over the summer. One parent of a girl participating in the program said, “She does not read as often as I’d like her to. Your program has changed that. She enjoys receiving the books in the mail.” This comment suggests that the program was successful in engaging this girl with text over the summer. Engagement with text is the necessary first step if we want to improve reading skills when school is not in session, or prevent a decline in reading achievement that might otherwise occur.

Voluntary reading typically means that students are given an opportunity to self-select texts and read silently on their own, often with little or no feedback provided. Most teachers in the United States believe that voluntary reading promotes reading skills including word recognition, fluency, and comprehension. Further, teachers regard wide reading as a major avenue to increased vocabulary, conceptual understanding, and world knowledge. These often deeply held beliefs do not mesh, however, with the report of the National Reading Panel (NRP; National Institute of Child Health and Human Development, 2000). The NRP concluded that there is little evidence from research that “encouraging reading has a beneficial effect on reading achievement” (p. 3-28).

The NRP based its conclusion regarding the effectiveness of voluntary reading on a review of 14 experimental and quasi-experimental studies. The conclusion generated heated controversy among literacy scholars that focused on research methods. For example, Cunningham (2001) criticized the NRP for excluding correlational studies. Shanahan (2004) pointed out that correlational studies showing a positive relationship between independent reading and reading achievement can be interpreted as showing that better readers read more. He defended the NRP, arguing that experimental studies are needed if we want to assert with confidence that independent reading will result in improved reading achievement.

What got lost in the debate about scientific evidence was the fact that the NRP assumed an agnostic position on the merits of voluntary reading, neither accepting nor rejecting it. The panel members suggested that the dearth of experimental evidence “does not mean that procedures that encourage students to read more could not be made to work—future studies should explore this possibility” (p. 3-28). Thus, the NRP left open the possibility that voluntary reading could be made more effective and encouraged researchers to pursue the question of how.

We have been pursuing the question of how to enhance the effects of voluntary reading for several years. In the process we developed what we call a “scaffolded” voluntary summer reading program and conducted two experiments to test its effectiveness. This article explains the motivation and rationale for the program, describes the experiments and the program, reports findings, and discusses conclusions about and practical implications of the findings.
Motivation and Rationale for the Program

Research has shown that low-income, minority, and less skilled readers fall behind their high-income, white, and more skilled peers during the summer months when they are not in school (Alexander, Entwisle, & Olson, 2001; Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Heyns, 1978; Phillips & Chin, 2004). This phenomenon, well known to educators, is referred to as summer loss.

Summer Loss and Voluntary Summer Reading

Given the reality of summer loss, we thought it was especially important to find a way to enhance the effectiveness of voluntary reading during the summer months. As Heyns (1978) suggested, summer loss might be reduced by providing low-income and minority students with better access to books and more opportunities to read and practice their skills during the summer. Currently many schools and school districts have summer reading programs, and there are some large programs supported by public funds. As far as we know, however, there are no studies showing that such programs produce achievement gains or ameliorate summer loss.

Matching Books to Readers

Students may choose books to read that are too easy or too difficult for them, so it is important for any voluntary reading intervention to provide guidance in the selection of text (Carver & Liebert, 1995). Controlling the difficulty of text improves both oral reading fluency and reading comprehension (Shany & Biemiller, 1995). Of course, text difficulty is only one factor to consider. Students should have an opportunity to read books that tap into their personal interests because this enhances their motivation to read independently (Guthrie & Humenick, 2004). Providing high-interest and appropriately challenging books that match students’ reading levels and reading preferences is essential for encouraging voluntary reading outside school (Morrow, 2002).

Teacher and Parent Scaffolding of Voluntary Summer Reading

In designing our summer reading program, we did not stop with book matching because, like Byrnes (2000), Carver and Liebert (1995), and others, we believed that simply providing students with well-matched books would not be sufficient to improve reading achievement. Our assumption was that especially for students at risk for summer reading loss, it may be necessary to put in place supportive mechanisms to ensure that students read the books and read in ways that are likely to build decoding skills, fluency, and comprehension. We further assumed that these supportive mechanisms should include evidence-based instructional strategies that teachers use during the school year, such as guided oral reading for fluency practice and comprehension strategies instruction. However, the program needed to be inexpensive and easy to implement and not so much like “school work” that it might undermine students’ motivation to read for pleasure.

To provide support or scaffolding for students’ summer reading, we asked teachers to implement several lessons at the end of the school year. In these lessons the teachers taught students to use comprehension strategies that they could apply at home during the summer when they were reading silently and independently, provided oral reading fluency practice, encouraged students to read aloud to their parents over the summer, and showed them a simple procedure for doing so. We also asked parents to listen as their sons or daughters told them about a book they had read during the summer, listen as a short passage from the book was read out loud, and provide feedback on the degree to which it was read smoothly and with expression.

We regarded the end-of-year lessons by teachers as a form of scaffolding because they involved modeling and explicit teaching of comprehension strategies and fluency, guided practice, and independent application (see, e.g., Clark & Graves, 2005; Kuhn et al., 2006). Scaffolding may also include efforts to support students’ motivation to read, as the parents in our studies did, by listening to the oral reading and explanation of a book (e.g., Lutz, Guthrie, & Davis, 2006). Note that some authors (e.g., Cole, 2006; Rodgers, 2004/2005) have described teacher scaffolding that is more flexible and adaptable and involves more gradual release of responsibility than the scaffolding that we could build into a three-day sequence of lessons.
The Experiments and the Program

In the first of our two experiments (Kim, 2006), fourth-grade students received lessons from their teacher at the end of the school year. In these lessons, the teacher modeled fluent oral reading and comprehension strategies for silent reading. Students practiced fluent oral reading in a paired reading format and practiced using five reading comprehension strategies while reading silently on their own. In the summer, the treatment group received matched books and parent scaffolding that consisted of listening as the student talked about a book, listening as a 100-word passage from the book was read aloud and then reread, providing general feedback, and signing a postcard to be mailed to the researchers with an optional comment about the summer reading experience. The control group received no books and no parent scaffolding in the summer, but did receive books in the fall after posttesting to satisfy ethical requirements.

Positive effects on reading achievement were observed in the Kim (2006) experiment, but considering the controversy over the benefits of voluntary reading, we believed that replication with a different sample of schools and additional grade levels was important. In addition, it is possible that the same results would have been obtained if the students simply received the matched books without any support from their teachers or parents, or if the students received only oral reading practice without comprehension strategies instruction. Therefore, we conducted a second experiment (Kim & White, 2008) with four groups of students in grades 3 through 5:

1. matched books only (Books Only)
2. matched books and oral reading (Books With Oral Reading Scaffolding)
3. matched books, oral reading, and comprehension strategies instruction (Books With Oral Reading and Comprehension Scaffolding)
4. control group receiving books in the fall after posttesting and no teacher or parent scaffolding (Control)

Participants

Both experiments were conducted in a large suburban school district in the Mid-Atlantic region of the United States. In the first experiment the participants were 34 teachers and 486 students who were completing grade 4 in one of 10 elementary schools. Non-white ethnic minorities (Black, Hispanic, Asian, and other) were predominant (67%), and 39% of the students were receiving free- or reduced-price lunch. In the second experiment, the participants were 24 teachers and 400 students who were completing grade 3, grade 4, or grade 5 in one of two elementary schools. The students’ characteristics were similar: 69% non-white and 38% receiving free- or reduced-price meals. Students with special education needs who could not be tested under standard conditions were excluded from the experiments. About 8% of the tested students were classified as learning disabled.

Prior research informed our decision to target the intervention to students in grades 3 through 5. Most voluntary reading interventions have focused on students who are old enough to have mastered basic decoding skills and are capable of improving their reading through reading (Byrnes, 2000; Clay, 2001; Share, 1999). For example, 12 of the 14 studies on voluntary reading reviewed by the NRP involved students in grade 3 or higher.

Treatment and Control Groups

In the first experiment, all students including those in the control group received the three end-of-year lessons. (We assumed—and this assumption was later borne out by the results of the experiments—that there would be minimal lesson effects for students in the control group because they got no books in the summer and thus no opportunity to practice what they were taught in the lessons.) Within each of the participating teachers’ classes, students were randomly assigned to either the treatment group or the control group. Students in the treatment group received matched books and parent scaffolding of oral reading in the summer. Students in the control group received books in the fall after the posttests were administered and no parent scaffolding. In the second experiment, both teachers and students were randomly assigned to one of the four groups—Books Only, Books With Oral Reading Scaffolding, Books With Oral Reading and Comprehension Scaffolding, and Control. Students in the Control group received no end-of-year lessons from their teacher, no books in the summer, and no parent scaffolding.
**Measures**

**Reading Surveys.** To determine the reading preferences we used to match books with students, teachers administered a survey that asked students how much they enjoyed reading books from one of 25 categories. The categories were initially developed from the Adventuring with Books list for pre-K to grade 6 students published by the National Council of Teachers of English (McClure & Kristo, 2002), validated using other published surveys of students’ reading preferences (Galda, Ash, & Cullinan, 2000; Ivey & Broaddus, 2001; Monson & Sebesta, 1991; Summers & Lukasevich, 1983), and reviewed and refined by four elementary teachers. To find out whether the intervention increased reading activity at home or access to books at home during the summer, teachers administered a survey in September. The survey included items that asked students to rate how often they had engaged in each of five reading activities and how many books there were in their homes.

**Tests of Reading Achievement and Oral Reading Fluency.** To measure growth in the students’ reading achievement over the summer, teachers administered the appropriate level of the Vocabulary and Reading Comprehension tests from the Iowa Tests of Basic Skills (ITBS; 2003) in the second week of June and the second week of September. Different forms of the test were used in June and September. The Vocabulary and Reading Comprehension test scores were combined to get a Total Reading score that was used in analyzing gains from pretest to posttest. The ITBS is highly reliable (KR-20 coefficients above 0.93 and equivalent form estimates of 0.86 or higher), and the levels are vertically equated to yield a continuous measure of reading achievement.

To measure growth in the students’ oral reading fluency over the summer, trained retired teachers gave the Dynamic Indicators of Basic Early Literacy Oral Reading Fluency subtest (DIBELS ORF) during the week after the ITBS in June and again in September, using the same grade-appropriate passage (the mid-level passage recommended for students at the end of the grade they had just completed). The DIBELS ORF subtest reliably measures fluency in terms of words read correctly per minute. Good and Kaminski (2003) report alternate form reliability, and we found test–retest reliability of 0.89 in our data. DIBELS ORF also has good concurrent and predictive validity, showing correlations with reading comprehension that range from 0.54 to 0.80 (see Riedel, 2007).

**The Voluntary Summer Reading Program**

The program was implemented in four stages: teacher training, end-of-year lessons, book matching, and parent/family member support for summer reading.

**Teacher Training.** In early June, teachers attended a 2-hour training session conducted by an experienced elementary language arts teacher. This teacher trainer had developed the lessons to meet our specifications and field-tested them in a grade 4 class prior to training. During training, she modeled a series of three lessons (described below) using an engaging, well-illustrated children’s storybook, *The Wreck of the Zephyr* (Van Allsburg, 1983).

**End-of-Year Lessons.** The end-of-year lessons were carried out over the course of several days by the participating classroom teachers following training. Each lesson was fully scripted and required no more than 45 minutes of class time. Lesson 1 focused on comprehension strategies. The teacher began by explaining to the students that they would be receiving books and postcards over the summer, and they would need to know what to do when they received them. She asked for the students’ help in generating a list of five strategies that good readers use to help them understand what they are reading: reread, predict, ask questions, make connections, and summarize. These were strategies the teachers had already introduced and taught, so it was not difficult to elicit them. The teacher then read *The Wreck of the Zephyr* aloud, stopping at appropriate points to model one of the strategies. As each strategy was modeled, the students were asked to identify it, and the teacher rephrased their responses so they exactly matched the phrases they would see on the postcard. Next, the teacher demonstrated on an overhead transparency how to complete the questions on a postcard like the one the students would be receiving with their books (see Figure 1). Then, in the last part of the lesson, students selected a book, attached sticky notes where they used a comprehension strategy, shared their examples of strategy use with the class, and practiced answering the questions on the postcard. The fourth
third reading was her best reading—smooth, full of
expression, and errorless. Next, the teacher used
an overhead transparency of the postcard to dem-
onstrate how the students would be answering an
additional question that was not discussed the day
before: a three-part question that asked whether they
read more smoothly, whether they knew more words,
and whether they read with more expression. Finally,
the teacher pointed out that the postcard asked for a fam-
ily member’s signature and an optional comment.

Lesson 2 continued with students pairing up,
counting 100 words from a passage in a book, and
practicing reading with their partners. One student
read the passage aloud while the other gave feed-
back using the postcard rating categories, then
the roles were reversed for a second reading. After
paired reading, the students “mailed” their postcards
by returning them to the teacher. The students were
given a homework assignment to independently read

question asked them to place a check mark by each
comprehension strategy they used.

In Lesson 2, the focus was fluency practice. Follow-
ing a review of comprehension strategies, the
teacher stated, “Another thing that good readers do is
read smoothly and with good expression when they
are reading aloud.” She asked the students how they
knew if someone was a good reader when they read
aloud, accepted their answers and said, “Yes, when
someone reads aloud with good expression and at
just the right speed without mistakes, we call that flu-
ent reading.” She wrote fluent reading on the board
and beneath it, smooth, good expression, and correct.
Then she explained that she would read a 100-word
passage from The Wreck of the Zephyr several times,
and the students would rate her reading. The first
reading was poor, with lots of pauses and miscues;
the second reading was better, with shorter pauses
and no miscues but flat and expressionless; and the

third reading was her best reading—smooth, full of
expression, and errorless. Next, the teacher used
an overhead transparency of the postcard to dem-
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additional question that was not discussed the day
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read the passage aloud while the other gave feed-
back using the postcard rating categories, then
the roles were reversed for a second reading. After
paired reading, the students “mailed” their postcards
by returning them to the teacher. The students were
given a homework assignment to independently read
a book for 15 minutes, read aloud a 100-word passage to a family member twice, complete the questions on the postcard, and obtain a family member’s signature.

Lesson 3 provided additional teacher modeling and practice with a nonfiction book. The teacher elicted and modeled comprehension strategies as before, modeled completion of the postcard questions, and modeled counting out 100 words and reading aloud with improvement shown. The students then practiced on their own (for silent reading and comprehension strategies) and with a partner (for oral reading and fluency practice).

In the first experiment, students received all three end-of-year lessons exactly as described above. In the second experiment, only the students in the Books With Oral Reading and Comprehension Scaffolding group received all three lessons. Students in the Books With Oral Reading Scaffolding group received two lessons that did not include comprehension strategies; and students in the Books Only group received a single lesson that included neither oral reading nor comprehension strategies instruction. For students in the Control group, the teacher prepared an alternative reading activity to use in place of the lessons.

Book Matching. In both experiments, matched books were selected for each student by a computer algorithm that merged data from two files. One file contained a text difficulty (Lexile) level and preference categories for each of 240 available book titles. The second file contained each student’s Lexile range from the June ITBS and reading preference ratings for the categories on the June survey. The algorithm generated a list of the eight books that represented the best matches for each student, those with high preference ratings within the student’s Lexile range. For students in the treatment groups, one matched book was mailed each week for eight successive weeks from early July until the end of August. Students in the control group received all eight of their matched books at once in September after the posttests.

Parent/Family Member Support for Summer Reading. Along with each book that was sent to the student, there was a postcard for the student and letter for the parent or other family member (translated into Spanish, Urdu, Arabic, or Vietnamese for parents who spoke one of these languages). The letter asked the parent to encourage their children to read and requested return of the postcard. Except for students in the Books Only group of the second experiment, the parent letter suggested that “It will help your child if he or she reads out loud to you, or to an older brother or sister,” and requested that, “After you listen to your child reading out loud a second time, tell him or her how they improved.” The postcard for the treatment group in the first experiment and the Books With Oral Reading and Comprehension Scaffolding group in the second experiment had all of the questions shown in Figure 1. The postcard was modified as needed to implement the Books Only and Books With Oral Reading Scaffolding treatment conditions in the second experiment (e.g., the postcard had no questions asking the student about his or her use of comprehension strategies).

Findings

First Experiment

Table 1 displays the posttest mean Total Reading scores on the ITBS for all students in the treatment and control groups. The posttest scores were adjusted for pretest scores by means of an ANCOVA. Overall reading achievement was higher for the treatment group (M = 207.9) than the control group (M = 205.9). The difference of 2.0 points was just 0.01 short of the conventional 0.05 level of statistical significance at \( p < 0.06 \), but it represented 1.3 additional months of school learning, so it is clearly significant in practical terms. We calculated additional months of school learning by dividing the difference between the treatment and control group means by 1.56, because students gain 14 points from the spring of grade 4 to the spring of grade 5 according to the test publisher’s norm sample, or 1.56 points per month during a 9-month school year. Research (e.g., Cooper et al., 1996) suggests that achievement scores do not increase during the summer, so we divided 14 by 9, not 12.

Table 1 also displays the ITBS results for each ethnic group and for low-income students regardless of ethnicity. Black and Hispanic students derived the greatest benefit from the summer reading program, showing treatment effects that were about twice as large as the overall effect. For Black students, the difference between treatment and control conditions (5.2 points) represents 3.3 additional months of learning. For Hispanic students, the treatment-control
Second Experiment

As in the first experiment, there was evidence that the intervention had an impact on students’ summer reading activity. On a scale that combined results from five items, there was a significant difference favoring the Books With Oral Reading and Comprehension Scaffolding group over the Control group. About half of the students in each treatment group returned at least one postcard indicating they had read at least one book, and about 25% returned four or more postcards indicating they had read at least four of the eight books.

Figure 2 displays the ITBS results for all students in each of the four experimental groups in terms of posttest means for Total Reading. (As before, these are adjusted means from an ANCOVA using the pretest as a covariate.) As predicted, students in the Books Only group (M = 203.6) performed similarly to students in the Control group (M = 203.1). Thus simply providing matched books did not have a significant positive effect on reading achievement. The lack of positive effects for books only did not seem to result from the students having not read the books. More than half of the students in each treatment group returned at least one postcard indicating they had read at least one book, and about 25% returned four or more postcards indicating they had read at least four of the eight books.

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Other data collected in the first experiment indicated that many of the students did read their books with a parent or family member. Slightly over half of the treatment group students in each of the ethnic groups returned a postcard indicating they read at least one book, and all but a few of the returned postcards had been signed by a parent or family member. Also, on two survey items measuring oral reading with a family member, the treatment group had significantly higher scores than the control group.
Students in the full treatment group, Books With Oral Reading and Comprehension Scaffolding (M = 207.0) significantly outperformed students in the Control group on the ITBS (M = 203.1; $p < 0.03$). The difference in posttest scores of 3.9 points represents a learning advantage of 2.5 months.

Students in the Books With Oral Reading Scaffolding group (M = 204.8) performed better than students in the Control group (M = 203.1) on the ITBS, and this difference was larger for students who were below the median on the fluency pretest (M = 204.8 vs. 200.7), but none of these differences were statistically significant. Thus the second experiment did not provide clear evidence on the question of whether oral reading scaffolding alone produces better reading outcomes.

For fluency as measured by the DIBELS ORF subtest, mean adjusted posttest fluency scores, in words read correctly per minute, were about the same for the Control group and two treatment groups. This finding of no treatment effect on fluency held for both the full sample and students who were below the median in fluency on the pretest.

Table 2 presents the main ITBS results for Black, White, Hispanic, and low-income students, comparing the Control group with the full treatment group, Books With Oral Reading and Comprehension Scaffolding. These data are directly comparable to the data in Table 1. Because there were fewer than 10 Asian students in each group, results for Asian students are not reported separately. The largest positive effects, ranging from 1.7 to 5.1 additional months of learning, were observed for Black, Hispanic, and low-income students. Low-income students gained an average of 4.0 months. Notably, this is enough to offset 100% of the summer loss shown by low-income students in Cooper et al.’s (1996) meta-analysis of studies of the effect of summer vacation on achievement, 0.34 grade-level equivalents or about 3 months.
only “think about ways to foster diverse reading” but also “provide scaffolds for students as they practice their reading skills” (p. 204).

Based on the data from these experiments, we offer a checklist of suggestions for teachers and school administrators who might want to implement a voluntary summer reading program like ours:

- **Before the end of the school year:**
  - Teach several lessons that model use of comprehension strategies and oral reading practice with a parent or family member.

- **During the summer:**
  - Provide at least eight books closely matched to each student’s reading level and interests.
  - Send a postcard with each book to remind the students of what they should be doing.
  - Send a letter to parents asking them to listen and provide feedback on the student’s reading.
  - Ask that the postcards be returned so you can see if the program is being implemented as intended.

**Table 2**

Results of the Second Experiment

<table>
<thead>
<tr>
<th></th>
<th>N (total for both groups)</th>
<th>Standard deviation (combining groups)</th>
<th>Treatment group mean (ITBS total reading) (a, b)</th>
<th>Control group mean (ITBS total reading) (a, b)</th>
<th>Additional months of learning (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students (including “other” ethnicity)</td>
<td>207</td>
<td>28.3</td>
<td>207.0</td>
<td>203.1</td>
<td>+2.5</td>
</tr>
<tr>
<td>White</td>
<td>72</td>
<td>25.4</td>
<td>221.6</td>
<td>222.4</td>
<td>–0.5</td>
</tr>
<tr>
<td>Black</td>
<td>50</td>
<td>26.2</td>
<td>201.0</td>
<td>198.4</td>
<td>+1.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>61</td>
<td>24.3</td>
<td>196.0</td>
<td>188.1</td>
<td>+5.1</td>
</tr>
<tr>
<td>Low-income</td>
<td>77</td>
<td>22.6</td>
<td>195.6</td>
<td>189.3</td>
<td>+4.0</td>
</tr>
</tbody>
</table>

\(a\) Books with oral reading and comprehension scaffolding only; other treatment groups, books only, and books with oral reading scaffolding are excluded to make Tables 1 and 2 comparable. \(b\) adjusted for pretest scores. \(c\) See text for explanation.

**Conclusions and Practical Implications of the Findings**

Our two experiments strongly support the idea that voluntary reading of books over the summer can enhance the reading achievement of ethnic minority students and reduce summer loss—if the books closely match their reading levels and interests, and if teachers and parents provide scaffolding support in the form of oral reading practice and comprehension strategies instruction.

The results of the second experiment are theoretically as well as practically important. They imply that merely giving students books is not effective and that some form of scaffolding is necessary for voluntary summer reading to have achievement benefits. As shown in Figure 2, giving students books without any form of scaffolding did not have positive effects, even when the books were carefully matched to the students’ reading levels and interests and the students reported reading them. Other researchers have suggested that simply providing students with more books and opportunities to read is not sufficient to improve reading achievement. For example, Carver and Liebert’s (1995) observations of a summer reading program indicated that students in grades 3 to 5 may need additional support to engage with texts during independent reading. Byrnes (2000) suggested that, if the primary goal of voluntary reading is to improve reading achievement, teachers should not

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